



# Book of Abstracts

20<sup>th</sup> IPA International Congress  
29 June - 2 July 2023 • Lisbon,  
Portugal

Preliminary Version

## Pre Congress Workshops

### Workshop I: Evidence-informed approach to prescribing of atypical antipsychotics to manage behaviors in Neurocognitive disorders: Results of a pilot study

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The senior author would like to thank Murray Alzheimer's Research and Educational Program (MAREP) under the Schlegel Research Institute in Aging, University of Waterloo, Waterloo, Ontario, Canada and Homewood Health Centre, Guelph, Ontario, Canada for all their support for my research. There are no conflict of interests.

**Background:** The LuBAIR™ Paradigm is a novel approach to ascribe meaning to behavioral expressions in advanced neurocognitive disorders when the reliability of a clinical assessment is limited. The meaning ascribed to each behavioral category was used to identify those who are likely to respond to the use of atypical antipsychotics in their management. De-prescribing was attempted on patients who qualified to enter this retrospective study. De-prescribing was defined as successful if individuals were completely withdrawn from AAP and remained off them for 60 days without the re-emergence of behaviors.

**Methods:** The LuBAIR™ Inventory was filled on two occasions. The data collected on the second occasion, in the successful and failed de-prescribed groups, were compared in this retrospective study. MANOVA, Chi-Square paired t-test statistical analyses were used to detect the differences in the behavioral categories between the two cohorts. Cohen d was used to measure effect size.

**Results:** Patients who did not have Mis-Identification and Goal-Directed Expressions were more likely to successfully de-prescribe:  $X^2(1, N = 40) = 29.119, p < 0.0001$  and  $X^2(1, N = 40) = 32.374, p < 0.0001$ , respectively. Alternatively, the same behavioral categories were more likely to be present in patients who failed de-prescribing: MANOVA and paired t-test ( $p < 0.0001$ ).

**Conclusion:** Atypical antipsychotics, in their role as an antipsychotic and mood stabilizer, may be used to manage Mis-Identification and Goal-Directed Expressions, respectively.

### Workshop 2: Humanitarian Crisis and Old Age Mental Health

**Authors:** Carlos Augusto de Mendonca Lima, Debanjan Banerjee, Liat Ayalon, Kiran Rabheru

In 2020 there were 727 million persons aged 65 years or over in the world and this number is expected to reach over 1.5 billion in 2050. Of these, 20% suffer of a mental health condition and 60% live in low- and middle-income countries where barriers (stigma, poor access to social and health care systems) present issues even during stable times. A humanitarian crisis is defined as a singular event or a series of events that are threatening in terms of health, safety or wellbeing of a community or group of individuals, and require action that is usually urgent and often non-routine. Examples of such crisis are wars, natural disasters, epidemics and forced immigration. There is an urgent need of an

international commitment to planning for humanitarian emergencies that include individual and community psychosocial support for older adults with mental health conditions. The current lack of inclusion for these older adults in humanitarian response is dramatic and constitute a clear violation of their Human Rights. Governments and humanitarian actors need to do more during crisis to ensure that individual's specific needs are addressed. A humanitarian response includes the collective actions of actors responding to the global needs. Each state has the responsibility first to take care of the victims of these emergencies occurring on its territory. Humanitarian actors must provide assistance in accordance with the principles of humanity, neutrality and impartiality. Promoting and ensuring compliance with these principles are essential elements of effective humanitarian coordination, in respect of the Human Rights principles, in particular when vulnerable people such older adults with mental health conditions are involved. The symposium intends to describe the consequences on older adults' mental health during humanitarian emergencies and discuss potential solutions to improve the humanitarian response for all in need.

### **Workshop 3: Develop, implement and evaluate technology for social health in dementia: lessons in best practice from the European DISTINCT network**

**Chairs:** Prof. Martin Orrell, University of Nottingham, School of Medicine, Academic Unit 1 Mental Health and Clinical Neuroscience, Institute of Mental Health, Nottingham, United Kingdom, Dr. Lizzy Boots, Maastricht University, Department of Psychiatry and Neuropsychology, Alzheimer Centre Limburg, Maastricht, The Netherlands

**Presenters:**

- David Neal, Amsterdam UMC, location Vrije Universiteit Department of Psychiatry; Amsterdam Public Health Research Institute, Amsterdam, Netherlands.
- Golnaz Atefi, Maastricht University, Department of Psychiatry and Neuropsychology, Alzheimer Centre Limburg, Maastricht, The Netherlands
- Esther Gerritzen, University of Nottingham, School of Medicine, Academic Unit 1 Mental Health and Clinical Neuroscience, Institute of Mental Health, Nottingham, United Kingdom
- Lesley Garcia, University of Nottingham, School of Medicine, Academic Unit 1 Mental Health and Clinical Neuroscience, Institute of Mental Health, Nottingham, United Kingdom

**Objective:** DISTINCT is a Marie Skłodowska-Curie Innovative Training Network. Supported by the INTERDEM network and European Association of Geriatric Psychiatry, DISTINCT aimed to establish a multi-disciplinary, multi-professional and intersectorial European research framework, for assistive technologies to support social health in dementia. In this symposium, we present research associated with the maturity lifecycle (development to evaluation) of four technologies: the ROADMAP online self-management intervention; online peer support for people with young onset dementia; online acceptance and commitment therapy for caregivers (ACT); and the FindMyApps tablet-based intervention for people with dementia and their caregiver.

**Method:** In 2019, 15 ESRs were recruited to 13 research organizations across 8 European countries. Research projects were launched in collaboration with people living with dementia and caregivers, and industry partners. Projects were adapted to meet challenges and opportunities due to the COVID-19 pandemic. The projects presented in this symposium employed a variety of research paradigms (user-centred design, feasibility and implementation studies, randomized controlled trials). Key insights from each project were combined into best practice guidance for developers, researchers, healthcare professionals and people living with dementia, covering the full innovation lifecycle.

**Results:** All DISTINCT research projects are now in the final stages, having so far resulted in more than 35 peer reviewed publications and many contributions to international conferences. Insights were incorporated into the Best Practice Guidance for Human Interaction with Technology in Dementia, published in December 2022, which will be updated by the end of 2023 with further insights from completed projects. Key findings presented in this symposium concern: development of ROAD MAP online; best practices for, and barriers to, online peer support; acceptability and preliminary effectiveness of online ACT; effectiveness and cost effectiveness of FindMyApps.

**Conclusion:** There is growing evidence that assistive technologies are feasible and effective for supporting social health of people with dementia and caregivers. People living with dementia, formal and informal caregivers, policymakers, designers, and researchers can refer to the DISTINCT Best Practice Guidance to inform their approach to assistive technology. Future research can build on these results, to further understand and improve usability, (cost-)effectiveness, and implementation of assistive technology in dementia.

### **Cost-effectiveness of a tablet-based intervention to support social health in dementia: results from the FindMyApps randomized controlled trial**

#### **Authors:**

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Judith Bosmans, Department of Health Sciences, Faculty of Science, Vrije Universiteit Amsterdam, Amsterdam Public Health Research Institute, Amsterdam, the Netherlands.

Rose-Marie Droes, Amsterdam UMC, location Vrije Universiteit Department of Psychiatry; Amsterdam Public Health Research Institute, Amsterdam, Netherlands.

**Objective:** Scalable, cost-effective interventions to support social health in dementia are required to address growing prevalence in the face of healthcare workforce shortfalls. Until now, very few high quality studies have addressed the effectiveness of assistive technologies for social health in dementia, and almost none have evaluated the cost-effectiveness. Effectiveness of the FindMyApps intervention was investigated and an economic evaluation was undertaken.

**Method:** A single-centre, non-blinded, randomized controlled trial (RCT) was conducted, comparing the effectiveness of FindMyApps with a digital care as usual control intervention (normal tablet computer with general advice). Primary outcomes measured at baseline and three month follow-up were social participation and self-management of community-dwelling people with mild cognitive impairment (MCI) or early stage dementia (MMSE 18-25), and sense of competence of their informal caregiver. Healthcare usage data was collected using a modified version of the RUD-lite instrument. Incremental costs and effectiveness associated with FindMyApps compared to the control intervention were estimated.

**Results:** Data collection was completed in November 2022. Of 150 dyads randomized, follow-up data were available from 128 dyads (14.7% loss to follow-up). The dataset has been cleaned and analyses are ongoing. Alongside main effects on primary outcomes, both a cost-effectiveness analysis and a cost-utility analysis will be reported, from a societal and healthcare perspective. Cost and effect differences between FindMyApps and digital care as usual will be estimated with bivariate regression analyses and incremental cost-effectiveness ratios will be reported (the difference in the mean total costs between the groups divided by the difference in mean effect between the groups). Cost-effectiveness acceptability curves will demonstrate the probability that FindMyApps is cost-effective compared to digital care as usual.

**Conclusion:** The results of this study establish the extent to which FindMyApps is effective and cost-effective for supporting social health in dementia. Implications for healthcare professionals, researchers and policymakers with respect to further implementation of FindMyApps are highlighted, as well as remaining uncertainty and directions for future research. The results of this study demonstrate the feasibility of large-scale (cost-)effectiveness evaluations with assistive technology, which should be replicated as gold-standard evidence for other technologies and health priorities.

### **Blended web-based Acceptance and Commitment Therapy for Informal Caregivers of people with dementia (ACT-IC study): Result of social health aspects**

**Authors:** Golnaz Atefi<sup>1</sup>, Rosalie J.M. van Knippenberg<sup>1</sup>, Sara Laureen Bartels<sup>1</sup>, Frans R.J. Verhey<sup>1</sup>, & Marjolein E. de Vugt<sup>1</sup>

**Affiliations:** 1 Department of Psychiatry and Neuropsychology and Alzheimer Centre Limburg, School for Mental Health and Neurosciences, Maastricht University, Maastricht, The Netherlands

**Objective:** Numerous e-health programs have shown the potential to enhance psychological and social health outcomes in informal caregivers of People with Dementia (PwD). However, there is still a need for evidence-based interventions tailored to the specific needs of this population, such as maintaining self-management and participating in meaningful activities. This mixed-methods study aims to evaluate the feasibility, acceptability, and preliminary effectiveness of a blended intervention based on acceptance and commitment therapy for informal caregivers of PwD, leading to a better understanding of intervention refinements for future controlled trials.

**Method:** A single-arm clinical trial design is conducted. A total of 20 informal caregivers of PwD are recruited through memory clinics and social media platforms in the Netherlands. The ACT-IC intervention is delivered over a 9-week period and consists of a collaborative goal-setting session, nine online modules, and nine telephone-based motivational coaching sessions. Feasibility and acceptability are assessed using the attrition rate, adherence to, and engagement with the intervention, the proportion of missing data, and semi-structured interviews. Clinical outcome measures assess depression, anxiety, stress, sense of competence, burden, and self-efficacy at baseline and post-intervention.

**Results:** Data collection will be completed by May 2023, and analyses are ongoing. Of the 20 caregivers, 19 completed the baseline assessment, and 3 dropped out. Results of an ANOVA investigating the effect of ACT-IC on the outcome measures at post-intervention will be reported, as well as the results of post-hoc analyses that explored the effect on outcomes of goal attainment and meaningful activities, observed use of the website, and reported adherence to the recommended frequency of website use.

**Conclusion:** The result will contribute to the need for further research on supportive e-health interventions for informal caregivers of PwD. The ACT-IC study is the first trial to apply an evidence-based blended approach to address and evaluate the specific shared needs of caregivers. The mixed-method approach may offer a better understanding of reasons for dropouts, as well as barriers and facilitators that informal caregivers experience over the course of the intervention. Furthermore, social interaction (telephone-based motivational coaching) might improve the feasibility and acceptability of the online ACT intervention.

### **Online peer support for people with Young Onset Dementia: development of a Best Practice Guidance**

**Authors:** Esther Gerritzen, Orii McDermott & Martin Orrell University of Nottingham, School of Medicine, Academic Unit 1 Mental Health and Clinical Neuroscience, Institute of Mental Health, Nottingham, United Kingdom

**Objective:** Peer support can be very valuable for people with Young Onset Dementia (YOD) (diagnosis before the age of 65). People with YOD often experience stigma, putting them at a higher risk of social isolation. In the United Kingdom, availability of age-appropriate, in-person peer support services is inconsistent, and as a result many people may miss out on the potential benefits. Online peer support could be a solution, as it overcomes geographical barriers, and offers a variety of platforms and modes of communication. This study aimed to explore how people with YOD experience online peer support, identify potential barriers to online peer support, and get insights into how online peer support can be optimized. The findings were used to develop a Best Practice Guidance on online peer support for people with YOD, and specific guidelines for facilitators of online peer support groups.

**Method:** This study was conducted between October 2019 and December 2022. It followed the Medical Research Council (MRC) guidelines on complex interventions and focused on the development stage. The study consisted of multiple sub-studies, which all contributed to the Best Practice Guidance. The sub-studies included literature reviews, focus groups, an online survey, and interviews. All participants were people living with YOD.

**Results:** Participants described online peer support as their lifeline which gave them hope and a sense of purpose again, after an often very difficult diagnostic and post-diagnostic period. For people in rural areas or who were unable to travel, online was the only way in which they could connect with their peers. However, many were unaware that online peer support exists, what it entails, and how they could get involved. This indicates a need for better advertisement of and signposting to (online) peer support.

**Conclusion:** Online peer support can be beneficial for people with YOD. The Best Practice Guidance provides people with YOD with evidence-based information on what online peer support entails, facilitators with guidelines on how to optimize online peer support for people with YOD, and healthcare professionals with an opportunity to signpost people with YOD to online peer support.

### **User experience and analytics inform the development of an innovative telehealth curriculum: ROAD MAP (Recovery-Oriented Approach to Dementia through Meaningful Activity Participation)**

**Authors:** Lesley Garcia, Martin Orrell, Justine Schneider University of Nottingham, School of Medicine, Academic Unit 1 Mental Health and Clinical Neuroscience, Institute of Mental Health, Nottingham, United Kingdom

**Objective:** To user-test a recovery-oriented, clinician-facilitated, web-based, self-management intervention accessible via mobile device: ROAD MAP. The initial programme theory underlying this research is that supporting the experiences of CHIME (connectedness, hope and optimism, identity, meaning in life and empowerment), in persons living with dementia (PLWD) will have health-promoting benefits for the PLWD.

**Method:** The intervention will be delivered to 20 dyads of community-dwelling PLWDs and their carers via a five-week, online, recovery-based curriculum. Five convenience-sampled occupational therapists (OT) will be trained online in a 10-hour training programme to deliver the intervention. All data collection instruments are informed by realist evaluation (RE) methodology and enquire into initial programme theories (IPTs) used to develop the curriculum and the ROAD MAP digital tool. Data collection, between January and March 2023, will occur during both the OT training and the five-week pilot study. The OT facilitators will provide qualitative feedback on the ROAD MAP technology. Data will be collected via pre-post self-completion forms, semi-structured interviews, a focus group, and weekly guided reflective journal. PLWD's self-reported, user experience will be live polled within the weekly one-hour long sessions of the pilot. Their digital usage analytics will be generated by the MyGuide platform on which the ROAD MAP intervention is built. These data will be manually screened for IPT relevance and used to test emerging programme theories.

**Results:** All data will be collected by end of March 2023 and analysed by end of May 2023. NVivo will be used to generate refined programme theories according to RE methodology. This will provide evidence of plausible, causal context-mechanism-outcome configurations which may optimize the refined version of the ROAD MAP digital intervention, curriculum and facilitator training methods.

**Conclusion:** This study will increase knowledge of a methodology for developing useable and acceptable recovery-oriented telehealth tools for PLWD. This intervention could directly enhance the education of health care professionals and improve the equitable delivery of dementia services.

## Workshop 4: Cognitive Assessment For Older People in Daily Clinical Practice – A Primer

**Authors:** Dr. Debanjan Banerjee (Consultant Geriatric Psychiatrist, APOLLO Multispecialty Hospitals, Kolkata Co-Chair, Advocacy and Public Awareness Committee, International Psychogeriatric Association)

**Ms. Snehasree Neogy** (Clinical Psychologist, APOLLO Multispecialty Hospitals, Kolkata)

The world faces a rapid population aging. Based on the World Health Organization (WHO) estimates, number of individuals older than 60 years is expected to double by 2030. With this demographic shift, non-communicable diseases are on the rise in the older population, especially neurocognitive disorders (NCD). Globally, 10 million new cases of dementia are detected every year according to the WHO (2019) data. Mild Cognitive Impairment (MCI) has an even greater prevalence of 15-20% with a conversion rate of 5-10% each year. NCD are not only progressive, but are associated with impairment of functioning, reduced autonomy, behavioral challenges, altered quality of life and caregiver burnout.

In light of the same, brief, tailored and culturally sensitive cognitive assessments need to be an integral component of routine mental healthcare for older people. However, training and validation related to such rating scales are often lacking, there exists ambiguity in their interpretation and their use is limited to tertiary settings. Further, various challenges in their use such as effect of education, ceiling effects, linguistics and patient comfort are often not taken into account.

**With this background, the current interactive workshop will involve**

- *Understanding the various domains of cognitive assessments in older people*
- *Clinical nuances for early detection of cognitive deficits*
- *Familiarity with the basic rating scales (screening and batteries) for assessing cognitive deficits in older adults*
- *Bedside lobar assessments*

\*This workshop intends to make the participants comfortable and interested in using structured cognitive assessments and clinical evaluation of cognitive deficits as a routine component of their clinical care for older adults.

## Workshop 5: Mitigating Ageism in Everyday Clinical Care

**Authors:** Debanjan Banerjee<sup>1</sup>, Liat Ayalon<sup>2</sup>, Kiran Rabheru<sup>3</sup>, Carlos de Mendonca Lima<sup>4</sup>

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**Learning objectives:** At the end of this workshop, participants will be able to:

- Integrate a human rights and dignity-based strategies into daily clinical care for older persons with mental health conditions
- Identify the effects of intersections of ageism, ableism, mentalism and elder abuse on the care provided to older persons with mental health conditions

- Describe and support the need for an international (UN) Convention on the rights of older persons to improve the care of older persons with mental health conditions

**Background:** Our world faces rapid population aging. Based on the WHO estimates, nearly 20% of older persons will have mental health conditions such as dementia, depression, anxiety and substance use, often complicated by physical and psychosocial comorbidities. Various mental health inequalities exist in this vulnerable population negatively influencing their healthcare and social status. This includes the 'triple jeopardy' of ageism, ableism and mentalism. The ongoing COVID-19 crisis has only widened the marginalization of older persons and especially those with mental health conditions.

**Methods:** Even though there has been a paradigm-shift in neurobiological understanding of psychogeriatrics, dignity-based mental healthcare is still silent in research as well as practice. This workshop brings in recommendations to include the principles of rights, dignity, equality, equity and respect in clinical care for older persons living with mental health conditions, including dementia. These suggestions are based on literature review, position statements of global organizations working in this area, the Decade enablers of the UN Decade of Healthy Aging (2021-2030) and also clinical experience of the authors. Special focus will be on end-of-life care, advance directives and those in institutionalized settings.

**Mode of conduction:** The workshop will involve a strategic and interactive discussion based on real-life case vignettes. Feedback will be sought on the perceived status of dignity and human rights in current clinical practice. Focus will be on ensuring dignity and promoting human rights in routine clinical care and patient-physician communication, age-friendly healthcare settings for older persons and the role of dignity therapy. The need for an International Convention for the rights of older persons will also be highlighted with evidence.

Elder abuse and inadequate end-of-life care as two of the many common manifestations of the implicit bias and core root cause of the phenomenon of the "ageism spectrum". Ensuring dignity and human rights in older persons can combat ageism and prevent elder abuse. Adequate sensitivity and training of professionals in this area will set the future pathway for dignified mental health interventions in the older persons with mental health conditions that are devoid of age-based discrimination and prejudice.

## Workshop 6: Young-onset Dementia (YOD), new developments, part 1

**Using the axonal protein neurofilament light to distinguish psychiatric and neurodegenerative disorders across a program of clinical research studies**

**Authors:** Dennis Velakoulis<sup>1</sup>, Dhamidhu Eratne<sup>1</sup> on behalf of The MiND Study Group

<sup>1</sup>The Markers in Neuropsychiatric Disorders (MiND) Study, Royal Melbourne Hospital and University of Melbourne, Melbourne, Australia

**Introduction:** There is an urgent need for clinical blood biomarkers which can rule in/out neurological disorders early in those with psychiatric symptoms, personality or behavioural changes and/or functional decline together with cognitive symptoms. The neuronal axonal protein neurofilament light (NfL) is released from damaged neuronal axons and can be measured in in blood and cerebrospinal fluid (CSF). We have undertaken a series of studies aimed at examining the clinical utility of blood and CSF NfL in assisting with the distinction between psychiatric and neurodegenerative / neurological disorders.



**Methods:** Since 2016 we have measured blood and CSF NfL levels across multiple psychiatric and neurological populations recruited through Neuropsychiatry, Royal Melbourne Hospital and our collaborators (national and international). We have described our findings in a series of published studies. Data from our ongoing work, in larger cohorts and diagnostic groups, will be presented. The diagnostic groups include people with psychiatric disorders (schizophrenia, bipolar disorder, depression, functional neurological disorders), neurodegenerative disorders (Alzheimer's disease, frontotemporal dementia, Huntington's disease, Niemann-Pick Type C) and neurological disorders (e.g., epilepsy).

**Results:** Our initial pilot study (n=129) found that CSF NfL was a promising biomarker in differentiating psychiatric from neurological disorders. In our larger follow up larger study (n=498) which included more diagnostic groups CSF NfL levels exhibited high accuracy (91%), sensitivity (92%), and specificity (87%) in differentiating psychiatric from neurological disorders, and distinguished behavioural variant frontotemporal dementia from frontal lobe syndrome phenocopies/mimics, with high accuracy. We have found that NfL is not elevated in people with treatment resistant schizophrenia compared to controls and is elevated in people with Niemann-Pick Type C compared to people with psychiatric disorders and controls. Further (unpublished) data has shown that these findings are replicated with plasma NfL levels across 400 further psychiatric, neurological and control participants.

**Conclusions:** NfL is a highly promising biomarker which differentiates psychiatric from neurological disorders with high sensitivity and specificity. The translation of NfL levels into standard clinical practice could substantially improve the clinical diagnostic process in people with complex neuropsychiatric and cognitive disorders.

### **Cross-sector learning collaboratives can improve post-diagnosis care integration for people with young onset dementia**

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**Introduction:** Post-diagnosis young onset dementia (YOD) care is often fragmented, with services delivered across aged care, health care, and social care sectors. The aim of this project was to test the feasibility and effectiveness of a learning collaborative implementation strategy for improving the cross-sector integration of care for people with YOD.

**Methods:** We conducted a longitudinal mixed-methods process evaluation, and recruited one representative from three Australian aged care organisations, three disability care organisations, and three organisations contracted to deliver care navigation services. One representative from each organisation joined a learning collaborative within their local area and completed a six-module online education package incorporating written resources, webinars, collaboration, and expert mentoring. Participants identified gaps in services in their region and barriers to care integration, and developed a shared plan to implement change. Normalisation Process Theory was applied to understand acceptability, penetration, and sustainability of the implementation strategy, as well as barriers and enabling factors.

**Results:** Dementia knowledge measured by the Dementia Knowledge and Awareness Scale was high among the professionals at the start of the implementation period (Mean = 39.67, standard deviation = 9.84) and did not change by the end (Mean=39.67, standard deviation = 8.23). Quantitative data demonstrated that clinicians dedicated on average half of the recommended time commitment to the project. However, qualitative data identified that the learning collaborative strategy enhanced commitment to implementing integrated care and promoted action toward integrating previously disparate care services. Participant commitment to the project was influenced by their sense of obligation to their team, and teams that established clear expectations and communication strategies early were able to collaborate

and use the implementation plan more effectively (demonstrating collective action). Teams were less likely to engage in the collective action or reflexive monitoring required to improve care integration if they did not feel engaged with their learning collaborative.

**Discussion:** Learning collaboratives hold promise as a strategy to improve cross-sector service collaboration for people with YOD and their families but must maximise group cohesion and shared commitment to change.

### **Impairment in Awareness and its Domains Vary According to the Age at Onset of Dementia**

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1. Center for Alzheimer's disease, Institute of Psychiatry, Federal University of Rio de Janeiro, Brazil.

**Introduction:** Awareness is the recognition of changes caused by deficits related to the dementia process. Awareness is related to a given object, like memory functioning or functional status. Objects of awareness can be grouped into a range of domains, including cognition, functional ability, emotional and social functioning, and behavioral difficulties. Preserved awareness in people with young onset dementia (YOD) has been reported; however, there is a lack of research investigating whether there are differences in the domains of awareness impairment according to the age at onset of dementia. This study compared the differences in awareness and its domains and examined associations with cognition, functionality, neuropsychiatric symptoms, social and emotional functioning, and quality of life (QoL) among people with YOD and late onset dementia (LOD).

**Methods:** A group of 136 people with dementia and their caregivers (YOD= 50 and LOD= 86) were consecutively selected. We assessed awareness of disease, dementia severity, cognition, functionality, neuropsychiatric symptoms, social and emotional functioning, and QoL.

**Results:** People with YOD presented more neuropsychiatric symptoms and worse cognition and functional ability than those with LOD. Compared to people with LOD, there were higher levels of awareness total score, awareness of cognitive functioning and health condition, and awareness of functional activity impairments domains in people with YOD, even in the moderate stage of the disease. There were no significant differences between groups in the emotional state, and social functioning and relationships domains of awareness. Multivariate linear regressions showed that functionality had a broad relationship with awareness in people with YOD. In contrast, neuropsychiatric symptoms and QoL were more significant to the awareness of people with LOD.

**Conclusion:** Different clinical variables are associated with different domains in YOD and LOD groups, reinforcing the heterogeneity of awareness in dementia. Differences in awareness and its domains in YOD and LOD may be particularly relevant to enabling interventions focused on meeting their specific needs and those of their families.

### **Developing dementia: The existential experience of the quality of life with young-onset dementia – A longitudinal case study**

**Authors:** Aud Johannessen<sup>1,2</sup>, Marcia C. N. Dourado<sup>3</sup> & Kirsten Thorsen<sup>1</sup>

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**Introduction:** Cognition and the ability to take care of daily activities and oneself gradually declines among people with dementia. Studies are scarce, especially regarding how people with young-onset dementia (YOD) (<65 years) experience

the quality of their lives with the progression of dementia. People with dementia living alone face special challenges. The aim was to examine the experience of the quality of life with YOD as a single person.

**Methods:** The study presents a longitudinal case study with in-depth interviews exploring the experiences of a person with YOD. Individual interviews were conducted seven times over a period of three years from 2014 to 2017.

**Results:** We examined if and how seven themes concerning the quality of life and well-being were fruitful for understanding the experiences of dementia in the everyday life of a single individual. The study explored needs and challenges during the development of dementia, and how the person reacted over time, set in context. The themes significant for well-being are: identity, connectedness, security, autonomy, meaning, growth and joy.

**Conclusion:** The study shows how treatment, support, and services must be individualized when dementia develops in order to support identity, resources and mastering capacity, and promote well-being.

### **Dementia Experts for Involvement Network-Young Dementia [DEFIN-YD]: Developing a national network of younger people with dementia prepared to get involved in research.**

**Authors:** Professor Jacqueline Parkes<sup>1</sup>, Dr Mary O'Malley<sup>2</sup>, Dr Laura Cole<sup>3</sup>, Dr Natasha Bayes<sup>1</sup>, Anna Crawford<sup>4</sup>

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In September 2020, a University of Northampton (UK) team, led by Professor Parkes and Dr Mary O'Malley (now at the University of Worcester) were successful in securing funding from the Wellcome Trust Public Engagement Fund. The central aims of the DEFIN-YD project were to share knowledge about young onset dementia (YOD) research; create a younger onset dementia public and patient involvement (PPI) network; develop ideas for future YOD research; and provide a reference group to support researchers developing YOD projects. Currently, 21 people have been recruited into one of three regional groups. Prof Parkes leads the Midlands group, Dr Cole from University of West London hosts the Southern group, and Bradford University supports the Northern group. The members were recruited via the Young Dementia Network (YDN), Dementia UK, Alzheimer's Society, the DEEP network, and local NHS Services. They come from urban and rural settings across the UK. Some attend the meetings alone and others are supported by advocates (usually carers). They have a variety of diagnoses and are at different stages of their dementia journey. The groups include members from different cultural backgrounds. They are able to share their personal experiences and are keen to do so in order to improve the care experiences of others. Due to COVID, members effectively completed all 5 regional workshop sessions from August 2021-March 2022 via Microsoft Teams. They are now fully prepared to engage in designing and developing YOD research projects. The top priority they identified for future research was for professionals to be more specifically trained in YOD. Once the workshops were designed and delivered, the first phase of the project was complete. Phase 2 (from April-October 2022) has sort to capture the experiences of participating in the workshops from the group members, facilitators, and project team; as well as developing a sustainable model for the future of the regional groups. The project comes to an end on the 31<sup>st</sup> March 2023.

In this presentation we would like to explore the following objectives:

1. Why we need specific YOD PPI research groups.
2. How we run the workshops and meetings.
3. How we hope to sustain the groups.

## YOD Symposium Part 2

**Objectives:** LuBAIR™ Paradigm, a novel approach to ascribing meaning for behavioral expression in advanced neurocognitive disorder, was used to identify behavioral categories that are likely to respond to the use of atypical antipsychotics in their management.

**Design:** *A retrospective study.*

**Setting:** St. Peter's Hospital (SPH), Hamilton, Ontario, Canada.

**Participants:** *Forty patients qualified for the study.*

**Intervention:** LuBAIR™ Inventory populated on all recruited patients on two separate occasions. The first time was within two weeks of admission and the second time was after sixty days, if they *successfully de-prescribed* off the AAP, or sooner, if they *failed de-prescribing*.

**Measurements:** Chi-Square paired t-test and Cohen d Statistical tests were used to detect the difference in the behavioral categories between the two cohorts.

**Results:** Seventeen patients *were successfully de-prescribed*, and twenty-three *failed de-prescribing*. Results on the LuBAIR™ Inventory, filled on the second occasion, in the *successful de-prescribed* and the *failed de-prescribed* groups compared using the Chi-Square Statistical test to detect the difference in the behavioral categories the two cohorts. Patients who did not have *Mis-Identification Expressions (MiE)* and *Goal-Directed Expressions (GDE)*, amongst the cluster of behavioral categories in their clinical presentation, were more likely to *successfully de-prescribe of AAP*:  $\chi^2(1, N = 40) = 29.119, p < .0001$  and  $\chi^2(1, N = 40) = 32.374, p < .0001$ , respectively. Alternatively, the same behavioral categories were more likely to be present in patients who failed de-prescribing: paired t-test and Cohen-d ( $P < 0.0001$ ).

**Conclusion:** The MIE and GDE were statistically significant, suggesting that these behaviors were more present in patients who *failed de-prescribing*. Atypical antipsychotics, in their role as an antipsychotic and mood stabilizer, may be

### **Euthanasia on their mind: a qualitative analysis of spontaneous expressions of people with young-onset dementia and their family caregivers.**

**Authors:** Romy Van Rickstal, MSc.<sup>1</sup>, Aline De Vleminck, prof. Dr.<sup>1</sup>, Kenneth Chambaere<sup>1</sup>, prof. dr., Lieve Van den Block, prof. Dr.<sup>1</sup>.

1. End-of-Life Care Research Group (Vrije Universiteit Brussel/Ghent University), Belgium

**Introduction:** Previous research showed that people with young-onset dementia and their family caregivers spontaneously addressed the topic of euthanasia when talking about the broader topic of advance care planning. A better understanding of what people address and why may provide innovative insights to inform the evolving physician assisted dying legislation worldwide. This study aimed to identify what people with young-onset dementia and their family caregivers spontaneously expressed regarding (communication about) euthanasia when discussing the topic of advance care planning.

**Methods:** A secondary qualitative analysis was conducted, through the method of constant comparative analysis on semi-structured interviews. We included 10 people with young-onset dementia and 25 family caregivers in Flanders, Belgium.

**Results:** Respondents described similar contexts for discussions about euthanasia: the topic arose at several key moments, usually with informal caregivers, and was motivated by patients considering the impact of disease progression both for themselves, thereby mainly wanting to avoid decline and maintain dignity, and their loved ones. Family caregivers paid considerable attention to the legality of euthanasia in dementia, specifically with regard to cognitive capacity, and elaborated on the difficulties and emotional impact of discussing euthanasia.

**Conclusions:** Considerations of people with young-onset dementia towards euthanasia appeared rooted in personal unbearable suffering and in expected interpersonal and societal consequences of their condition. Negative social framing of young-onset dementia might contribute to the livelihood of euthanasia in respondents' thoughts. The incorporation of euthanasia as a legal end-of-life option was mirrored in its incorporation in patients' and family caregivers' thought framework.

### **Perspectives of people with young-onset dementia on future quality of life: a qualitative interview study with implications for advance care planning**

**Authors:** Jasper Maters, MD<sup>1,2</sup>, Jenny T. van der Steen, MSc, PhD, FGSA<sup>1,2,3</sup>, Marieke Perry, MD, PhD<sup>1,2</sup>, Marjolein E. de Vugt, MSc, PhD<sup>4</sup>, Christian Bakker, MSc, PhD<sup>1,2,5</sup>, and Raymond T.C.M. Koopmans, MD, PhD<sup>1,2,6</sup>

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<sup>3</sup> Department of Public Health and Primary Care, University Medical Center Leiden, Leiden, the Netherlands

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<sup>5</sup> Groenhuysen, Center for Geriatric Care, Roosendaal, the Netherlands

<sup>6</sup> Joachim en Anna, Center for Specialized Geriatric Care, Nijmegen, the Netherlands

**Introduction:** Advance care planning (ACP), one of the key domains of palliative care, enables individuals to define and discuss goals and preferences for future treatment and care with family and healthcare professionals. By exploring the views of people with dementia on quality of life now and in the future, including the end of life, care provisions can be tailored to their values. The perspectives of people with young-onset dementia (YOD), with a symptom onset before the age of 65, may differ from those of older people with dementia given the different life phase and family context. Qualitative research methods can be used to elicit the attitudes and beliefs to generate insight into their perspectives.

**Methods:** Qualitative study, as part of the Care4Youngdem-study, using semi-structured interviews with a criterion-based purposive sample of community-dwelling people with YOD (n=10) and their (family) caregivers in the Netherlands. We adapted the interview guide based on discussion of the transcripts. Double coding of three interviews resulted in a codebook. The codes were subsequently analysed through thematic analysis.

**Results:** Interviews took place between December 2019 and February 2022. The most prevalent dementia subtype was Alzheimer's (n=7). Four overarching themes, based on 21 categories, were derived from the interviews: (1) connectedness with others, (2) sense of dignity, (3) acceptance versus no acceptance of the impact of dementia, (4) concerning oneself with the future versus not wishing to concern oneself with the future. Connectedness with others and a sense of dignity were deemed prerequisites for (future) quality of life but were affected by YOD. These themes overlapped in terms of axial codes. Ambiguities were seen in the attitude towards the impact of YOD and the preparation for the future. The degree of acceptance of YOD affected the orientation towards the future.

**Discussion:** Family and professional caregivers should discuss with people with YOD how to maintain connectedness with others and a sense of dignity. Opposite ways of coping with the present and future were found. Professional caregivers should take personal coping styles into account when starting ACP conversations.

### **Meeting IPA Shared Interest Forum on Young-onset Dementia**

Chair: Raymond Koopmans

With the rising prevalence of dementia, numbers of people with Young Onset Dementia will probably increase too. Young onset dementia is increasingly being recognized as an important psychosocial and medical health problem with serious consequences for both patients and their families. In several countries it is acknowledged that this group of people, in which dementia started before the age of 65 years, has special needs and therefore a need for support and health care services that are particularly designed to fit those needs. However, the number of these special health care services is scarce.

#### **Main Objectives of the Young Onset Dementia Shared Interest Forum:**

- Establishing a network of professionals and researchers that are involved in the care and research of people with Young Onset Dementia
- Exchanging ideas between countries to improve care for people with Young Onset Dementia
- Establish international research projects.

During the meeting we will explore opportunities for international collaboration in new research projects.

## **Keynote Lecture: Emerging Concepts in Combating Ageism, Protecting and Promoting Human Rights and Mental Health of Older Persons**

*Amal Abou Rafeh and Claudia Mahler*

### **Plenary Sessions**

#### **Plenary Session 1 : Healthy Ageing and the role of physical and social environments**

*John Beard*

Overview: The UN Decade of Healthy Ageing aims to foster the ability of people in the second half of life to be and to do the things they value. But, since older populations are extremely heterogenous, action cannot be generic. In 2015, WHO developed a life course approach that is tailored around the intrinsic capacity of the individual (including their cognitive and psychological capacity). This presentation will explore how this framework can help identify opportunities to foster healthy ageing through strategies to retain the highest level of capacity possible; break down ageist barriers; build environments that compensate for losses of capacity; and enable people to maintain lives of meaning and dignity despite significant losses.

#### **Plenary Session 2: Late onset psychosis / schizophrenia**

*Manabu Ikeda and Dilip Jeste*

Overview: This presentation will focus on late-onset schizophrenia (LOS) as well as ageing of persons with early-onset schizophrenia (EOS). 20% of middle-aged and older patients with schizophrenia have onset of illness after age 40. LOS is characterized by female preponderance, better premorbid functioning, fewer positive symptoms, and less cognitive impairment than EOS. EOS presents a paradox of aging – i.e., there is accelerated physical aging with multimorbidity and elevated mortality, while the mental well-being tends to improve with age. Adverse social determinants of health such as childhood traumas, social isolation, discrimination, and food insecurity worsen health. On the other hand, family and social support and access to necessary healthcare enhance the likelihood of sustained remission and recovery.

Antipsychotics tend to be effective at doses lower than those in young adults, though the risk of side effects is higher. Psychosocial interventions like cognitive behavior therapy and social skills training are useful. It is important to employ the principles of Positive Psychiatry including promotion of resilience, social connections, optimism, and healthy lifestyle in people with schizophrenia

### **Plenary Session 3: The importance and value of psychosocial care in dementia in historical perspective, with reflection and commentary**

*Rose Marie Dröes*

Overview: Prof. Dröes will discuss the importance and value of psychosocial care and support for people with dementia and their informal carers. She will look back at new insights that have emerged in this field over the past decades through (inter)national research and practice innovation. For example, the importance of sufficient activation in long-term care facilities, insights into the causes of behavioral and mood disruptions in dementia and the influence of interaction with the environment on this, the importance of integrative person-centered care, in line with the needs and what is relevant for the individual person's quality of life, and the importance of good combined support for people with dementia and their careers, as shaped among others by the successful Meeting Centres Support Programme. Also the potential of assistive technology will be addressed. The lecture will conclude with a look at the future, the further development of psychosocial care in dementia through research, but also through education, and connection and exchange with practice, which are prerequisites for the successful implementation of innovations.

### **Plenary Session 4: Disease-Modified Drug**

*Masaru Mimura*

### **Plenary Session 5: The role of social connectedness in the multifactorial demential syndrome. Does social life matter? - IPA/INTERDEM live webinar**

*Sube Banerjee and Marjolein de Vugt*

Overview: Dementia is influenced by multiple factors. It is crucial to learn more about the impact of these factors. Here we focus on the role of social health, that might have different faces around the world. Join us on July 2nd in Lisbon Portugal at our 2023 IPA International Congress for presentations and discussion on this exciting topic. Eminent dementia experts will present data on the role of social health in dementia. In this webinar, participants will gain an understanding of how social life can impact dementia and the perspectives for interventions to prevent and live well with dementia. As with all programs in the IPA Webinar Series, this presentation is intended as an educational event on topics that are timely and relevant to the field of mental health for older adults.

## **Symposia**

### **S1: Social health in the context of dementia**

#### ***Symposium Overview:***

The recognition of dementia as a multifactorial disorder encourages the exploration of potentially modifiable risk factors. Social health might play a role in cognitive decline and dementia. The Social Health And REserve in the Dementia patient journey (SHARED) project aims to unravel the interplay between social health and biological and

psychological factors on the trajectory from cognitive healthy. A multi-method approach is used, including the development of a conceptual framework for social health and its application in epidemiological and qualitative studies. Epidemiological studies in the SHARED project reveal potentially modifiable social health characteristics or markers associated with cognitive decline, dementia and mortality. This may shape new avenues for future interventions to prevent or delay cognitive decline and dementia and to enhance living well with dementia.

### **Conceptual framework for social health: identification of modifiable and protective and risk factors**

**Authors:** Myrra Vernooij-Dassen, Eline Verspoor, Suraj Samtani, Perminder S Sachdev, M. Arfan Ikram, Meike W. Vernooij, Claudia Hubers, Rabih Chattat, Marta Lenart-Bugla, Joanna Rymaszewska, Dorota Szczesnia, Henry Brodaty, Anna-Karin Welmer, Jane Maddock, Isabelle F van der Velpen, Henrik Wiegelman, Anna Marseglia, Marcus Richards, Rene Melis, Marjolein de Vugt, Esme Moniz-Cook, Yun-Hee Jeon, Marieke Perry, Karin Wolf-Ostermann AND INTERDEM taskforce social health

**Objective:** The recognition of dementia as a multifactorial disorder encourages the exploration of new pathways to understand its origins. Social health might play a role in cognitive decline and dementia, but conceptual clarity is lacking and this hinders investigation of associations and mechanisms. Social health might provide a new perspective on social connectedness. The objective is to develop a conceptual framework for social health to advance conceptual clarity in future studies and to identify potentially modifiable risk and protective factors in the “Social Health And Reserve in the Dementia patient journey (SHARED)” project.

**Methods:** The methods include the process of building the conceptual framework. We used the following steps: underpinning for concept advancement, concept advancement by the development of a conceptual model, and exploration of its potential feasibility.

**Results:** Underpinning of the concept drew from a synthesis of theoretical, conceptual and epidemiological work, and resulted in the definition of social health as well-being that relies on capacities both of the individual and the social environment. In the conceptual framework the abstract definition has been elaborated into more precisely defined domains at both the individual and the social environmental levels. This allowed to identify domain related social health characteristics or markers in epidemiological data bases and to investigate associations between these markers and cognitive decline and dementia. The associated social health markers represent potentially modifiable risk and protective factors. Examples are “social engagement” in the participation domain at the individual level, and “frequency of contact” in the structure domain, “exchange of support” in the function domain and “loneliness” in the appraisal domain at the environmental level. The conceptual framework facilitated identification of domain related markers in the SHARED project, thus showing its potential feasibility.

**Discussion:** The conceptual framework provides guidance for future research and facilitates identification of potentially modifiable risk and protective factors. These may shape new avenues for preventive interventions. We highlight the paradigm of social health in dementia as a priority for dementia research.

### **How to measure social health in the context of cognitive decline and dementia - A systematic review on instruments.**

**Authors:** Henrik Wiegelmann<sup>1\*</sup>, Marta Lenart-Bugla<sup>2</sup>, Myrra Vernooij-Dassen<sup>3</sup>, Eline Verspoor<sup>3</sup>, Imke Seifert<sup>1</sup>, Dorota Szcześniak<sup>2</sup>, Joanna Rymaszewska<sup>2</sup>, Rabih Chattat<sup>4</sup>, Yun-Hee Jeon<sup>5</sup>, Esme Moniz-Cook<sup>6</sup>, Martina Roes<sup>7</sup>, Marieke Perry<sup>3</sup>, **Karin Wolf-Ostermann<sup>1</sup>**

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Last authors: Karin Wolf-Ostermann, Marieke Perry

**Background:** Besides aspects of physical and mental health and quality of life aspects the concept of social health is getting increasing attention in dementia research. Current research has led to a new umbrella concept of social health and first studies show relationships between social health markers and cognitive decline and dementia. But so far, no general overview exists how to measure social health in empirical studies.

**Objective:** The objective of this study therefore is to provide a systematic overview of instruments measuring aspects of social health and proposing a classification based on the new umbrella concept of social health.

**Methods:** Following the PRISMA 2020 guidelines a systematic review was conducted. The online search covered the databases PubMed/MEDLINE, PsychINFO, CINAHL within a publication period from 1st January 2000 till 15th October 2020 for English publications. To classify instruments a new multidimensional framework of social health was used.

**Results:** A total of 150 studies with 68 single instruments were included into the study. A broad range of study types was covered (i.e., feasibility studies, cross-national panel studies) from all over the world, with the majority of studies being conducted in the USA. Most of the described instruments consist of self-report measures, but also proxy and hybrid tools were found. The length of the instruments in terms of the number of single items ranged from 3-126 items, with a median length of 13 items. On the individual level of social health with the three domains *capacities*, *autonomy* and *social participation* we classified 42 instruments and on the social environment level with the three domains *structure*, *functions* and *appraisal* we classified 53 instruments. A large part of the identified instruments only addresses single aspects of social health and does not address the multidimensionality of the concept.

**Conclusion:** A structured overview of measures related to the conceptual framework of social health can help develop appropriate interventions for people with dementia and improve the conditions for living well with dementia. Furthermore, the creation of new standardized and terminologically consistent measures of social health is one of the tasks for future research in the field of social health.

### **Social connections and risk of incident mild cognitive impairment, dementia, and mortality in 13 longitudinal cohort studies of ageing**

**Authors:** Gowsaly Mahalingam, Suraj Samtani, Ben Chun Pan Lam, Darren M Lipnicki, Maria Fernanda Lima-Costa, Sergio Luis Blay, Erico Castro-Costa, Xiao Shifu, Maëleenn Guerchet, Pierre-Marie Preux, Antoine Gbessemehlan, Ingmar Skoog, Jenna Najar, Therese Rydberg Sterner, Nikolaos Scarmeas, Mary Yannakoulia, Themis Dardiotis, Ki-Woong Kim, Steffi Riedel-Heller, Susanne Röhr, Alexander Pabst, Suzana Shahar, Katya Numbers, Mary Ganguli, Tiffany F. Hughes, Ching-Chou H, Chang, Michael Crowe, Tze Pin Ng, Xinyi Gwee, Denise Qian Ling Chua, (representatives from SHARED work packages, Joanna Rymaszewska, Karin Wolf-Ostermann, Anna-Karin Welmer, Jean Stafford), Myrra Vernooij-Dassen, Yun-Hee Jeon, Perminder S Sachdev, **Henry Brodaty**, on behalf of the SHARED consortium for the Cohort Studies of Memory in an International Consortium (COSMIC)

**Background:** Good social connections are proposed to positively influence the course of cognitive decline by stimulating cognitive reserve and buffering harmful stress-related health effects. Prior meta-analytic research has uncovered links between social connections and the risk of poor health outcomes such as mild cognitive impairment, dementia, and mortality. These studies have primarily used aggregate data from North America and Europe with limited markers of social connections. Further research is required to explore these associations longitudinally across a wider range of social connection markers in a global setting.

**Research Objective:** We examined the associations between social connection structure, function, and quality and the risk of our primary outcomes (mild cognitive impairment, dementia, and mortality).

**Method:** Individual participant-level data were obtained from 13 longitudinal studies of ageing from across the globe. We conducted survival analysis using Cox regression models and combined estimates from each study using two-stage meta-analysis. We examined three social constructs: connection structure (living situation, relationship status, interactions with friends/family, community group engagement), function (social support, having a confidante) and quality (relationship satisfaction, loneliness) in relation to the risks of three primary outcomes (mild cognitive impairment, dementia, and mortality). In our partially adjusted models, we included age, sex, and education and in fully adjusted models used these variables as well as diabetes, hypertension, smoking, cardiovascular risk, and depression.

**Preliminary results of the ongoing study:** In our fully adjusted models we observed: a lower risk of mild cognitive impairment was associated with being married/in a relationship (vs. being single), weekly community group engagement (vs. no engagement), weekly family/friend interactions (vs. not interacting), and never feeling lonely (vs. often feeling lonely); a lower risk of dementia was associated with monthly/weekly family/friend interactions and having a confidante (vs. no confidante); a lower risk of mortality was associated with living with others (vs. living alone), yearly/monthly/weekly community group engagement, and having a confidante.

**Conclusion:** Good social connection structure, function, and quality are associated with reduced risk of incident MCI, dementia, and mortality. Our results provide actionable evidence that social connections are required for healthy ageing.

### **The influence of the social environment on the functioning and well-being of the person with dementia: a qualitative study**

**Authors:** Marieke Perry, Eline Verspoor, Rene Melis, Myrra Vernooij-Dassen

**Objective:** Dementia negatively affects the interaction with the social environment by changes in cognition and behavior. On the other hand, the social network may be an important enabler for persons with dementia to make use of their remaining capacities. Mechanisms driving and explaining these interactions are unknown. We aimed to explore how the social environment impacts the functioning and well-being of a person with dementia.

**Methods:** We performed a qualitative case study, conducting semi-structured interviews. We used the grounded theory approach, as defined by Strauss and Corbin, including alternate data collection and analysis. Per case, the person with dementia, the primary caregiver, significant kin or non-kin network member and the primary healthcare professional were interviewed individually. The interviews were conducted using a topic guide, which was adjusted according to preliminary analyses. Transcripts were coded by two researchers independently, where after axial codes, categories were formulated and a theory including a core phenomenon was identified with the entire research team.

**Results:** Analyses revealed 'creating a safe environment' as a core phenomenon. This relates to encouragement and the created anchor points of the environment to compensate for the inevitable feelings of loss of control that persons with dementia experience. The ways safety is created include active acts of involvement and participation, trust, humor, reciprocity, appreciation and shared experiences. Suspicion, loss of initiative by the person with dementia and the inability to act and correcting by the environment were identified as major challenges to creating a safe environment.

**Conclusions:** A safe and supporting environment enables persons with dementia to use their remaining capacities. Active participation, trust, humor and reciprocity are key elements to create such a safe environment. These findings show that basic needs of persons with dementia for daily functioning and well-being are similar to these of all humans.

## **S2: Social functioning in people with dementia and its cognitive and psychiatric consequences**

### ***Symposium Overview:***

**Authors:** Andrew Sommerlad, Gill Livingston (University College London, UK), Hideki Kanemoto (Osaka University, Japan), Jennifer Bethell (University Health Network, Toronto, Canada)

Social functioning is fundamental to human experience. The profound social functioning impairments affecting people with dementia are distressing to them and their families and account for significant individual, family and societal burden. There are no effective treatments that improve this major aspect of dementia, so there is urgent need to characterise social functioning decline in dementia and its consequences to inform future therapeutic approaches. In this symposium, an international panel will present perspectives on social functioning in dementia from across the disease course.

### **Social participation and dementia risk**

**Authors:** Professor Gill Livingston, University College London

In this presentation, we will summarise the observational and interventional evidence linking social participation with dementia risk, the potential mechanisms, and consider what this evidence means for future clinical and policy interventions.

Social participation encompasses several concepts including social activity, contact and support. International observational study evidence finds people who participate less socially in mid or late-life have increased risk of developing dementia. More social contact and less loneliness are consistently associated with less dementia risk in studies with long and short follow-up. However, this is not true of perceived social support.

People who participate socially in late life may be able to do so because they are cognitively intact, so some studies limit their analyses to those without dementia over 10 years before follow-up or consider social participation trajectories. Within social activities, studies use heterogeneous definitions, some including individual activities such as crosswords as social activity, and others requiring group activities and some cognitively stimulating activities. Those with shorter follow-up periods find social activity is more protective, suggesting part of the effect is reverse causality.

The postulated mechanisms for social participation's effects include increasing cognitive reserve, which provides resilience to neuropathological damage, and improved brain maintenance related to a healthier lifestyle, lower stress response, reduced cellular ageing and inflammatory response. The relationship between social participation, depression and hearing is complex with each reinforcing the other and each being associated with dementia.

It is difficult to trial the effect of increasing social participation which might need unacceptable, impractical and long-term interventions (in line with findings that married compared to single people have lower dementia risk). Facilitator-led social group interventions have been small and short with inconsistent effects on cognition.

Overall, the increasing, consistent and biologically plausible evidence that social participation reduces dementia risk means that interventions should begin to be included within dementia prevention guidelines and considered in policy. Public health policy should be an important component through promoting participation in those at risk and improving the accessibility of buildings and cities. This should be targeted at those who are more isolated, and this is closely linked with socio-economic deprivation.

### **Impact of loneliness and social isolation in older people in Japan**

**Authors:** Hideki Kanemoto, Sumiyo Umeda, Yuto Satake, Yuma Nagata, Takashi Suehiro, Maki Suzuki, Manabu Ikeda  
Osaka University, Japan

A decline in social functioning is a hallmark of dementia and is associated with worsening cognitive impairment, various behavioral and psychological symptoms, and caregiver burden. Since the feeling of loneliness is related to social function decline in people with mild cognitive impairment (MCI) and dementia, care for the social isolation that can cause loneliness is considered important in Japan, where the number of older people living alone is increasing.

In addition to dementia, late-onset psychosis is also known to be affected by loneliness and social isolation. Psychosis that develops after age 60 and does not involve organic or affective disorders is defined as very late-onset schizophrenia-like psychosis (VLOSLP) and is known to be different in quality from psychosis that develops at a younger age. Social isolation has been reported as one of risk factors of VLOSLP, and although people with VLOSLP are independent in daily life, their social functioning is impaired in a way that is different from dementia due to their abnormalities in the content of thinking. Therefore, social isolation and decline of social functioning are also major problems for VLOSLP. Longitudinally, people with VLOSLP are more likely than the general older population to progress to dementia including Lewy body disease and Alzheimer's disease subtypes. With the increasing importance of early diagnosis and intervention of these neurodegenerative diseases, identification and intervention of people with VLOSLP is a challenging but important topic.

We are now investigating the use of robots with communication capabilities aiming to improve loneliness and social isolation of older people living alone with MCI, mild dementia and VLOSLP. On the other hand, we have found that loneliness in MCI and mild dementia does not necessarily correlate with social isolation status, such as living alone, indicating that loneliness and social isolation among older people requires further research.

### **Insight into impaired social functioning in dementia**

**Authors:** Andrew Sommerlad<sup>1,2</sup>, Jessica Grothe<sup>3</sup>, Sumiyo Umeda<sup>4,5</sup>, Manabu Ikeda<sup>4</sup>, Hideki Kanemoto<sup>4</sup>, Gill Livingston<sup>1,2</sup>, Melanie Lippa<sup>3</sup>, Katherine P. Rankin<sup>6</sup>, Steffi G. Riedel-Heller<sup>3</sup>, Susanne Röhr<sup>3,7,8</sup>, Maki Suzuki<sup>9</sup>, Jonathan Huntley<sup>1,2</sup>

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- 7) Global Brain Health Institute (GBHI), Trinity College Dublin, Dublin, Ireland.
- 8) School of Psychology, Massey University, Manawatu, New Zealand.
- 9) Department of Behavioral Neurology and Neuropsychiatry, Osaka University United Graduate School of Child Development, Osaka, Japan.

**Background:** People with dementia commonly have impaired social functioning and may not recognise this. This lack of insight may result in worse outcomes for the person and their family carers. We aimed to characterise insight into social functioning in dementia, and describe its association with dementia severity.

**Methods:** Observational cross-sectional study of people aged >65 years with clinically diagnosed dementia and their family informants recruited from three sites in Germany, Japan and the United Kingdom. We used the Social Functioning in Dementia scale (SF-DEM), which assesses three domains: “spending time with other people” (domain 1), “communicating with other people” (domain 2), and “sensitivity to other people” (domain 3). We calculated lack of insight into social functioning as the discrepancy between the ratings of the participants with dementia and their informant. We described this discrepancy and the proportion of people with dementia whose rating was overestimated, congruent or underestimated compared to their family informant. We calculated the association between SF-DEM discrepancy score and total mini-mental status examination (MMSE) score and recall and attention/concentration subdomains.

**Results:** In 108 participants with dementia (50.9% women), mean age = 78.9 (standard deviation, SD 6.5) years, and mean MMSE score = 22.7 (SD 3.7). Ratings of patients and informants for domain 1 did not differ, but patient-rating was higher than carer-rating for domain 2 (patient-rated score 11.2 (2.5), carer-rated score 10.1 (3.4);  $p = 0.003$ ) and domain 3 (patient-rated score 9.7 (2.4), carer-rated score 8.1 (2.8);  $p < 0.001$ ). Sixty (55.6%) people with dementia overestimated their overall social functioning, 30 (27.8%) underestimated, and 18 (16.7%) gave ratings congruent with their family informant. Performance on the MMSE, and its sub-domains was not associated with SF-DEM discrepancy score.

**Conclusions:** We found that insight varies according to subdomains of social functioning, with people with dementia rating their communication and sensitivity differently, and usually higher than their carers. Researchers and clinicians should consider insight into social functioning in dementia as a multidimensional, rather than a unified, concept. Clinicians should help family members understand and adapt by explaining their relative with dementia’s lack of insight about aspects of their social functioning.

### **Social connection in long-term care homes**

**Authors:** Jennifer Bethell, KITE-Toronto Rehabilitation Institute – University Health Network, Toronto, Canada / Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, Canada

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**Background:** Social connection is a basic human need and is important for quality of life and care for residents in long-term care (LTC) homes. Research has established associations between aspects of social connection (e.g., social engagement, social support and loneliness) and mental health outcomes (e.g., depression). Yet, despite living in a congregate setting, those in LTC homes often experience poor social connection. Social connection has unique considerations for LTC homes, including that most residents are living with cognitive impairment or dementia, which requires a customized measurement approach.

**Research Objective:** The social connection in long-term care home residents (SONNET) study aims to improve measurement of social connection in LTC homes by addressing three specific questions: (1) What existing measures assess social connection in LTC homes and what are their psychometric properties? (2) What do residents, families, staff and clinicians consider to be the important elements of social connection in LTC homes? (3) Can a new measure accurately assess social connection in LTC home residents?

**Method:** The three study questions will be addressed through: (1) A systematic review of existing measures, where measures will be characterized using content analysis and CONsensus-based Standards for the selection of health Measurement INSTRUMENTS (COSMIN) methods; (2) Qualitative interviews with residents, families, staff and clinicians to understand important aspects of social connection, and, (3) Development and testing of a new measure of social connection in Canada and the UK.

**Preliminary results of the ongoing study:** Previous research will be discussed, including a scoping review summarizing research evidence linking social connection to mental health outcomes as well as strategies to build and maintain social connection during the COVID-19 pandemic. The SONNET study update will include preliminary findings from the systematic review and qualitative interviews, as well as development of a conceptual model and key considerations for a new measure.

**Conclusion:** Social connection is an important concept in LTC homes. A robust measure of social connection, developed specifically for this setting, will enable researchers and care settings to test the effects of interventions and to report outcomes at the individual-, home- and system-level.

## S3: Quality of Life and Psychological Strengths of Older People

### *Symposium Overview:*

**Background:** Aging has traditionally been studied from loss, disease, and dependency, limiting the conceptualization of Quality of Life (QoL) to health. The population group of older people characterize by its heterogeneity in which many older adults experience gains and age with good physical, psychological and social conditions. Ignoring these aspects can lead to ageism. It is necessary to offer a change of perspective in which older adults' QoL is analyzed from a multidimensional perspective where not only losses are taken into account but also the strengths of the person and the satisfaction of their higher needs (self-fulfillment, control, autonomy and pleasure).

**Research Objective:** This symposium aims to develop an assessment to improve QoL in older people through the promotion of their strengths.

**Method:** Four studies from different Spanish and Portuguese universities were presented

**Preliminary results on the ongoing study:** Older people have psychological strengths that enhance QoL.

**Conclusion:** This symposium seeks to promote QoL in older people from a change of perspective based on strengths in a society for all ages, in line with the decade of healthy aging (2021-2030) approved by the World Health Assembly and the United Nations General Assembly. Aging implies a range of personal and material losses to which older people must

adapt to maintain adequate levels of QoL. The stress model of Lazarus and Folkman (1984) states that the impact of stress on the person depends on the resources that they use to face the factors associated with stress. Previous research has supported the protective role of reminiscence, personal growth, digital skills, psychological well-being, acceptance, resilience, gratitude, and family functioning in QoL. Likewise, interventions focused on these variables have shown an increase in QoL. However, studies based on a strengths model are still very limited in older people.

### **Factors associated with older adults' quality of life**

**Authors:** López, J. & Pérez-Rojo, G. (Universidad San Pablo-CEU, CEU Universities, Madrid-Spain)

**Background:** The COVID-19 situation could be considered as an uncontrollable stressful life event. It may exert an impact on their quality of life (QoL). Not only COVID related variables, sociodemographic characteristics, health and appraisal but also personal resources could have an impact on QoL.

**Research Objective:** This study aims to assess the association between QoL and sociodemographic characteristics (sex, age), levels of health (physical health, emotional distress, and psychological well-being), COVID-19 related variables

(having got infected, having lost a loved person, being hospitalized or having had a loved one hospitalized), appraisal (fear of COVID-19 outbreak), personal resources (family function, resilience, acceptance and gratitude).

**Method:** QoL was assessed in all participants using CASP-19. A regression model was tested. 361 older adults in Spain participated in this study. The average age was 68.44 (SD= 5.31) and 62.8% were women (N= 227) and 58.2% were married (N= 210).

**Preliminary results on the ongoing study:** The results suggest that the nature of the COVID-19 may not be as relevant for the older adults' QoL as their levels of health, personal resources for managing COVID related and emotional status. We found that the older adults QoL increased when increased the levels of health, acceptance, gratitude, personal growth, and purpose in life and when there were lower scores in anxiety and depression. This model explained 66.4% of variance. In contrast, COVID-19 variables or appraisal did not show any association with QoL.

**Conclusion:** A better understanding of the factors associated with QoL could help health professionals to develop interventions that enhance it. Efforts to address older adults' QoL focusing on older adults' personal resources, perceived health and emotional status should be considered.

### **Protective and Vulnerability Factors of Posttraumatic Growth in Older Adults during the COVID-19 Pandemic**

**Authors:** Noriega, C., Sánchez-Cabaco, A. (University Pontificia de Salamanca-Spain & University San Pablo CEU, Madrid-Spain)

**Background:** The group population of older adults has suffered the highest number of deaths and impact on health associated with the COVID-19 pandemic. Many older adults can perceive this pandemic as a traumatic experience. However, many older adults may have also experienced positive changes, defined as post-traumatic growth (PTG). Several factors may enhance or hinder this possibility of development.

**Objective:** This study aimed to analyze if the effects of COVID-19 affection (direct and indirect), anxiety and depression on PTG would be mediated by the protective variables life purpose and resilience.

**Method:** 359 older adults over 60 years old completed a web-based survey during the COVID-19 pandemic including sociodemographic data, direct/indirect affectation by COVID-19, anxiety, depression, resilience, life purpose and PTG.

**Preliminary results on the ongoing study:** 63.2% of the participants were women and 58.2% were married. 89.1% had been infected by COVID-19, 1.7% had been hospitalized, 15.6% had lost a loved one and 17.2% have had a relative hospitalized because of COVID-19. Women ( $M = 56.77$ ;  $SD = 18.00$ ) showed higher levels of PTG than men ( $M = 52.41$ ;  $SD = 17.84$ ) ( $t = -2.19$ ;  $p < .05$ ). Differences in the outcome variables based on direct or indirect COVID-19 affection were not found. The path analysis showed that the effect of COVID-19 symptoms on PTG was mainly mediated by life purpose, and anxiety to a lesser extent. We also confirmed two indirect effects: (1) the negative effect of depression on PTG through resilience and life purpose assessed simultaneously; (2) the positive effect of resilience on PTG through life purpose. Results showed an excellent model fit to this model ( $\chi^2 = 3.759$ ;  $\chi^2/df = 5$ ;  $p = .585$ ;  $GFI = .997$ ;  $CFI = .999$ ;  $RMSEA = .001$ ).

**Conclusion:** The identification of protective and vulnerability variables is essential to protect older adults from mental disorders. This study highlights the need for developing interventions that aim to increase PTG by promoting life purpose and resilience.

### Older adults and digital skills

**Author:** Nieves Erades Pérez

Nieves Erades Pérez; Esther Sitges Maciá y Beatriz Bonete López (University Miguel Hernández de Elche, Spain)

**Background:** New technologies have many benefits for the quality of life of older people, but their use also carries risks and can transform older people in potential victims of cyber-attacks. The increase of ICT use has caused many older adults to be displaced from these social advances, resulting in greater isolation, negative feelings related to ICTs and less access to services.

Due to the absence of extensive and generalisable studies in this area with this population, we consider it necessary to analyse older people's behaviour in relation to ICT and the psychosocial variables that are related to their adaptation.

**Objective:** To determine the effect of different psychosocial variables that may be related to the adaptation to TIC and protection measures used in cyberspace in older adults.

**Method:** We have used a mixed research methodology: Firstly, a quantitative pilot study, analysing the variables descriptively; secondly, using qualitative interviews and an exploratory analysis. The next step is to design and validate a questionnaire that will include the 4 factors that we found relevant: victimisation, use of new technologies, fear of cybercrime and use of online protection barriers.

**Preliminary results on the ongoing study:** The 84% of the sample uses ICT more than one hour per day and 77% had not received training in TIC and their perception of online vulnerability is low. The need for social support for the management of these tools was observed. Older people who use ICT less are those who are not digitally literate, perceive themselves as more vulnerable in their use of ICTs and have no one to help them with these tools.

**Conclusion:** The identification of variables related to the use of TIC, the perception of vulnerability and the online protection of older adults is fundamental for the development of effective interventions. It would be desirable not only to offer them training in digitalisation but also to provide them with the social support they demand.



### **The person first: reflections about reminiscence, decision and person-centered attention to reduce the psychological impact of losses in Residential Care Facilities (RCF s)**

Rosa Marina Afonso (University of Beira Interior; CINTESIS@RISE, ICBAS, University of Porto, Portugal), Ana Saraiva Amaral (University of Coimbra, CINEICC; FPCE-University of Coimbra; PsyAssessmentLab, FPCE-UC, University of Coimbra; CICS, FCS-University of Beira Interior, Portugal) & Maria Miguel Barbosa (CICS- FCS, University of Beira Interior; CINTESIS@RISE, ICBAS, University of Porto; School of Medicine and Biomedical Sciences, University of Porto, Portugal)

**Background:** Although the losses associated with aging activate additional psychological resilience resources, dependency settings, which often require admission to Residential Care Facilities (RCF's), need adequate care so that the person can maintain his/her dignity and quality of life. The activation of mechanisms for regulating losses and the preservation of the identity and autonomy of the person respecting his/her decision-making capacity are central for the preservation of the well-being of people with dependence. Portuguese RCF's are mainly based on care models that are opposed to the models of attention centered on the person, which value the person's potential and decision-making capacity. The COVID-19 pandemic has tested RCF's, highlighting their weaknesses and limitations.

**Objective:** This study aimed to identify ways to improve the provision of care in RCF's during the pandemic.

**Method:** This is a qualitative study, with data collection through an online questionnaire. Participants were invited to indicate strategies to improve the provision of care to elderly residents in RCF's. The study included 198 RCF's workers during the COVID-19 pandemic. Content analysis of the collected data was performed.

**Preliminary results on the ongoing study:** The results indicate that the strategies that RCF's workers consider most necessary are at the level of human resources, also highlighting the need for greater proximity, affection and attention to residents, the personalization of care and the valorization of the resident person and his/her opinions. These are considered by the participants as central strategies for the quality of care and satisfaction of RCF s workers.

**Conclusion:** The needs identified are in line with the guiding principles of Person-Centered Care. The use of reminiscence as a strategy for valuing the person and his/her identity, as well as the promotion of self-determination, evaluating and allowing the person to make decisions may be central to meeting the needs identified at the level of care. The necessary transition from RCF's in Portugal to paradigms of centered care is thus reinforced by the results of this study.

## **S4: Mild Behavioral Impairment. Assessment, biological and clinical factors in the cognitive impairment continuum**

### ***Symposium Overview***

Dr. Onésimo Juncos-Rabadán, Faculty of Psychology, University of Santiago de Compostela, Spain

Mild Behavioral Impairment (MBI) is a diagnostic construct defined by the later-life emergence of persistent neuropsychiatric symptoms (for example, apathy, anxiety, depression, amongst others) displayed by older adults, with the aim to identify individuals at increasing risk of future dementia. The construct is also related to AD biomarkers including beta-amyloid, tau, and cerebral atrophy. For the assessment of MBI, researchers developed the Mild Behavioral Impairment Checklist (MBI-C) (Ismail et al., 2017) evaluating five domains: decreased motivation, affective dysregulation, impulse dyscontrol, social inappropriateness, and abnormal thought and perception.

The purpose of this symposium is to present four contributions that allow increasing our knowledge of the added value of MBI in clinical diagnosis of neurocognitive disorders.

Firstly, Dr. Maurits Johansson from Lund University (Malmö, Sweden) presents an overview of the role of MBI in the contemporary clinical diagnostic criteria for AD and some perspectives for treatment in the future.

Then, Dr. Sabela C. Mallo from the University of Santiago de Compostela (Spain) and Dr. Byron Creese from the University of Exeter (UK) will talk on methodological issues regarding the MBI-C, the underlying structure of the instrument and the impact of the self and informant ratings in the results of the questionnaire.

Dr. Martin Vyhnalek from the Faculty of Medicine of Prague (Czech Republic) will discuss the MBI profile and severity in a sample of  $\beta$ -amyloid positive individuals with amnesic Mild Cognitive Impairment compared to Cognitively Normal older adults.

Lastly, Dr. Camilla Elefante and Giulio Emilio Brancati from the University of Pisa (Italy) will analyze the relationships and boundaries between MBI and late-life major primary psychiatric disorders in patients who attend to psychogeriatric settings.

## Reference

Ismail Z et al. *J. Alzheimers Dis.* 2017; 56(3),929-938

## The role of Mild Behavioral Impairment in a future era of Alzheimer's disease modifying treatments

**Author:** Maurits Johansson, MD, PhD, Lund University.

Early clinical risk markers of neurodegenerative diseases, such as Alzheimer's disease (AD), can be considered fundamental in a new era with novel disease modifying treatments on the horizon. Mild Behavioral Impairment (MBI) is a diagnostic construct defined by the later-life emergence of persistent neuropsychiatric symptoms (e.g. apathy, anxiety, depression, amongst others) displayed by older adults, with the aim to identify individuals at increased risk of future dementia. According to established MBI criteria the syndrome can co-occur with mild cognitive impairment due to a neurodegenerative disease or even precede it, and in fact, MBI is most meaningful when reported in conjunction with cognitive status, as MBI-associated risk is moderated by cognitive status. MBI symptomatology has been reported prevalent among older adults, as well as in patients with early stages of neurodegenerative disease. Symptoms of MBI are further associated with several clinically negative outcomes, such as a reduced quality of life, increased caregiver burden and earlier institutionalization. In support of the MBI construct, several previous reports have demonstrated MBI to be predictive of future cognitive decline, dementia, or AD. The construct is also related to AD biomarkers including beta-amyloid, tau, and cerebral atrophy. Intriguingly, an earlier study indicates that MBI even can precede memory deficits in its association with early tau deposition in cognitively unimpaired elderly with confirmed amyloid-beta pathology, strengthening its position as an early marker of dementing biochemical processes. Despite this growing evidence of being both prevalent and an early prognostic marker, MBI is still only given diminutive consideration in contemporary clinical diagnostic criteria for AD. Perhaps so since the added value of MBI in such criteria has rarely been investigated. Consequently, cognitively unimpaired subjects with positive MBI and AD biomarker status face the risk of not being eligible for a future disease modifying AD treatment since they formally do not fulfill AD diagnostic criteria. Hence, studies exploring the added value of MBI in clinical diagnostic criteria for neurocognitive disorders are prompted.

## The assessment of Mild Behavioral Impairment (MBI): Some methodological issues

**Authors:** Sabela C. Mallo<sup>1</sup>, Byron Creese<sup>2</sup>, Eulogio Real-Deus<sup>1</sup>, Zahinoor Ismail<sup>3</sup>, Arturo X Pereiro<sup>1</sup>, and Onésimo Juncos-Rabadán<sup>1</sup>

(1) University of Santiago de Compostela, Santiago de Compostela, Spain, (2) University of Exeter, UK, (3) University of Calgary, Canada

**Objective:** The assessment of MBI involves two important issues: 1) to know the underlying structure of the Mild Behavioral Impairment Checklist (MBI-C) a questionnaire designed to evaluate Neuropsychiatric Symptoms (NPS) in pre-dementia states; and 2) to consider self and proxy (i.e., study partner) symptom ratings that may not capture comparable samples. Our objective is to give some answer to these questions: first, to analyze the underlying structure of the MBI-C at baseline and follow-up using Multidimensional Scaling (MDS) and two, to determine how self and proxy ratings and the choice of rating type impact in the results of the MBI-C.

of the MBI-C at baseline and follow-up using Multidimensional Scaling (MDS) and two, to determine how self and proxy ratings and the choice of rating type impact in the results of the MBI-C.

**Methods:** To analyze MBI-C structure, 200 Subjective Cognitive Decline and Mild Cognitive Impairment patients from the CompAS longitudinal study completed baseline and follow-up assessments. Two-step bidimensional weighted dichotomous MDS were performed. All items were included in the first step. Items closely associated with each dimension (1 SD above or below the mean) were selected in a second step to obtain the final models solution. We will also present a review of the literature on the importance of self and proxy MBI-C ratings. We will also present new empirical evidence based on data from over 10,000 cognitively normal.

**Results:** Results from baseline and follow-up showed two dimensions: Dimension I (right-left) differentiate high and low emotional activation and Dimension II (top-down) high and low behavioral activation. The combination of both generates 4 quadrants: resistance, restlessness, flattening and desolation. The final models were built considering the most relevant items, with little differences between baseline and follow-up. The good fit of the models, type of two-dimensional solution and group weights were similar in baseline and follow-up. Regarding our second objective, the results suggest that self and proxy ratings may not capture comparable samples and that the choice of rating type can indeed impact the conclusions drawn from analysis.

**Conclusions:** The 4 quadrants identified could be the most useful NPS to determine risk factors for predementia patients. Also, the findings suggest that the way of applying the MBI-C has relevant implications.

## References

Ismail Z et al. *J. Alzheimers Dis.* 2017; 56(3),929-938

## Mild behavioral impairment in prodromal Alzheimer's disease and its association with APOE and BDNF risk genetic polymorphisms

**Authors:** Veronika Matuskova<sup>1</sup>, Katerina Veverova<sup>1</sup>, Dylan Jester<sup>2,3</sup>, Vaclav Matoska<sup>4</sup>, Zahinoor Ismail<sup>5</sup>, Katerina Sheardova<sup>6</sup>, Hana Horakova<sup>1</sup>, Jan Laczó<sup>1</sup>, Jakub Hort<sup>1</sup>, Martin Vyhnaek<sup>1</sup>

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**Objective:** We aimed to examine the profile and severity of mild behavioral impairment (MBI) in a sample of  $\beta$ -amyloid positive individuals with amnesic mild cognitive impairment (aMCI) compared to cognitively normal older adults (CN). Within aMCI, we further examined the potential influence of APOE and BDN Frisk genetic polymorphisms on MBI severity.

**Methods:** We included 64  $\beta$ -amyloid positive aMCI participants and 50 CN older adults from the Czech Brain Aging Study. The participants underwent neurological, comprehensive neuropsychological examination, APOE and BDNF genotyping, and magnetic resonance imaging. MBI was diagnosed with the Mild behavioral impairment checklist (MBI-C) developed for MBI case detection, and the diagnosis was based on the MBI-C total score  $\geq 7$ . Additionally, self-report instruments for anxiety (the Beck Anxiety Inventory) and depressive symptoms (the Geriatric Depression Scale-15) were administered. The participants were stratified based on the presence of at least one risk allele in genes for APOE (i.e., e4 carriers and non-carriers) and BDNF (i.e., Met carriers and non-carriers). We used linear regressions to examine the between-group differences.

**Results:** MBI symptoms (MBI-C total score  $\geq 1$ ) were present in 28% CN and 83% aMCI. Almost half (48.4%) of the aMCI individuals met the criteria for the MBI syndrome. Compared to the CN, the aMCI group displayed more affective, apathy, and impulse dyscontrol symptoms ( $p < 0.001$ ) but not social inappropriateness or psychotic symptoms. Furthermore, aMCI participants reported more depressive ( $p < 0.01$ ) but similar anxiety symptoms to CN on self-report measures. Within the aMCI group, APOE e4 and BDNF Met carriers did not differ from non-carriers in the severity of NPS in either instrument. However, the results suggested that an interaction between these polymorphisms influenced self-reported anxiety ( $p = 0.034$ ), with Met carriers/e4 non-carriers reporting the highest anxiety levels.

**Conclusion:** MBI is frequent in prodromal Alzheimer's disease and characterized by affective, apathy, and impulse dyscontrol symptoms. APOE and BDNF risk genetic polymorphisms did not influence the NPS severity when considered separately; however, their interaction might influence anxiety, which warrants further investigation.

The research has received funding from the EEA/ Norway Grants 2014-2021 and the Technology Agency of the Czech Republic – project number TO01000215, Ministry of Health of the Czech Republic, grant no. 19-04-00560, National Institute for Neurological Research (Programme EXCELES, ID Project No. LX22NPO5107) - funded by the European Union – Next Generation EU and GAČR 22-33968S.

#### **Mild Behavioral impairment (MBI) and late-life psychiatric disorders: Differential clinical features and outcomes.**

**Authors:** Camilla Elefante<sup>1</sup>, Giulio Emilio Brancati<sup>1</sup>, Filippo Baldacci<sup>2</sup>, Lorenzo Lattanzi<sup>1</sup>, Roberto Ceravolo<sup>2</sup>, Giulio Perugi<sup>1</sup>

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Mild Behavioral Impairment (MBI) refers to a late-onset neurobehavioral syndrome in which neuropsychiatric symptoms (NPS) represent early markers of dementia. Though being a promising diagnostic category for neurobiological research, in daily clinical practice, the boundaries and relationships between MBI and late-life psychiatric disorders are yet to be established. Particularly, no studies have been conducted so far on the prognostic implications of an MBI diagnosis in the psychogeriatric context.

For these reasons, since June 2020, we are conducting a prospective longitudinal study on MBI in psychogeriatric patients. On June 2022, 144 elderly patients ( $\geq 50$  years) referred to the outpatient clinic of the 2nd Psychiatric Unit of the University of Pisa had been recruited. Patients had been diagnosed with a primary psychiatric disorder (N=73, 50.6%), MBI (N=40, 27.8%) or dementia (N=31, 21.5%). Patients with MBI showed a significantly higher age at onset of psychiatric disorders and depressive episodes than patients diagnosed with primary psychiatric disorders. MCI and vascular leukoencephalopathy were also more common in patients with MBI. Moreover, compared to primary

psychiatric disorders, MBI was associated with a significantly higher psychopathology severity, especially in the apathy and negative symptoms domain.

Preliminary longitudinal analyses were also performed on a subsample of 83 patients followed-up for at least 3 months (on average for one year): at baseline 44 patients had been diagnosed with primary mood disorders including 23 patients in remission and 21 patients with current mood episodes; 22 patients had MBI and 17 were diagnosed with dementia. While at follow-up patients with mood episodes showed a significant decrease in psychopathology severity and increase in global functioning, those with MBI had no significant improvements.

In conclusion, MBI is a common condition in psychogeriatric settings and shows distinctive clinical features that may help differential diagnosis. Moreover, the presence of MBI in patients with late-life psychiatric disorders may affect both clinical and functional outcomes. The recognition of patients with MBI symptoms, including apathy, might be useful for the early detection of individuals with poor prognosis.

## **S5: COGNISANCE: Co-Designing Dementia Diagnosis And Post Diagnostic Care**

### *Symposium Overview*

Prof Frans Verhey, Alzheimer Centrum Limburg, Maastricht University  
Prof Henry Brodaty, Professor of Ageing and Mental Health, UNSW SYDNEY

People with dementia can live full and meaningful lives after diagnosis, but still many people with dementia and their family care partners are dissatisfied with the process of getting a diagnosis and may also receive limited, if any, post-diagnostic support. The international COGNISANCE project aims to improve the communication of dementia diagnosis and post-diagnostic support. It is a 3-year project supported by the EU Joint Program for Neurodegenerative Disease Research (JPND), with partners in Australia (lead), Canada, Netherlands, UK, and Poland.

Based on the experiences of people with dementia, family care partners and health care professionals, and in partnership with them, we codesigned a website that provides structured information, resources and tools tailored to empower people with dementia and their family care partners. Effects of the campaign was evaluated using the RE-AIM framework. From our collective experiences, a 'playbook' was produced outlining how to deliver similar campaigns in other countries. Through these activities we aimed to improve health care practitioner's diagnostic habits and provision of support, as well as increase help seeking by people with dementia and care partners.

In this symposium, you will hear about the latest results of four workpackages of this COGNISANCE project:

1. A general overview of the rationale, goals, and design of the project will be presented by the principal investigator
2. Data of a qualitative study will be presented on the experiences of receiving a diagnosis, and the barriers and facilitators towards post-diagnostic support, as well as on the differences and similarities between countries.
3. The development of an online actionable guide Forward with dementia ([www.forwardwithdementia.org](http://www.forwardwithdementia.org)) using a person-centered approach with target audience groups. The aim of this online guide was to support decision making and to help people find their way forward from a diagnosis of dementia.
4. Data will be presented of the evaluation of the implementation and perceived impact of the Forward With Dementia websites and campaign in the five participating countries

### **Co-Designing Dementia Diagnosis And Post Diagnostic Care, The Cognisance Project: Forward with Dementia (FWD)**

COGNISANCE Team\*

Despite many national guidelines for diagnosis and management of dementia, persons diagnosed with dementia and their family carer partners are often dissatisfied with the diagnostic process and receive limited post-diagnostic support.

Teams from Australia, Canada, the Netherlands, the UK and Poland co-designed and delivered, in partnership with people living with dementia, family care partners and health care professionals, online packages, toolkits and campaigns to improve the dementia diagnostic process and post-diagnostic support.

Our website [www.forwardwithdementia.org](http://www.forwardwithdementia.org) (FWD) offers information in English, Dutch, French and Polish for people living with dementia, carers and health care practitioners developed based on published evidence, national dementia guidelines and, across five countries, from surveys focus groups and input from each target group; and refined after field testing. FWD uses engaging language and graphics to provide personal stories, tips, advice and local contacts for assistance. The FWD website, and in two countries an online tool-kit for curating the information, was promoted with social media, regionally-specific targetted campaigns, webinars, local events, television coverage and presentations to the public and to health care providers. The effectiveness of the internationally varied campaigns, evaluated using RE-AIM framework, demonstrated variable Reach and Engagement; Adoption, Implementation and Maintenance are still being assessed. In collaboration with the World Health Organisation, Alzheimer's Disease International and Dementia Alliance International we have developed a playbook that facilitates FWD to be adapted and implemented internationally.

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## **Experiences in coping with dementia and the role of support; a qualitative study of the COGNISANCE project.**

**Objective:** People with dementia and informal caregivers utilize a variety of coping strategies to deal with the consequences of a dementia diagnosis. In the beginning they often rely on informal support, but research shows that they could benefit from formal support. The societal and cultural context may also influence how people deal with dementia. Yet, most research that takes place across countries or cultures provides little detail about cross-country differences or similarities. The purpose of this qualitative study is firstly to describe experiences of receiving a diagnosis and experiences, barriers and facilitators towards post-diagnostic support and secondly, and to examine differences and similarities between countries

**Methods:** A cross-country qualitative study with people with dementia recently diagnosed and their informal caregivers was carried out in Australia, Canada, the Netherlands and Poland between March 2020 and September 2020. A wide range of recruitment strategies and methods was adopted to aid recruitment and participation during the covid pandemic. Participants could participate in (online) Individual and dyadic interviews as well as online focus groups. To examine experiences after diagnosis and support, methods utilized 'projective techniques' whereby participants could project their experiences onto two fictional characters (a person with dementia, and her informal caregiver). A multi-step iterative inductive qualitative content analysis was carried out.

**Results:** 23 people with dementia and 53 informal caregivers participated. The following themes were identified; 'getting a diagnosis, 'coming to terms with dementia', 'support from friends and family', 'formal support', 'adapting to the role of informal caregiver' and 'living well with dementia'. 'Formal support' and 'support from friends and family' could serve as a barrier, facilitator or both in relation to 'coming to terms with dementia' and 'adapting to the role of informal caregiver'. Coming to terms was a necessity for living well with dementia. 'Adapting to the role of informal caregiver' was an ongoing adaptation process that was part of 'coming to terms with dementia' and extended into 'living well with dementia'. Similarities of the themes across countries were larger than the differences.

**Conclusion:** Support should enable the process of coming to terms with dementia in a culturally appropriate manner.

## **"FORWARD WITH DEMENTIA" CO-DESIGN OF AN ONLINE GUIDE FOR DEMENTIA PATIENTS AND FAMILIES**

**Authors:** Wilcock<sup>i</sup>, Poole<sup>ii</sup>, Robinson<sup>ii</sup>, Rait<sup>i</sup> on behalf of the COGNISNACE consortium<sup>iii-vii</sup>.

University College London<sup>i</sup>, Newcastle University, University of New South Wales<sup>iii</sup>,  
University of Sydney<sup>iv</sup>, McGill University<sup>v</sup>, Maastricht University<sup>vi</sup>, Wroclaw Medical University<sup>vii</sup>.

**Objective:** Through a co-design process we set out to improve post diagnostic dementia support as part of a wider international programme. A partnership approach was taken with people living with dementia, carers and healthcare professionals.

**Methods:** A scoping review and thematic analysis of existing national and international dementia policies guidelines and campaigns were undertaken to identify gaps and to create a core evidence base. We established co-design local working groups in each of the five partner countries. A series of 20 objective led iterative workshops, four in each country over a period of six months were held. In this way a prototype website was designed, built, populated, and refined. Evidence based English language content was generated and edited collaboratively, core themes were derived from operationalising national Dementia Clinical Guidelines, utilising current evidence, responding to co-designers' requests and formative research findings. The website was then adapted regionally through translation, links to local information, and including culturally appropriate images, stories and news items. These adapted sites were then user tested and further refined ahead of awareness raising campaigns.

**Results:** We co-designed a dementia friendly accessible resource to support people living with dementia, carers and healthcare professionals for the first 12 months following diagnosis. The workshops determined that the resource should be available online, current, practical, and relevant at a regional and individual level. The need for a practical, empathetic and individually tailored resource was identified. Language, tone, and online accessibility were essential, particularly for people living with dementia. It was important that the content be written and presented specifically and discretely for people recently diagnosed with dementia, for care partners and for healthcare professionals.

**Conclusion:** We set out to improve the dialogue around dementia diagnosis. To empower patients and practitioners through providing information, practical tools, improving awareness of and access to available local supports. Through a person-centred approach with target audience groups together we have developed an online actionable guide [Forward with dementia](https://www.forwardwithdementia.org) (<https://www.forwardwithdementia.org>) which supports decision making and to help people find their way forward from a diagnosis of dementia.

## **Evaluating the Forward with Dementia Campaign in Five Countries**

**Authors:** Isabelle Vedel<sup>1</sup>, Shelley Doucet<sup>2</sup>, Alison Luke<sup>2</sup>, Carrie McAiney<sup>3</sup>, Pam Jarrett<sup>4</sup>, Laura Rojas-Rozo<sup>1</sup>, Amy E. Reid<sup>2</sup>, Emma Conway<sup>3</sup>, Ana Saavedra<sup>1</sup>, Luke MacNeill<sup>2</sup>, Julia Besner<sup>5</sup>, Rachel Thombs<sup>5</sup>, and The COGNISANCE Consortium.

**Authors if the 4 presenters also count for the authors :** Isabelle Vedel, Shelley Doucet, Alison Luke, Carrie McAiney, on behalf of the The COGNISANCE Consortium

1: Department of Family Medicine, McGill University; 2: Centre for Research in Integrated Care, University of New Brunswick Saint John; 3: University of Waterloo; 4: Horizon Health Network; 5: University of New Brunswick Saint John

Word Count: 317/350

**Objective:** The Forward with Dementia (FWD) project is a dementia awareness campaign that was implemented across five countries. The campaign included components such as websites (in four languages – [www.forwardwithdementia.org](http://www.forwardwithdementia.org)), webinars, newsletters, and social media posts. This campaign is the fourth phase of a three-year longitudinal mixed methods study with five phases in five countries: Canada (New Brunswick, Ontario, Quebec), Australia, the Netherlands, United Kingdom, and Poland. The purpose of this study is to evaluate the implementation and perceived impact of the FWD websites and campaign in the five participating countries.

**Methods:** The RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance) was used to guide the campaign evaluation. The evaluation was drawn from Google Analytics, surveys, individual interviews, and report cards. Data collection occurred between September 2021 and May 2022.

**Results:** There were approximately 124,945 page views across all FWD websites during the campaign. Participants of the surveys and interviews reported engaging in a range of campaign activities. They read information about receiving a diagnosis, stories from persons with lived experience in dementia, news, and attended webinars (or watched recording). Most participants rated the information that they read on the website moderately, very, or extremely helpful. In addition, the majority of respondents said that they plan to visit the website again. During the interviews, participants shared that the website was easy to navigate, practical, and that it maintains a positive tone related to dementia. The co-design aspect of the campaign was considered a strength.

**Conclusion:** The findings indicate that the FWD campaign can provide support for people who have recently received a dementia diagnosis and their family or friends. In addition, the campaign may provide health and social care providers with a new source of information and tools to use and share with their clients. These results informed the development of a playbook to guide regions and countries beyond those involved in this project to implement similar initiatives.

## **S6: Adapting and implementing WHO iSupport among dementia caregivers worldwide: users' perspectives and future development (Session I)**

### *Symposium Overview:*

The WHO Global Action Plan against Dementia calls for “at least 75% of member states providing carer support and training by 2025”. In response to the global target, WHO has developed iSupport aiming to provide support for caregivers of people living with dementia. The generic WHO iSupport has been translated and adapted in 39 countries and 37 languages so far. The adapted versions of WHO iSupport are now being implemented worldwide, usually as an online program for caregivers. The feasibility, accessibility, effectiveness and sustainability of the iSupport program in different cultural context is now being explored extensively. This symposium aims to share the up-to-date research findings and lessons learned on the adaptation and implementation process and users’ perspectives from diverse cultural background. It will include seven presentation and be divided into sessions: 3 presentations on Session I and 4 presentations on Session II.



**Session I:** The first presentation will be dedicated to overviewing the development and the progress of adaptation and implementation of WHO iSupport. The second presentation will focus on the adaptation of iSupport in Uganda. The presentation will inform the utility of iSupport in Sub-Sahara Africa. Based on individual semi-structural interview data from Tunisia, the third presentation will highlight that caregivers' experience and needs are valuable for cultural adaptation of iSupport.

**Session II:** The first presentation will demonstrate how facilitator-enabled iSupport intervention would change the interaction and engagement in learning among Chinese caregivers living in Australia and Greater China. The second presentation will focus on adapting iSupport in Switzerland using a community-based participatory approach. The third presentation will show the potential benefit of raising awareness of the Russian society about dementia after the implementation of iSupport through digital technologies. The fourth presentation will report on the co-design of an adapted version of iSupport for young caregivers.

The symposium is expected to inform further development, improvement and implementation of WHO iSupport for diverse cultural background. This will be not only valuable information for participants who are interested in iSupport but also for those (interested in) investigating interventions developed in another cultural setting.

### **iSupport: the online support program for caregivers of people with dementia**

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**Objective:** In this first presentation, we will present iSupport, WHO's skills training and support program for caregivers of people living with dementia, and summarize the theoretical and empirical background for its development and cultural specific adaptations, and the lessons learned so far. WHO iSupport consists of 23 sessions in total, covering five modules: (a) what is dementia (one session); (b) being a carer (four sessions); (c) caring for me (three sessions); (d) providing everyday care (five sessions) and (e) dealing with changing behaviour (ten sessions).

**Methods:** The overview that we will present in this session will be based on the fast growing evidence on the adaptation and implementation of iSupport described in the scientific literature.

**Results:** First steps have been undertaken to translate and adapt WHO iSupport systematically and culturally fair for several countries and specific target groups and first studies on the impact have been carried out. Published results from India, Portugal, Australia and Brazil will be summarized, also discussing some experienced barriers for implementation related to the way the intervention is provided and implemented, also related to cultural issues.

**Conclusion:** The scaling of programs like WHO iSupport remains challenging. Ongoing research shows that interventions for caregivers of people living with dementia especially in LMICs such as India require further consideration. However, low uptake and adherence help us better understand which barriers caregivers face and how future research might tailor iSupport and other online programs better to carers' needs.

Support and training programmes such as iSupport, are more important than ever in the context of the ongoing COVID-19 pandemic. They present a real opportunity to help to reach the global target set by WHO that 75% of countries will provide support and training programmes for caregivers of people living with dementia by 2025.

### **Cultural adaptation of the WHO-iSupport intervention for caregivers of persons with ADRD in Uganda**

**Authors:** Joy Louise Gumikiriza - Onoria, Denis Buwembo, Kamada Lwera, SEEHER Katrin, Mark Kaddumukasa, Janet Nakugudde, Roy Mayega and Noeline Nakasujja

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**Background:** Family caregivers of persons with ADRD face major stressful emotional, social and economic burdens, and the negative consequences associated with caregiving are well documented. Given the projected global increase in the number of people with dementia (82 million by 2030 and 152 million by 2050), plus a current Dementia prevalence among persons 60 years and older in Uganda, ranging from 5.5% to 20%, there is paucity of information regarding the psychotherapeutic management of challenges that family caregivers of persons with ADRD go through in many settings in sub-Saharan Africa, including Uganda. This study will contribute to the cultural adaptation of the WHO-iSupport that is an appropriate intervention for caregivers of persons with ADRD in Uganda.

**Objective:** To investigate the current approaches that caregivers use in the support of persons with ADRD, so as to inform the adaptation of the WHO iSupport intervention for Uganda.

**Methods:** This is a cultural adaptation study involving adaptation and pre-test the WHO-iSupport for family caregivers of persons with ADRD in Wakiso, Uganda. We are using a group consensus method that includes a professional translator and independent groups of bilingual experts. Caregivers of patients with ADRD are being recruited into the study. Data will be collected by the researcher and trained research assistants.

**Outcomes:** The primary outcome of this study is the adaptation of the WHO-iSupport psychotherapy. **Analysis:** Primary analyses will be based on Intention to treat (ITT) principle to avoid any biases that may occur by subjective choice of ineligible subjects. Summary statistics like age will be given as a mean (SD) while for categorical data will be given as a proportion and summarized in tables and graphs.

**Utility:** The proposed study is instrumental as it will be the first known study in our setting that provides a step-by-step guide in the cultural adaptation of an intervention for care giving of persons with ADRD. The A-iSupport is a caregiver focused intervention, that promises better health and care outcomes for family caregivers of persons with ADRD, thus reducing the health care load on mental health workers.

### **Preparing for implementing "iSupport" in Tunisia: Experience and needs of caregivers of persons with dementia**

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**Context:** Caregivers of persons with Alzheimer's disease or related dementia (ADRD) are essential for a better quality of life of those they care for. Their role can have a severe impact on their own physical and mental health, as well as on their social and financial situation, according to the current literature. For this reason, WHO has provided the iSupport tool to provide support to caregivers of people with ADRD. Its adaptation and implementation in Tunisia is challenged by the lack of Tunisian data concerning the experience and needs of this population.

**Objectives:** To explore, in cooperation with the WHO, the experience of caregivers of persons with ADRD in Tunisia, and their potential training and support needs.

**Methods:** A qualitative cross-sectional study using individual semi-directive interviews was conducted with caregivers of persons with ADRD in Tunisia. Interviews were recorded and transcribed. A thematic analysis of the interviews was performed by two researchers.

**Results:** Fifteen caregivers (11 women and 4 men) were interviewed on-site, or by telephone. Concerning their overall experience of caregiving, several main themes have emerged: The disruption of the relationship with the close relative (including the role switching, or the impossible mourning), the disruption of the relationship with oneself (including the forgetting of oneself, or the revision of priorities) and the disruption of the relationship with the others and the world (including the isolation and the withdrawal into the dyad caregiver - close relative with an ADRD, the lack of time, or the life as an unending daily struggle). When it comes to training and support needs, content and format preferences were identified.

**Conclusion:** This work helped us to adapt iSupport to the specific needs of caregivers in Tunisia. Data concerning their overall experience should provide an opportunity for a better adaptation of the social and policy context.

### **Adapting the World Health Organisation's 'iSupport' for Young Dementia Carers**

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**Objectives:** The number of children and adolescents who have caring responsibilities for a family member with dementia is rising. They need help to understand the illness, what changes are expected and how it can affect their family member. This presentation reports on the co-design of an adapted version of *iSupport* for young carers.

**Methods:** A theoretically driven co-design approach was followed, drawing on the lived experiences of young dementia carers. Young dementia carers (n=6, age 12-16) and professionals who work with young carers (n=5) took part in three workshops and provided individual contributions. Feedback was analysed and adaptations organized according to the dimensions of the Ecological Validity Model which addressed the structure and design, content, context and language. By focussing on these dimensions, we intended to increase the relevance, acceptability and comprehensibility of *iSupport* to this new target group while keeping the completeness of the theoretical premises underpinning it.

**Results:** Informed by feedback from participants a number of adaptations were carried out. Case scenarios included in the original *iSupport* were edited and other new ones created to place the focus on a young character with caring responsibilities within a family unit. These characters were young people with a parent or grandparent living with dementia. Also, illustrations portraying human characters representing a range of ages and ethnicities were added throughout. These characters emphasised the actions described within the carer case scenarios. Adaptations to the 'design' and 'language' were also carried out. For example, the quantity and complexity of the text was reduced as much as possible without compromising its readability and meaning. Clarity and appeal were increased by changing font size, style and including brighter colour schemes. Adaptations resulted in the creation of *iSupport for Young Carers*.

**Conclusions:** *iSupport for Young Carers* is the first e-health intervention of its kind and aims to support the mental health, knowledge, and skills of young dementia carers. This new adaptation provides opportunities for other countries and demographic groups to translate and adapt *iSupport for Young Carers* to their specific cultural context.

## **S7: Updates on Electroconvulsive Therapy practice and research**

Electroconvulsive Therapy (ECT) has evolved into a highly safe, effective, and well tolerated treatment for several severe psychiatric conditions and has become a necessary tool in the armamentarium of modern psychiatry. In this symposium we will review current state of the art clinical practices in Electroconvulsive Therapy (ECT) and new data on research.

More specifically Dr. Charles Kellner will review the elements of optimal patient selection/preparation in the ECT consultation and review clinical decision-making during a course of ECT (including electrode placement, stimulus dosing and other technical procedural details.)

Dr Raphael Braga will review the evidence for the use of ECT as an augmentation to antipsychotic medications strategy for the treatment of patients with schizophrenia who are resistant to medications, including clozapine.

Dr. Brent Forester will discuss the rationale and evidence base for the safety and efficacy of ECT for the treatment of Agitation in Dementia. Agitation is the most common neuropsychiatric symptom of dementia, accounts for about 12% of the total health and social care costs (approximately \$31billion/year). It is implicated in a vicious cycle of negative events including deterioration of family and professional relationships, increased risk of death, and increased caregiver burden, which is a significant predictor for institutionalization or death of patients with dementia. His presentation will highlight the existing evidence base and method of ECT delivery to target symptoms of severe agitation, and review an ongoing multi-site NIA funded clinical trial of ECT for severe agitation in dementia.

Dr Søren Dinesen Østergaard will discuss the suicide risk in patients receiving ECT which, despite the well-established anti-suicidal effect of ECT, remains high due to the severity of their underlying illness. He will present data quantifying and identifying risk factors for suicide among patients receiving ECT using data from nationwide Danish registers on 11,780 patients.

Dr. Georgios Petrides is the organizer and will moderate this symposium

## **S9: Green care farms and other innovative care environments for older people living with dementia: concept, mechanisms and impact on residents**

Chair: Prof. Dr. Hilde Verbeek, Maastricht University, the Netherlands

Key goals of the dementia care environment focus on increasing autonomy, supporting independence and trying to enable the own lifestyle of older people living with dementia for as long as possible. To meet these goals, innovative, small-scale and homelike care environments have been developed across the world that have radically changed of the physical, social and organizational aspects. This symposium presents examples of these facilities in the Netherlands (Green Care Farms) and Germany (Shared Housing Arrangements) for people living with dementia. These presentations cover the whole spectrum of long-term care from day-care services, assisted living facilities and nursing home care. It focuses on the concepts and their impact on older people living with dementia. Furthermore, it presents an overview of other innovative long-term care environments across the world, aiming to provide care for older people living with dementia. The first presentation will highlight working mechanisms of green care farms as alternative to nursing homes in the Netherlands and how these mechanisms can be transferred to other regular care settings. The second presentation focuses on the potential of green care farming as a daycare service for older people living with dementia from ethnic minority backgrounds. The third presentation discusses shared housing arrangements in Germany and has investigated the impact of a complex care intervention to reduce the number of hospital admissions for people living with dementia in these facilities. The final presentation provides an overview of international concepts of innovative care environments for older people living with dementia and gives insights in their characteristics.

## **S10: Needs assessment, the basic too for psychogeriatric care**

### **S11: Digital Health and Artificial Intelligence (AI) in Psychogeriatrics: Opening Multiple Frontiers**

#### ***Symposium Overview***

##### **Session Faculty:**

Ipsit Vahia, MD (Chair): McLean Hospital and Harvard Medical School, Boston, USA

Ana F. Trueba, PhD (Presenter): Harvard Medical School and Universidad San Francisco de Quito, Ecuador

Kreshnik Hoti, PhD (Presenter): University of Pristina, Republic of Kosovo

Bettina Husebø, MD (Presenter): University of Bergen, Norway.

**Overall Abstract:** The past decade has seen an explosion in the growth of technologies in mental health. Particularly, the scaled adoption of virtual care catalyzed by the COVID-19 pandemic has opened up new frontiers in how digital tools can be incorporated into psychiatry. No area of mental health care is as ripe for digital innovation as psychogeriatrics. In this session, an international group of clinicians and researchers will demonstrate how digital health in psychogeriatrics represents multiple cutting edges of innovation.

Our symposium will include 4 presentations, that represent original research from the USA, Ecuador, Norway, Kosovo and Australia. We will highlight clinical applications of these digital tools and aligned issues such as improved care access in low- and middle-income countries, the ethics of digital data collection and the potential for creating new liabilities.

We will focus on four distinct technologies and applications. Dr. Ipsit Vahia will discuss passive environmental sensing supported by signal processing and artificial intelligence (AI) in guiding treatment decision making, especially in dementia care. His presentation will include discussions on how AI can be incorporated into care while also preserving autonomy. Dr. Kreshnik Hoti will discuss the application of AI on voice-based signals to determine changes in pain levels and psychopathology. His presentation will include research conducted in collaboration between teams based in Australia and Kosovo and through a public-private partnership with a digital health startup. Dr. Ana Trueba will focus on digital interventions, specifically virtual reality (VR). She will present data from two studies, one from McLean hospital in the US, and the other from Ecuador that explore how VR can deliver evidence-based non-pharmacologic interventions. Dr. Bettina Husebø will present data from a project she oversees in Norway. Her talk will discuss how care in nursing homes can be improved by incorporating a range of digital approaches into nursing home care paradigms. A particular focus will be on the relationship between pain and behavior symptoms and dementia among nursing home dwelling older adults.

Thus, the symposium will address diagnostics, treatment and systems level care and how New technologies are shaping the evolution of psychogeriatrics worldwide.

#### **Digital Phenotyping of Behavior and Clinical Decision Making in Psychogeriatrics: Towards Precision Care**

Presenter: Ipsit Vahia, MD

**Introduction:** Appropriate and personalized pharmacologic management of behavioral and psychological symptoms in dementia (BPSD) is among the most complex clinical challenges in dementia care. Use of antipsychotics and mood stabilizers is common but accompanied by risk, including high likelihood of adverse effects that can lead to hospitalization or institutionalization. Information to support decision-making in these scenarios is typically obtained

from self-report/caregiver report. This presentation will focus on demonstrating how data obtained through digital phenotyping may augment clinical decision making.

**Methods:** This presentation will include information from 3 completed or ongoing studies. The first looks at radio wave based sensing as a way of passively monitoring behavior and dementia. The second uses wearables to track the impact of psychopharmacologic changes in dementia. The third study focuses on incorporating data from electronic media (e-mail, text messages) impact psychotherapy in early and late life

**Results and Discussion:** Preliminary results indicate that passive sensing is able to accurately identify patterns of behavior as well as circumscribed clinical events with a precision that exceeds the current standard of care. Data and insights gained from these three ongoing studies are helping develop best practice models that can impact clinical outcomes.

**Conclusions:** Collectively, the data in this presentation will demonstrate to clinicians a range of approaches towards developing precision care for older adults with dementia and psychiatric diagnosis. These approaches share the common theme of emphasizing the human element in care, while augmenting it with a range of data that provide objective collateral information to guide more precise decision making. The session will also discuss issues that will impact precision care, including the potential for creating inequities, translation to low income settings and countries as well as the matter of data privacy and security.

### **Seeing people living with dementia through the lens of technology: pain assessment and clinical impact**

Presenter: Kreshnik Hoti, PhD

**Objective:** Due to communication difficulties, pain assessment in people living with dementia (PLWD) is challenging. In this study we explore vocalisations and facial expressions during assessment of pain and provide evidence in regards to clinical impact of pain assessment, as part of a targeted care program.

**Methods:** In order to determine key facial and vocalisation features and their relationship with pain we analysed a total of 22,194 pain assessments in PLWD ( $n = 3,144$ ) from 34 different Australian residential aged care homes. Pain assessments were conducted using PainChek, which is a technology-based system comprised of three key components: point-of-care AI-powered application, training and digital analytics. Additionally, we examine the 6-months clinical impact of introducing this system, as part of a wider psychosocial care intervention (i.e., the Reconnect program) in the UK care home setting. Here we focus on how this pain assessment system contributed to the use of psychotropics and issues such as safeguarding.

**Results:** Likelihood of vocalization feature presence varied based on the intensity of pain. In this regard, sighing and screaming were more likely during experience of higher pain (eight times). During experience of severe pain eyelid tightening was the most frequent facial expression (48.6%) whereas higher pain levels were mostly predicted by horizontal mouth stretch feature. Use of PainChek system as part of the Reconnect program contributed to a more consistent pain management approach, benzodiazepine reduction (29%) and cessation (46%) and reduction of antipsychotic prescribing (22%). Compared to the 6 monthly period from the year prior to implementation of the Reconnect program, a 92% reduction in safeguarding events was reported.

**Conclusion:** In this study we demonstrate the potential to digitally phenotype key pain behaviours such as vocalizations and facial expressions using the PainChek system. We also evidence the positive impact of pain assessment combined with psychosocial care, on use of psychotropics and safeguarding incidents.

### **Implementing Affordable Virtual Reality Interventions for Older Adults in Latin America: A Feasibility Study**

Presenter: Ana Trueba, PhD

Coauthors: Cristina Crespo-Andrade, PhD; Camila A. Merino, B.A., Nicolas Agustin Alvarez Frank, B.A., Maria Sol Garces, PhD, Hailey V. Cray, MPH; Rebecca Dickinson, B.Sc., B.A, Ipsit V. Vahia, MD

**Introduction:** Virtual Reality (VR)-based meditation has shown to help reduce, stress, anxiety, sadness, and anger in younger adults. However, this has not been extensively studied in older adults. Furthermore, there are no standard guidelines on how VR mindfulness interventions should be implemented to ensure successful outcomes in different cultures and languages. The availability of affordable hardware raises the possibility of VR being used in low-income countries. The goal of this study is to describe and highlight some key considerations and challenges when implementing low-cost VR mindfulness interventions with older adults in Quito, Ecuador.

**Methods:** We created a guided mindfulness intervention using low-cost VR (smartphones and Destek V5 headsets) for older adults with anxiety in Quito, Ecuador. This project is a collaboration between the Technology and Aging Lab at McLean Hospital and the Universidad San Francisco de Quito in Ecuador. Our goal was to recruit 20 older adults with anxiety from various outpatient settings in Quito. We used the free “Sites in VR” app and selected different nature scenes for each intervention. The intervention consists of a total of 10 sessions each lasting 30 minutes. We assessed depression using the Geriatric Depression Scale (GDS), and anxiety with the Generalized Anxiety Disorder 7-item scale (GAD-7). In addition, we also administered the Mindfulness Attention Awareness Scale (MAAS) and the Behavior Activation for Depression scale (BADs).

**Results:** At the time of writing, we have reached 100% of our recruitment goal and anticipate completing data analysis by January 2023. Qualitatively, our intervention revealed barriers to designing scalable VR Spanish language interventions in Latin America. Some of the main difficulties we encountered are described below: (i) There are very few virtual reality videos (360° videos) that are available for use with the DesTeK VS VR Headset in Spanish. We therefore, used a standardized Spanish narration to guide the mindfulness practice based on a script used in the United States. (ii) We found that majority of the available content is not suitable for mindfulness. Using the application Sites in VR remedied this concern, as it provides static 360° images, suitable for mindfulness. (iii) Not all technology necessary for VR interventions is readily available in Latin America: smartphones sold in Latin America do not always have a gyroscope sensor.

**Conclusion:** Mindfulness interventions using virtual reality may be an effective way to address stress and mood symptoms in older adults across cultures. However, there are many culture-specific aspects that must be addressed before applying these interventions in different cultures. This study, conducted in Latin America, is an initial step toward the establishment of best practices and standardized low-cost VR mindfulness intervention in older adults, and many aspects addressed here may be generalizable to other cultures, settings, and countries.

### **Visualization of Pain and Agitation by System Analysis Algorithms**

Presenter: Bettina S. Husebo, MD

Coauthors: Line I. Berge, Ane Erdal, Monica Patrascu

Pain is a critical trigger for underlying behavioral and psychological symptoms in dementia, such as agitation, depression, and eating and sleeping disturbances. People with moderate to severe dementia are no longer able to report their suffering, the effect of medication after treatment has been initiated or potential side effects of the treatment. In “Understanding Pain and Agitation Through System Analysis Algorithms in People With Dementia. A Novel Explorative Approach by the DIGI.PAIN Study” we investigate whether system analysis algorithms can shed light on the relationship between pain and agitation. The method generated individualized estimations for the evolution of pain and agitation over time, as well as a dynamical model for their relationship. The participant group included 219 persons with dementia



from the COSMOS study (Communication, Systematic assessment and treatment of pain, Medication review, Organization of activities, and Safety). Moreover, in our talk we will present early findings on the visualization of systematic pain medication review on activity levels in nursing home patients with dementia

## **S12: Recent advances in therapies for late-life neuropsychiatric disorder**

### *Symposium Overview:*

This international symposium combining experts from Canada, Australia and the USA and supported by the American Association for Geriatric Psychiatry will present an update on the recent advances in therapeutic interventions for late life mood and cognitive disorders, including late life depression, anxiety and apathy associated with dementia, and preventive strategies including mind-body interventions. Four leaders of the field will present the summary of novel studies: starting with Dr. Benoit Mulsant (CA) presenting the results of the recently completed OPTIMUM study of novel strategies optimizing treatment of late-life treatment resistant depression. He will be followed by Dr. Krista Lanctot' (CA) update on novel therapies for apathy associated with Alzheimer's disease, and Dr Nancy Pachana (AU) will present on non-pharmacological approaches to treatment of anxiety associated with neurodegenerative disorders. Finally, Dr. Helen Lavretsky (USA) will present on the recent studies of mind-body therapies used to treat and prevent late life depression and cognitive decline, along with the discussion of the underlying neurobiological mechanisms. The panel will conclude with a brief discussion of future directions in the development of therapeutic interventions.

Treatment-resistant depression in late life has been understudied and is lacking evidence supporting augmentation or switching strategies. Recently completed OPTIMUM multi-site study (funded by the PCORI) sought to compare effectiveness of augmentation strategies (bupropion or aripiprazole) to switch to bupropion, in the first step of 1-week acute treatment followed by randomization into the 2<sup>nd</sup> step of augmentation with Lithium or switch to nortriptyline. The augmentation strategies in the first step produced the most robust response compared to switching, and did not differ in the 2nd step. Primary outcomes included remission rates and wellbeing measures. A discussion of future directions will be provided at the end of this presentation.

In those with Alzheimer's disease, apathy is common and associated with decreased quality of life, increased risk of decline and increased mortality. As such, apathy is increasingly recognized as an important treatment target. Recent advances in diagnosis and treatment will be reviewed.

In this presentation, several methodological issues will be discussed, such the importance and prevalence of apathy in Alzheimer's disease (AD); current diagnostic criteria for apathy in neurocognitive disorders, and will present the results of recent pharmacologic interventions for apathy in AD.

In this presentation, new focused and innovative treatments for anxiety in persons with Alzheimer's and Parkinson's disease with co-morbid anxiety will be discussed. Anxiety is common in Alzheimer's Disease and Parkinson's disease and contributes to increased disability and poorer quality of life. Yet only a small fraction of such patients received any form of treatment for mental health issues. Non-pharmacological approaches to address anxiety are advantageous in these populations. Research on tailored CBT and innovations such as virtual reality approaches for these groups will be discussed.

Standard pharmacological therapies for treatment of late life depression offer limited efficacy with the downside of adverse events and drug-drug interaction. Novel strategies are needed for more effective and safe treatment and prevention strategies for mood and cognitive disorders in late life. This presentation will focus on the recently completed studies of Tai Chi for treatment of late life depression, and yoga for prevention of cognitive decline in older women at risk for Alzheimer's disease. Neural and peripheral biomarkers of treatment response will be described. Future directions in mind-body therapies research will be outlined.



## **S13: Technology enabled care for neuropsychiatric symptoms of dementia: implementation at the point of care**

**Authors:** Amer M. Burhan, Winnie Sun, Mary Chiu, Samira Choudhury, Abeer Badawi, and Khalid Elgazzar

*Symposium Overview:*

Neuropsychiatric symptoms of dementia (NPSD) are diverse and prevalent group of symptoms that impose significant challenge for people living with dementia (PLWD), their caregivers, and the system of care. Quality standards in all jurisdictions stipulate that individualized, non-pharmacological intervention for NPSD needs to be provided to PLWD before pharmacological interventions are used due to modest effect size and the risks involved in using the latter. Implementation of individualized non-pharmacological plan of care face many challenges including limited staffing, issues with skill development in formal and informal caregivers, difficulty in achieving individualization of behavioral plans with precision, issues with environmental design to name few. To that end, technology has been proposed to address some of these challenges with significant promise at the proof-of-concept level but real-life implementation remains limited.

At the Ontario Shores Centre for Mental Health Sciences in Whitby, Ontario, in collaboration with Ontario Tech University, we have established the “Advancement for Dementia Care Centre”, whereby technological solutions are tested at the point of care considering implementation challenges and engaging formal and informal caregivers in the co-design and implementation of these interventions.

In this symposium, we aim to provide a framework for the successful implementation of different technological solutions for PLWD and NPSD and present the design and preliminary data from four projects that use technology to facilitate standardized, individualized non-pharmacological care for PLWD and their caregivers. The symposium will have 4 talks:

- 1- Rationale and review of technological solutions to detect emotional distress in PLWD
- 2- virtual reality to provide reminiscence therapy for PLWD
- 3- virtual reality to provide caregiver skill development and problem solving
- 4- the use of simulation platform to provide microcredentialing of health care providers

The objectives of this symposium are:

- 1- discuss opportunities and challenges related to implementing technological solutions for NPSD at the point of care
- 2- discuss a framework for co-designing technological solutions with caregivers at the point of care
- 3- discuss rationale and preliminary findings of 4 projects implemented at the point of care for PLWD presenting with NPSD

This symposium is presented by a multi-ethnic, interprofessional panel including earlier career knowledge mobilization caregiver intervention scientist, a mid career nurse PhD scientist, and a senior clinician investigator geriatric psychiatrist representing a large collaboration team including technology developers, caregivers, engineers, knowledge users and clinicians.

### **Identifying pre-agitation biometric signature in patients with dementia: A feasibility study**

**Authors:** Choudhury, Samira, Badawi, Abeer, Elgazzar, Khalid, and Burhan Amer M.

**Background:** Agitation and aggression (AA) occur frequently in patients with dementia (PwD), and cause distress to PwD and caregivers. This study will investigate whether physiological parameters, such as actigraphy, heart rate variability, temperature, and electrodermal activity, measured via wearable sensors, correlate with AA in PwD. It will also explore whether these parameters could be compiled to create a pre-agitation biometric marker capable of predicting episodes of AA in PwD.

**Methods:** This study will take place at Ontario Shores Centre for Mental Health Sciences. Thirty inpatient participants who are inpatients, males, and females, aged 60 or older, with clinically significant AA, and diagnosis of Major Neurocognitive Disorder will be recruited. Participants will wear the device for 48 to 72 hours on three occasions during an 8-week study period. Participant demographics and clinical measures used to assess behavior will be collected at specific time intervals during the study period.

Ceiling mounted cameras and clinical data are collected to annotate episodes of AA, which will allow identification of peripheral physiological markers “signature” unique to the patient

**Results:** the algorithm connecting wearable devices, cloud and cameras was tested on healthy volunteers and demonstrated feasibility and reliability. The feasibility of implementation in PwD has been demonstrated in our sample of PwD previously in a sample of 6 participants. Feasibility in this larger sample will be assessed. Correlation analysis between physiological measures, camera capture of agitation onset and clinical measures will be calculated to identify agitation events and pre-agitation triggers. Various machine learning and features extraction/exploration techniques will be used to test whether physiological measures can detect exact time of agitation and predict pre-agitation triggers. This study will provide a reasonable estimation of sample size needed to detect a meaningful effect size, which will be determined from the prediction model.

**Conclusion:** Early detection of AA in PwD will allow caregivers to offer timely and personalized interventions which will help avoid crises and critical incidents and improve quality of life in PwD and their caregivers.

### **Using Simulation-Based Learning (Gamified Educational Network) to Provide Micro-credentialing for Dementia Care Workers**

**Authors:** Sun, Winnie, Chiu, Mary, & Burhan, A.M.

**Background:** Dementia care is a critical area of need in the community and institutional settings, with estimated one-third of seniors younger than 80 years of age with dementia living in institutional settings and this proportion increases to 42% for those 80 years and older in Canada. It is of critical importance to promote excellence and best practices in dementia care by preparing for well-trained dementia workforce through capacity building.

**Methods:** This project developed a dementia care micro-credential education to enable competency development of new graduates and upskilling of workers through simulation-based learning. This micro-credential program leveraged interdisciplinary partnership, to develop nine core modules related to best practices in dementia care, facilitated with a Gamified Educational Network (GEN). GEN is an evidence-based learning management platform that provides learners with a simulated and immersive experience to engage them in a virtual learning environment that allows for rich experiential interaction with other users and its content.

**Outcome:** Face and content validity was established by an inter-professional committee including geriatric psychiatry, nursing, social work, occupational therapy, behavioral therapy, knowledge mobilization and simulation education experts. Next phase will begin to establish construct validity. It is expected that GEN will have a positive impact on increasing learner’s motivation and engagement in the educational tasks, as well as improving learner’s competencies

and outcomes through its multi-modal approaches, including gamification (usage of game-based elements in a non-game context to engage learners and promote learning), active observational practice, independent hands-on practice, case-based discussion, peer-to-peer assessment, expert facilitated feedback, skills debriefing and reflective practice.

**Conclusion:** This micro-credential program will provide an enhanced dementia care curriculum for building capacity of existing workers, and those entering into the workforce to promote a dementia-friendly environment for older adults.

### **Using Virtual Reality to Facilitate Reminiscence Therapy for People with Dementia**

**Authors:** Sun, Winnie. & Burhan, Amer .M.

**Background:** Reminiscence therapy (RT) is a multi-sensory treatment that uses a combination of sight, touch, taste, smell and sound to help people with dementia (PWD) remember events, people and places from their past lives. Currently, digital technologies such as mobile applications and immersive solutions including virtual and augmented reality, are gaining momentum as supplementary tools for RT. This paper presents a usability study of a web-based and virtual reality application to understand the limitations and opportunities of digital platforms for facilitating engaging experiences for PWD towards recalling memories, while easing the therapy process for the caregivers.

**Methods:** A total of fifteen healthcare caregivers were recruited from the Geriatric Dementia Unit and Geriatric Transitional Unit in Ontario Shores Center for Mental Health Sciences, Ontario Canada. Usability feedback from the caregivers were collected from the interviews after the completion of the System Usability Scale (SUS) questionnaire.

**Results:** Healthcare caregivers found both web-based and virtual reality (VRRT) usable with SUS score above average (68/100), but required improvements related to the onboarding training of caregivers. The interview revealed four overarching themes related to the VRRT: (1) Ease of use; (2) Positive impact on caregiving; (3) Potential reduction in behavioral symptoms; (4) Feasibility of promoting social connection during COVID-19 pandemic.

**Conclusion:** Next steps will focus on improving the user experience and expanding the application for immersive VR supporting head-mounted displays, hand tracking, and physiological measures, as well as conducting a usability study with PWD to expand our understanding of using RT digital tools with various levels of immersion.

### **Virtual reality to provide caregiver skill development and problem solving**

**Authors:** Chiu, Mary and Burhan Amer M.

**Background:** Caring for persons with dementia (PWD) leads to disproportionate vulnerability to physical, mental, and social adverse health consequences among caregivers (CGs). The VR-SIMS CARERS Initiative aims to engage Knowledge Users (KUs), older adults and community stakeholders in the co-design of a Virtual Reality (VR) simulation training environment for dementia caregivers, and to explore end-user's perspectives, design and implementation challenges and opportunities (e.g. digital literacy, technology readiness, VR acceptability), to ensure that the resulting "Minimally Viable Prototype" is clinically efficacious, scalable and sustainable.

**Objectives & Methodology:** The specific objectives of this study are to:

1. employ a co-design approach to develop and validate an immersive VR simulation training environment for CGs to be in touch with realities of caregiving, practice communications and behavioural management of PWD based on the well-established CARERS Program;

2. to evaluate feasibility, acceptability, tolerability informed by VR-CORE Framework and Hybrid development-implementation design, and to explore issues around implementation of the VR simulation training platform; and
3. to conduct pilot testing to examine a) initial clinical efficacy of VR-based CG training in improving quality of relationship with PWD, competence, resilience, and reducing depression and stress in dementia CGs and its b) readiness for implementation in the community.

**Anticipated Outcomes:** VR-SIMS CARERS innovation is intended to be an accessible, scalable and sustainable VR simulation training platform that will support CGs in the practice and acquisition of essential dementia caregiving skills, enhancing their caregiving competence and resilience. Training CGs to recognize and manage stressors can lower their risk of overall mental health decline.

## **S14: The use of advanced data and sensortechnology in dementia: innovation and implementation**

**Chair:** Sarah Janus, Department of General Practice and Elderly Care Medicine, Alzheimer Center Groningen, University of Groningen, University Medical Center Groningen;

### **Main Abstract**

The use of health care technology to support informal and formal caregivers in decision making for proper guidance of care for people with dementia, is rising over the last decade. For example, (tools within) electronic health records systems, technological devices such as wearables and devices using sensor technology (domotics) are more and more available in health care. Recent developments of artificial intelligence (e.g. machine learning, deep-learning, text mining) can be useful to provide a more advanced use of sensor and other data, and contribute to a better guidance of (person)centered care. However, the use of health care technology (and the data it accumulates) could – when used appropriately and meeting the needs of (in)formal care workers who use this technology- help to relieve the burden of care (in times of lack of staff resources), delay nursing home admission and reduce corresponding costs. Unfortunately, some of these developments, not always meet the needs of care workers and informal caregivers caring for people with dementia.

For health care technology to be able to contribute to personalized dementia care, a combination of innovation (novel technology) and implementation is necessary. A wider use of novel technology on a broader scale is necessary to generate impact. For a proper implementation, several factors such as staff opinions that may be reluctant to using novel technology, data safety and ethical issues have to be taken into account. In addition, a proper training guiding the process of implementation is crucial.

In this workshop, we will provide several examples of applications in health care based on data usage and sensor technology: (1) the use of (the combination of) qualitative and quantitative data for personalized health care, (2) wearable sensors to measure stress, a phenomenon that is regarded as an early warning for the onset of challenging behavior in people with dementia, (3) combination of ambient and body mounted sensors to monitor challenging behavior and to prevent further deterioration, (4) the practical use of communication, tracking and sensor technology to support welfare to people with dementia and caregivers in the community.

In conclusion, this symposium will give insight in the challenges of designing novel technology and its implementation into daily practice, to assist informal and formal cares to be able to deliver person-centered care.

### **Towards data-informed shared decision making: what do we need?**

**Authors:** Dr. Sil Aarts, Prof. Jan Hamers & Prof. Hilde Verbeek. Living Lab in Ageing and Long-Term Care, Department of Health Services Research, Maastricht University

**Background:** The increasing availability of data offers new possibilities for supporting quality of care in long-term care (LTC) for older adults, also for dementia care units in nursing homes. Examples are quantitative data in electronic health records (i.e. medication), data collected by technological devices such as sensors and wearables (i.e. data related to psychical and mental health including for example heart rate and sleeping patterns), but also qualitative data stored in texts (e.g. transcribed conversations about perceived quality of life). LTC organisations currently lack tools to interpret and integrate the data in the shared decision-making (SDM) process. This project investigates the necessities for data-informed SDM.

**Methods:** The study was conducted in co-design with the knowledge group 'Data Science' residing in the Living Lab in Ageing and Long-Term Care, Maastricht. A focus group-setting, in which a diverse set of stakeholders, including data/ICT-specialists, care managers and client representatives, took place to discuss bottlenecks, possibilities and solutions related to data-informed SDM.

**Results:** In total, representatives (n=18) from 7 care organisations participated in three separated focus groups. This resulted in several themes that were deemed necessary for data-informed SDM: 1) an organisational vision on data and data-informed SDM, 2) investment in data-driven care SDM, 3) the instalment of multidisciplinary teams, including clients, informal and formal caregivers, 4) a planned implementation process is needed, and 5) the use of living lab constructions.

**Conclusion:** A well-thought-out, integral learning process, including a vision statement on data and the installation of multidisciplinary teams working on data-problems, is deemed necessary in order for LTC organisations to accomplish data-informed SDM. A concrete step-by-step plan, which can provide LTC organizations with tools to embed data in the current SDM process, is suggested to help organisations in their quest to data-informed personal care.

### **Developing a system for measuring stress in the care for nursing home residents with dementia**

**Authors:** Manon W. H. Peeters<sup>1</sup>, Leoni van Dijk<sup>1</sup>, Ittay Mannheim<sup>1</sup>, Evelien van de Garde-Perik<sup>2</sup>, Petra Heck<sup>2</sup>, Noortje Lavrijssen<sup>3</sup>, Gerard Schouten<sup>2</sup>, Eveline J.M. Wouters<sup>1</sup>.

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**Background:** Measuring and monitoring stress has potential benefits for the care and self-management of stressors for people with dementia. Early identification of stressors may help to cope with challenging behaviours (CB), occurring in up to 80% of nursing home residents with dementia. The identification of stressors causing CB is difficult (as often

residents cannot themselves indicate what is experienced as stressful or relaxing), hampering the psychosocial approach. Several studies have found that skin conductance and heart activity can be used as a proxy for stress. Measuring these physiological parameters using wearable sensors, might be helpful to identify (de)stressors and consequently, a psychosocial treatment approach. Therefore, wearables are promising as a supportive technology in the care of people with dementia and CB. However, stakeholders (i.e., (in)formal caregivers of people with dementia) indicate that current available (wearable) systems to measure stress are not fit for purpose within the everyday care of people with dementia. In addition, due to legislation, not all systems are allowed. The purpose of the current research is to develop a system prototype together with different stakeholders.

**Method:** A prototype of a system measuring stress suitable in the care for people with dementia will be developed during different iterations between September 2022-July 2024. A community of stakeholders will be built, in which the needs, requirements and evaluations of people with dementia, (in)formal caregivers, legal- and IT-experts, will be collected through literature studies, focus groups, interviews and co-design sessions. The system will be developed and adjusted appropriately, taking social, technical and legal requirements into account.

**Results and discussion:** Preliminary results will be presented regarding identified requirements for initial system prototypes as well as lessons learned from first iterations with conceptual and working prototypes. Implications for the care and self-management of people with dementia will be discussed.

### **Sensortechnology for monitoring challenging behavior in nursing home residents with dementia**

**Authors:** Jan Kleine Deters<sup>1,2</sup>, Rinesh Baidjnath Misier<sup>1</sup>, Sarah Janus<sup>1</sup>, Huib Burger<sup>1</sup>, Heinrich Wörtche<sup>2</sup>, Sytse Zuidema<sup>2</sup>

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<sup>2</sup> Hanze University of Applied Sciences, Groningen, the Netherlands

**Background:** Neuropsychiatric symptoms (NPS) are common in affected individuals and can be challenging for (in)formal caregivers. Therefore, they are also referred to as challenging behaviors (CBs). Sensor technology measuring context and behavior can be assistive to effectively manage CBs in an objective fashion. Sensors can help support healthcare professionals, such as nurses, by enabling remote monitoring and alarming on early-stage behavioral changes associated with CBs. This might/ will improve the quality of life (QoL) for both caregivers and clients living in a nursing homes (NH).

In the project “MOonitoring Onbegrepen Gedrag bij Dementie met sensortechnologie” (MOOD-Sense), we aim to develop such a monitoring system. Our research focuses on two questions 1) How to develop and implement a monitoring system within the context of nursing homes with parameters on environment, physiology, and behavior, identify and process relevant precursors of challenging behavior with this monitoring system and 2) gain insight in which behaviors are challenging according to nurses and how they are described. This will be represented in an ontology such that sensor data can be translated into the same conceptual information.

**Methods:** The first research question will be examined with a set of experiments in the field (in NH) with an iterative approach. Insights from previous experiments on usability and added value of sensors will be used to improve successive experiments. During each experiment, multiple participants (clients with dementia and CBs) are monitored with both ambient and wearable sensors. For the second research question a qualitative approach is employed, using focus groups

(FG) and consensus methods. These FGs will be held amongst nursing staff who are involved in daily care tasks for people with dementia. Subsequently, consensus methods are used to align behavioral descriptors/labels.

**Results:** early findings will be presented at the symposium

**Discussion:** Within this project we expect to find precursors of challenging behavior in a personalized fashion based on nurse's expert knowledge and sensor data. In order to develop a monitoring system that can be embedded within NH's, real-time alarming, in-situ behavior recognition and trustworthiness are part of our technological requirements. Just-in-time interventions may then be deployed to prevent behavior escalation or the persistence of undesirable situations.

**Learning from trials: LIVE@Home.Path, a stepped-wedge cluster randomized controlled trial of care coordination and implementation for home-dwelling people with dementia.**

**Authors:** Prof. Bettina S. Husebo<sup>1</sup>, Maarja Vislapuu<sup>1</sup>, Marie H. Gedde<sup>1</sup>, Renira C Angeles<sup>2</sup>, Nathalie Puaschitz<sup>4</sup>, Line I. Berge<sup>1,4</sup>

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**Background:** Dementia is not an unavoidable consequence of aging, but for most home-dwelling people with dementia (PwD) a result of complex chronic health conditions. About 95% of PwD have multimorbidity, which requires a multicomponent approach and interdisciplinary collaboration to support patients and relatives, and to implement welfare technology and smart solutions.

**Method:** The LIVE@Home.Path study is a 2-year, mixed-method, stepped-wedged, cluster randomized controlled trial, including home-dwelling PwD and their informal caregivers (N=320 dyads) in Norway (May 2019 – December 2021), to investigate the efficacy of the multicomponent LIVE intervention (LIVE is the acronym for Learning, Innovation, Volunteerism, and Empowerment) on resource utilization and use of welfare technology. The intervention was implemented by a skilled coordinator from the municipality with high focus on use, usefulness, and experiences in welfare technology, both at baseline and during the implementation period.

**Results:** At baseline, we found that most participants had traditional equipment such as stove guards (43.3%), social alarms (39.5%) or everyday technology (45.3%) (e.g., calendar, door locks). A social alarm was more often available for alone-living elderly women, while tracking devices (14.9%) were associated with lower age. Everyday technology was more often available for women at increased age, higher comorbidity, and poor instrumental activities of daily living (IADL). In people with severe dementia, welfare technology was associated with poor IADL function, children as the main caregiver (61.3%), and having caregivers who contributed 81–100% to their care (49.5%).

**Discussion:** We describe unmet potential for communication, tracking, and sensing technology and especially, for devices not offered by the municipalities. In our symposium, we will present early findings on the implementation effect of welfare technology and participants experiences related to usage and awareness.

## **S15: New perspectives on undergraduate dementia education: Time for Dementia**

**Authors:** Dr Stephanie Daley (Symposium chair), Dr Molly Hebditch, Ms Yvonne Feeney

Centre for Dementia Studies, Brighton and Sussex Medical School, UK.

**Abstract:** Outcomes and care experiences for people with dementia are worse than for those without the condition and the workforce is in crisis. High quality care requires adequate training that includes an understanding of those living with the condition.

Time for Dementia is an educational programme in which healthcare students visit a person with dementia and their family carer over a two-year period (Banerjee et al., 2017). People with dementia and their carers are our 'experts' and teach students about life with dementia, healthcare experiences and what helps them to live well with dementia. The aim of the programme is to improve student attitudes, knowledge, and empathy towards dementia.

Since 2014, 6500 healthcare students, including medical, nursing and allied health professions, have undertaken the programme in the UK at 7 different universities. Research indicates that there are higher levels of knowledge and positive attitudes in students undertaking the programme, compared to those who did not. This symposium will present several sub-studies outlining what has been learned so far from the mixed methods evaluation of Time for Dementia. The symposium will include 3 speakers on 3 key themes:

1. The development and delivery of Time for Dementia programme and educational outcomes for students.
2. The factors influencing career preferences for working with people with dementia.
3. The development of empathy towards people with dementia in undergraduate healthcare students

### **Key take-aways**

- How to deliver a lived experience programme at scale.
- The value of a lived experience education programme.
- How undergraduate education can shape empathy and career preferences.

### **Reference**

Banerjee, S., Farina, N., Daley, S., Grosvenor, W., Hughes, L., Hebditch, M., Mackrell, S., Nilforooshan, R., Wyatt, C., de Vries, K., Haq, I., Wright, J., 2017. How do we enhance undergraduate healthcare education in dementia? A review of the role of innovative approaches and development of the Time for Dementia Programme. *International Journal of Geriatric Psychiatry* 32 (1), 68-75

### **Time for Dementia: innovation in dementia education**

**Author:** Dr Stephanie Daley

**Background:** The future healthcare workforce needs the skills, attitudes, and empathy to better meet the needs of those with dementia. Time for Dementia is an educational programme in which healthcare students from a range of professional groups visit a person with dementia and their family carer over a two-year period. The first phase of



research demonstrated positive outcomes for students (Banerjee et al., 2021; Daley et al., 2020). Here we discuss the most recent findings from the second phase.

**Objectives:** to evaluate the impact of Time for Dementia on student attitudes, knowledge and empathy towards dementia, and satisfaction of students and families.

**Methods:** A mixed methods longitudinal cohort study was conducted between 2014- 2021. Measures of dementia knowledge, attitudes and empathy were administered to healthcare students at five universities in the south of England before and after (24 months) they completed the Time for Dementia programme. Data were also collected at equivalent time points for a control group of students who had not taken part in the programme. Outcomes were modelled using multilevel linear regression models. Satisfaction surveys were completed by students and families at the end of the programme.

**Results:** 2,700 intervention group students, 562 control group students and 803 families consented to participate in the research. Students undertaking the Time for Dementia programme had higher levels of knowledge and positive attitudes at follow-up compared to equivalent students who did not undertake the programme. Satisfaction was high for both students and families, with both perceiving benefits of taking part.

**Conclusions:** The results suggest the Time for Dementia programme is effective in improving the knowledge and attitudes of healthcare students across different professional groups and universities. It also demonstrates that dementia education that meaningfully involves people with dementia and their carers can be delivered at scale for healthcare professionals.

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## How do we increase interest in working with people with dementia? Career preferences of undergraduate healthcare professionals in dementia

**Author:** Dr Molly Hebditch

**Background:** With population ageing, an emergent issue in workforce planning is how to ensure that future healthcare professionals are both competent and willing to work with older adults with complex needs. This includes dementia care; which is widely recognised as a policy and practice priority. Yet research suggests that working with older people is unattractive to undergraduate healthcare students. However, how students view a career working with people with dementia is not well understood, in either related specialities (such as geriatrics or old age mental health) or as a general clinical interest.

**Objective and Methods:** This sequential mixed methods study aimed to identify the factors that contribute to preferences for working with people with dementia. A summary of three papers will be presented:

- 1) Preferences of nursing and medical students for working with older adults and people with dementia: a systematic review.
- 2) Preferences of newly qualified healthcare professionals for working with people with dementia: a qualitative study (n=27).
- 3) Student nurses' career preferences for working with people with dementia: A longitudinal cohort study (n=840).

**Results and conclusions:** The findings from these studies have contributed to the development of a conceptual framework for understanding career preferences for working with people with dementia in students and newly qualified nurses. Key factors related to dementia preferences include:

- Student characteristics (e.g. gender, attitudes and knowledge) and whether students perceive their attributes are aligned with dementia care;
- Impact of experiences including dementia educational programmes;
- Importance of making a difference to patients' lives;
- Perception of working with people with dementia as a 'different type of care';
- Perceptions of people with dementia including care challenges;
- Career characteristics.

The findings will be discussed in relation to implications for education and policy for how preferences for working with people with dementia may be developed in line with workforce needs.

**"I think the rose-tinted glasses do just sort of slowly come off": a grounded theory study on the development of empathy towards people with dementia in healthcare student education.**

**Author:** Ms Yvonne Feeney

**Background:** Globally, dementia prevalence is rising. In the UK, over a million people are expected to be impacted by dementia by 2050. One in four hospital beds are occupied by a person with dementia, and it is inevitable that healthcare professionals will work with people with dementia during their career and across a variety of settings. To deliver effective person-centered care, healthcare professionals need to have the capacity and skills to practice with empathy. Greater empathy can lead to better patient relationships, reduced burnout, and enhanced recognition of personhood. However, people with dementia frequently report episodes of care that lack empathetic approaches. To improve the quality of care, high quality dementia education needs to be provided at undergraduate level. To inform the design and delivery of suitable educational resources, this study aimed to understand the major factors that impact the development of empathy towards people with dementia during undergraduate education.

**Methods:** A constructivist, longitudinal grounded theory study (Charmaz, 2014) was conducted. Data were collected in 2019 using semi-structured interviews with undergraduate nursing, physiotherapy, and medical students (n=30). A second interview was completed with students (n=26) eighteen months later. Emergent findings were informed by simultaneous data collection and analysis using constant comparison techniques, and the use of theoretical memo writing.

**Results:** Preliminary findings suggested that the development of empathy towards people with dementia was impacted by social and emotional exposure during undergraduate years. Data centered on four sub-categories. While there were barriers connecting and understanding people with dementia, students experienced conflicting expectations about empathy more widely. Positive and negative cultural experiences during placement led to emotional changes and a shift in ideals.

**Conclusion:** Environments that promote empathetic practice during clinical placement could impact the development of empathy in undergraduate healthcare education more widely. This study highlights a need for educational design that focuses on both the patient and the environment.

## **S16: Post-Acute Covid-19 Cognitive Sequelae in an Aging Population**

### **Symposium Overview**

**Background:** In the years since the beginning of the SARS-CoV-2 pandemic, research has revealed that patients with infection can experience cognitive and other neurological symptoms that do not always remit following infection clearance. Older people tend to be at particularly high risk of decline following infection.

**Research Objective:** This symposium will report studies of post-acute sequelae of Covid-19, with particular attention toward cognitive and other neurological symptoms in an aging population. It will emphasize the importance of methodological rigor in studies going forward, including large and representative samples and comprehensive, longitudinal cognitive assessments.

**Methods:** The symposium will consist of three talks and discussion.

**Results:** The first talk will summarize what is known about cognitive symptoms in post-acute Covid-19 and discuss biological and environmental mechanisms that may account for these symptoms. Importantly it will propose ways in which ongoing and future studies of post-acute cognitive symptoms can enhance scientific rigor and make recommendations for assessment and management of patients with post-acute cognitive sequelae of Covid-19. The second talk will review first- and second-wave findings of cognitive functioning in the context of neurological, pulmonological, and other psychological and daily functioning factors from a longitudinal study of recovered asymptomatic, severe, and never-infected patients. It will reveal small to medium sized effects of Covid-19 disease status in several areas of cognition, in addition to other medical outcomes, with more severe effects found in older adults relative to younger people. The third talk will present data collected in 139 older adults approximately seven months after diagnosis with Covid-19. It reports higher levels of subjective (67.2%) relative to objective (4.7%) cognitive dysfunction and finds that severity of subjective cognitive dysfunction was predicted by psychiatric distress, but not demographic, illness, or objective cognitive functioning.

**Conclusions:** Cognitive decline can occur following infection with Covid-19, and older adults are at particularly increased risk relative to the general population. Objective assessment of cognitive functioning is imperative, and future studies must employ rigorous scientific methodology to elucidate the nature and trajectory of cognitive functioning in post-acute Covid-19. Findings will inform best practices for diagnosing and managing cognitive impairment in clinical populations.

**Background:** Covid-19 infection is associated with increased rates of acute and post-acute cognitive dysfunction that may portend significant consequences for patient functioning and quality of life.

**Research Objective:** This lecture will 1) summarize what is known about cognitive symptoms in post-acute Covid-19; 2) discuss biological and environmental mechanisms that may account for these symptoms; 3) propose ways in which ongoing and future studies of post-acute cognitive symptoms can enhance scientific rigor; and 4) make recommendations for assessment and management of patients with post-acute cognitive sequelae of Covid-19.

**Methods:** The literature on post-acute Covid-19 sequelae was reviewed, with particular attention toward limitations in methodology.

**Results:** Depending on how it is assessed, Covid-19 cognitive dysfunction occurs in a subset of patients (~ 24%) of all age groups, across the spectrum of disease severity, and may persist following viral resolution. Early cognitive studies were limited by methodological shortcomings, secondary to Covid-19's virulence and transmissibility. Most studies have resorted to suboptimal cognitive assessments such as self-report measures, which are distal measures of brain functioning, or brief dementia screeners that provide objective data but are insensitive to subtle cognitive impairment. Small sample sizes also plague existing studies, resulting in low power, limited external validity, and an inability to properly control for potential confounders. Despite the disproportionate impact of COVID-19 on racial and ethnic minorities, these populations remain underrepresented in cognitive studies. Further, the degree to which pre-existing risk factors for cognitive impairment and other pandemic-related factors (e.g., social isolation, depression, anxiety, PTSD) may contribute to post-COVID-19 cognitive dysfunction are unknown, marking the need for appropriate comparison groups. The range and severity of cognitive sequelae are varied. There appear to be meaningful differences in the experiences of COVID-19 patients who were hospitalized versus those who were not. Similarly, younger individuals greatly differ from older individuals in terms of pre-existing risk factors, comorbidities, and consequently, cognitive profiles.

**Conclusions:** While studies to date examining subjective and objective post-acute Covid-19 cognitive functioning have been invaluable in unmasking post-acute neuropsychiatric symptoms of Covid-19, it is imperative that future studies employ rigorous methodological approaches across diverse samples. In the meantime, patients' complaints of post-acute cognitive decline must be taken seriously, but also measured objectively, with a consideration toward pre-existing factors that portend greater or lesser likelihood of cognitive difficulties following Covid-19 infection.

**Background:** Clarity about the common cognitive phenomena associated with "brain fog" and attention or memory problems after the initial resolution of COVID-19 infection is needed.

**Research Objective:** To systematically study cognitive sequelae in the context of neurological, pulmonological, and other critical psychological and daily functioning factors.

**Methods:** 160 participants were seen at three study visits over 12 months. Participants comprised 52 Asymptomatic/Mild (ASY) remitted Covid-19 patients, 52 severe (SEV) remitted Covid-19 patients and 56 control (CTL) participants. Neurocognitive function, pulmonary health, neurological status, serum biomarkers NSE and Nf-L, and neuroradiological scans were assessed at baseline and 12 months. A shorter examination of neurocognition, lung function, and neurological status only was conducted at the 6-month visit (Visit 2).

**Results:** In initial analyses of the first wave of data, complex attention, language, and short-term verbal and visual memory differed between healthy controls and Covid-19 patients. Generally, the neurocognitive performance of the ASY cohort lay between that of the more SEV and CTL. There was a similar pattern of results regarding lung function and brain volume. No differences were found for serum biomarkers NSE or Nf-L. Currently, the second wave of data is almost finished being collected. Data collection will be complete in early Spring of 2023. Initial longitudinal findings will be analyzed and presented.

**Conclusion:** Small to medium-sized effects of Covid-19 disease status in several areas of cognition (language, complex attention, and short-term memory), certain aspects of neurological function, pulmonary function, and brain morphology were found at the baseline visit. Older adults were more likely to be severely affected by Covid-19 and thus more severely affected from a neurocognitive perspective than younger age groups.

**Background:** Subjective cognitive dysfunction is often reported following SARS-CoV-2 infection. Studies of outpatients and primarily younger adults suggest that mood symptoms and fatigue are also common and may contribute to subjective cognitive dysfunction.

Understanding factors driving subjective cognitive dysfunction is important to guiding treatment interventions for older patients with persistent post-COVID-19 cognitive complaints.

**Research Objective:** We will present data demonstrating the demographic factors, illness characteristics, psychiatric symptoms, and objective cognitive performances that predict persistent subjective cognitive dysfunction in older post-COVID-19 patients and contrast these with findings from their younger counterparts.

**Methods:** Approximately seven months after COVID-19 diagnosis, patients in the Johns Hopkins Post- Acute COVID-19 Team (JH PACT) multidisciplinary clinic underwent a telephone-based clinical assessment evaluating depression, anxiety, fatigue and subjective cognitive complaints. Patients also completed objective tests of neuropsychological functioning assessing processing speed, language, learning, memory, and executive functioning. Of the >400 patients assessed to date, 139 were  $\geq 60$  years of age (M 67.9; 60.4% female, M education 14.1 years, 54% ICU).

**Results:** In preliminary analyses among older adults, a greater proportion of patients reported subjective cognitive dysfunction (67.2%) relative to the proportion producing a cognitive composite  $\geq 1.5$  SD below expectation (4.7%). Psychiatric symptoms were also common (PHQ-9  $\geq 10$  in 22.5%, GAD-7  $\geq 10$  in 12.3%). Linear regression models revealed that among older adults, severity of subjective cognitive dysfunction was predicted by psychiatric distress, but not demographic, illness or objective cognitive functioning. In contrast, subjective cognitive difficulties were predicted by a combination of demographic, illness, and objective cognitive variables among younger patients.

**Conclusion:** Among patients followed in a long-COVID-19 clinic, we observe high rates of clinically significant psychiatric distress and subjective cognitive dysfunction but relatively less frequent objective cognitive deficits. Among older adults, cognitive concerns appear driven by neuropsychiatric symptoms and may be appropriate targets for intervention. We will present ongoing work evaluating predictors of cognitive complaints including performance across specific cognitive domains in > 400 patients.

### ***S17: Debate Series – Quo Vadis Psychogeriatrics?***

### **S18: Newcomers to euthanasia and assisted suicide: challenges for Psychogeriatrics with a focus on Spain and Portugal**

CHAIR: Manuel Martín-Carrasco

Co-chair: Manuel Gonçalves-Pereira

SPEAKERS: Manuel Martín-Carrasco, Manuel Sánchez-Perez, Lia Fernandes, Rui Barranha, Ana R. Ferreira, Javier Olivera

Euthanasia or assisted suicide are now legal in several European countries. Spain has approved related legislation in 2022, and in Portugal the subject is currently under debate after preliminary ratification. This remains a controversial topic, raising passionate discussions that sometimes hamper the need to consider, in depth, the ethical, clinical, and operational difficulties of processes of this type. Older age people do not necessarily lose their autonomy with age, nor

should they lose their right to decide on euthanasia or assisted suicide whenever the jurisdiction allows it. However, there is a growing concern of older people being coerced into decisions about ending their lives, not least due to their own fears of becoming a burden both for their families and the society. Manuel Martín-Carrasco will analyze how ageism can influence or model a wish to die in elderly people, especially those living with greater physical and/or mental disability. The so-called rational suicide focuses on the possibility that a healthy subject eventually decides to end his own life as a reflex of a free decision, and not within the context of a mental illness. Manuel Sánchez-Perez will discuss how difficulties in assessing the rationality of suicidal ideation include its dimensional character, together with the evidence that rationality is not always absent in depression and that the absence of depression does not imply rationality. Next, Lia Fernandes will provide an overview of years of public and parliamentary debates on euthanasia and physician-assisted suicide in Portugal. She will focus on issues regarding the exact role of psychiatrists (old age psychiatrists in particular) in the decision process, as proposed by the recently approved legislation. Finally, Javier Olivera will provide a brief overview of the recent implementation of legal access to euthanasia in Spain. A discussion of several controversial aspects of the operationalization of such a complex process will follow, including those related with conscientious objection.

### **Euthanasia and Ageism**

Manuel Martín-Carrasco

It is clear that old people do not necessarily lose their autonomy as they age and nor should they lose their rights to make their own decisions, including the right to request euthanasia or assisted suicide, if the Law of the jurisdiction allows it. However, there are also vulnerable elderly and there is a concern that frail older people could be coerced into ending their lives because of their fears about being a burden on either their family or society. This presentation analyses how ageism can influence the formation of the desire to die in the elderly, especially in those of greater physical and/or mental frailty

### **Suicide and rationality**

Manuel Sánchez-Perez

The so-called rational suicide focuses on the possibility that a healthy subject can make the determination to end his life in the absence of conditions on his freedom of decision, as in the context of a mental illness. Difficulties in assessing the rationality of suicidal ideation include its dimensional character and the evidence that rationality is not always absent in depression and the absence of depression does not always implies rationality.

### **Legislation of euthanasia in Portugal: The psychiatrist's role**

Lia Fernandes, Rui Barranha, Ana R. Ferreira

The Netherlands (2001) and Belgium (2002) were pioneer countries in euthanasia legislation, and it has been progressively implemented in Luxembourg (2009), Colombia (2015), Canada (2016), the state of Victoria in Australia

(2017), and New Zealand (2021). After these, the most recent approvals of euthanasia-related legislation were Spain's Organic Law (2021), and recently, in December 2022, euthanasia and physician-assisted suicide were approved by the Portuguese parliament, following four years of discussion.

In this context, an increasing number of countries are currently regulating or considering the inclusion of euthanasia as a healthcare service, which places an urgent need to define the health professionals' and particularly psychiatrists' roles and participation in this process. Currently, these assessments are limited by the lack of scientific precision in the methods used to determine patients' decision-making capacity, conditioning this process to psychiatrists' personal beliefs.

This presentation will provide a comprehensive overview of Portuguese legislation, highlighting the psychiatrists' involvement.

### **The implementation of euthanasia in Spain: a one-year balance and current challenges**

Javier Olivera

In Spain there have been 180 cases of euthanasia in the past year, one year since the country's Euthanasia Law came into force. The new law established that euthanasia can be carried out if it is the wish of patients who are suffering from serious, chronic and debilitating conditions or serious and incurable illness which causes intolerable suffering. Up to now, the intent to end one's life was considered a sign of psychopathology; psychiatrists are trained to treat the underlying psychiatric disorder. Assessing the mental capacity of an individual making a death wish and acting as an agent for euthanasia is contrary to traditional training of a psychiatrist. The role of psychiatrists concerning Euthanasia in Spain, particularly as far as elderly patients is concerned, is reviewed.

## **S19: Using narratives to improve quality of long-term care for older people**

Chair: JPH Hamers,<sup>12</sup>

<sup>1</sup>*Department of Health Services Research, Care and Public Health Research Institute (CAPHRI), Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands*

<sup>2</sup>*Living-Lab in Aging and Long-Term Care, Limburg, The Netherlands.*

### *Symposium Overview*

Internationally there is a growing interest in evaluating experienced quality of care to better tailor care to resident's needs. Narratives are a promising method to achieve this, because they capture experiences, identify conflicting values, and provide rich data that can be used to learn from and improve quality of care with. In the Netherlands, narratives are becoming a more substantial element within the quality improvement cycle of nursing homes. In this symposium, four Dutch research groups will present studies on how different narratives can be used and implemented in nursing homes to achieve and maintain high quality of care for residents.

The first speaker will present how micro-narratives from care staff, residents and significant others enable the evaluation of long-term care. The second speaker will present how stakeholders improve care by reflecting together on

rich narrative portraits of residents' experiences. The third speaker will present the results of a study investigating how the narrative quality evaluation method 'Connecting Conversations' can be implemented in nursing home organizations. And, the last speaker will present findings on how the Dutch healthcare inspectorate is currently overseeing the quality of person-centred care in long-term care facilities and discuss the potential of a more reflexive approach using narrative methods.

### **Experience Matters: using micro-narratives for the co-creation and evaluation of good care**

**Authors:** M Dohmen<sup>1,2</sup>, C van den Eijnde<sup>1,2</sup>, JM Huijg<sup>1,2</sup>

<sup>1</sup>*Leyden Academy on Vitality and Ageing, Leiden, The Netherlands*

<sup>2</sup>*Leiden University Medical Center, Leiden, The Netherlands*

**Objective:** The narratives of care staff, residents and significant others (SOs) about their personal experiences with care offer insight into their perceived care quality. This information enables the co-creation and evaluation of good care. Therefore, we aimed to develop a method to systematically collect and reflect on micro-narratives, on multiple levels.

**Methods:** From January 2020 to April 2022, we conducted a participatory action study in two care home locations. By continuously following the cycle of action research, we collaboratively worked on the content development, organizational implementation, and technical realization of our method. We used a distributed ethnography software tool (SenseMaker®) as the starting point. Input from care staff, residents and SOs was obtained through participatory observations, interviews, focus groups, and informal conversations.

**Results:** Together, we developed Experience Matters, a method for collecting, sharing and reflecting on micro-narratives about personal experiences with care. In Experience Matters, care staff, residents and SOs share their experiences as micro-narratives and add meaning to them by answering a number of quantitative questions. The answers to these questions are attached to the micro-narratives as metadata. Using this method, the micro-narratives and metadata can be used to co-create and evaluate care for individual residents (micro-level application) and care provided by a team (meso-level application), and to develop quality policy and accountability reports (macro-level application). Care staff indicated that using Experience Matters contributes to job satisfaction, team spirit and feelings of empowerment. Residents reported increased feelings of equality, and SOs felt more involved in the care process. Lastly, managers and directors indicated that the method leads to real-time insights into the quality of care.

**Conclusion:** Collaboratively developed with all stakeholders, Experience Matters enables collecting, sharing and reflecting on micro-narratives for the co-creation and evaluation of good care. To implement the method effectively, organizations may consider deploying Experience Matters as part of a larger transition towards being a learning organization.

### **Collective learning as means to improve quality of long-term care**

**Authors:** A Scheffelaar<sup>1</sup>, M. Janssen<sup>1</sup>, K Luijkx<sup>1</sup>

<sup>1</sup>*Department Tranzo, Tilburg School of Social and Behavioral Sciences, Tilburg University, The Netherlands*

**Objective:** Collective learning is a widespread aim in long-term care. When professionals share detailed information on their perspective regarding quality of care, they can enter each other's perspective and create a new joint perspective which may generate a broader meaning together. Reflective spaces are helpful in learning processes as tacit and explicit



knowledge is bridged when people come together to reflect on concrete care practices. This study aimed to evaluate the use of the narrative quality instrument 'The story as a quality instrument' as a means for collective learning to realize quality improvement.

**Methods:** A qualitative evaluation was performed in 2021-2022 on six field sites of four large care organizations providing long-term care to older adults in the Netherlands. On every field site. The story as a quality instrument was applied: an action plan was formulated based on narrative portraits of older adults in a quality meeting and 8-12 weeks later the progress was evaluated. The data collection concerned the transcripts of both meetings and the observation reports of the researchers. Data were analyzed using thematic analysis.

**Results:** Four mechanisms became visible that stimulate learning among participants to reach quality improvement: in-depth discussion, exchange of perspectives, abstraction, and concretization. The participants reported on several outcomes regarding individual learning such as change of attitude, looking to older adults more holistically and the realization that possibilities to work on quality improvement could be small and part of everyday work. Participants learned from each other, as they gained insight into each other's perspectives. The added value concerned getting insight into the individual perceptions of clients, the concrete areas for improvement as outcome, and the diverse people and functions represented. Time was found to be the main challenge for the application of the instrument. Furthermore, the anonymity and quality of the portraits, structural embedding of the instrument and communication were four main conditions for future execution.

**Conclusion:** The story as a quality instrument is deemed promising for practice, as it allows care professionals to learn in a structured way from narratives of older adults in order to improve the quality of care.

### **The implementation of the narrative assessment method 'Connecting Conversations'**

**Authors:** KYJ Sion<sup>1,2</sup>, JPH Hamers<sup>1,2</sup>

<sup>1</sup>*Department of Health Services Research, Care and Public Health Research Institute (CAPHRI), Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands*

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**Objective:** Connecting Conversations is a narrative method that assesses experienced quality of care in nursing homes from the resident's perspective. This study aimed to identify facilitators and barriers in implementing Connecting Conversations.

**Methods:** In 2022, Connecting Conversations was actively implemented in a nursing home organization where the organization was in the lead. A process evaluation was performed focused on completeness (to what extent did the planned wards complete participation?), value and burden (how did respondents, care teams, ward managers and interviewers experience Connecting Conversations?), and usability of the findings (to what extent was the narrative data used for quality improvement initiatives?). Data were collected with interviews, focus groups and structured observations.

**Results:** In 2022, 6 internal interviewers followed the Connecting Conversations' interviewer training and performed 42 conversations (13 residents, 14 family, 15 caregivers) in 4 nursing homes on 5 wards within the care organization.

Findings show that vision & leadership, flexibility in performing the conversations, and clear instructions for respondents and participating wards are necessary for successful implementation. Identified barriers for implementation into the quality management cycle were the continuation of existing quality assessments, lack of resources and the administrative burden linked to research, such as randomization of participants and retrieving informed consent. In addition, it was identified as crucial to provide participating care teams ownership regarding how to use the data for learning and improvement initiatives. This process needs guidance from for example an internal facilitator.

**Conclusion:** Stories from multiple perspectives provide valuable information for quality improvement initiatives. Yet, in order to implement Connecting Conversations successfully organizational support is indispensable

### **Interpreting and evaluating open norms of person-centred care in daily regulatory practice of the Dutch nursing home care setting**

**Authors:** M Kalisvaart<sup>1</sup>, L Oldenhof<sup>1</sup>, R Bal<sup>1</sup>, AM Pot, PhD<sup>1,2</sup>

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**Objective:** The emphasis on person-centred nursing home care poses a key challenge for inspectors who regulate quality of care, because of its situated characteristics (i.e., for each client different and changing over time). This makes it difficult to assess with predetermined norms in contrast to for example requirements of medication safety. In this paper, we therefore empirically investigate how inspectors operationalize and evaluate open norms of person-centred care in the Dutch healthcare setting.

**Methods:** Qualitative methods were used to study the work of inspectors who assess the quality of nursing home care within the Dutch Health and Youth Care Inspectorate. The first author observed the inspection process of nursing home care organizations (preparation, inspection visit, consults between inspectors and team meetings) and conducted semi-structured interviews with the observed inspectors and managers of the assessed organizations. Furthermore, different versions of the quality report were analyzed.

**Results:** Easy made operationalizations of person-centred care (e.g., choice for meal) received more attention than other, less easily made, operationalizations of person-centered care (e.g., group dynamics). The following three exclusion mechanisms show why certain aspects of person-centred care got less attention than others: 1) not being able to triangulate information 2) doubting the trustworthiness of a person 3) not being able to deviate from the structure of the inspection program. Furthermore, there are two exclusion mechanisms that show how the assessment of person-centred care is ignored or overruled by other values in the assessment framework: 1) downplaying person-centredness by mitigating circumstances and, 2) prioritization of safety risks over risks of lacking person-centredness.

**Conclusion:** In evaluating person-centred nursing home care using open norms, certain mechanisms are in place that exclude the assessment of quality of (certain aspects of) person-centered care. To overcome these mechanisms, a different, more reflexive approach for regulation might be needed to encourage stakeholders to engage in self-observation and self-criticism. Reflexive regulation using narrative methods can be especially helpful with complex issues, which are associated with uncertainty about standards and where different perspectives play a role. In further participative action research, we will experiment with and study the use of reflexive regulation using narrative methods in long-term care.

## **S20: Adapting and implementing WHO iSupport among dementia caregivers worldwide: users' perspectives and future development (Session II)**

The WHO Global Action Plan against Dementia calls for “at least 75% of member states providing carer support and training by 2025”. In response to the global target, WHO has developed iSupport aiming to provide support for caregivers of people living with dementia. The generic WHO iSupport has been translated and adapted in 39 countries and 37 languages so far. The adapted versions of WHO iSupport are now being implemented worldwide, usually as an online program for caregivers. The feasibility, accessibility, effectiveness and sustainability of the iSupport program in different cultural context is now being explored extensively. This symposium aims to share the up-to-date research findings and lessons learned on the adaptation and implementation process and users’ perspectives from diverse cultural background. It will include seven presentation and be divided into sessions: 3 presentations on Session I and 4 presentations on Session II.

Session I: The first presentation will be dedicated to overviewing the development and the progress of adaptation and implementation of WHO iSupport. The second presentation will focus on the adaptation of iSupport in Uganda. The presentation will inform the utility of iSupport in Sub-Sahara Africa. Based on individual semi-structural interview data from Tunisia, the third presentation will highlight that caregivers' experience and needs are valuable for cultural adaptation of iSupport.

Session II The first presentation will demonstrate how facilitator-enabled iSupport intervention would change the interaction and engagement in learning among Chinese caregivers living in Australia and Greater China. The second presentation will focus on adapting iSupport in Switzerland using a community-based participatory approach. The third presentation will show the potential benefit of raising awareness of the Russian society about dementia after the implementation of iSupport through digital technologies. The fourth presentation will report on the co-design of an adapted version of iSupport for young caregivers.

The symposium is expected to inform further development, improvement and implementation of WHO iSupport for diverse cultural background. This will be not only valuable information for participants who are interested in iSupport but also for those (interested in) investigating interventions developed in another cultural setting.

### **Chinese caregivers' experiences in an iSupport intervention program in Australia and China**

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**Objective:** Around 95% of Chinese with dementia in Australia and China reside at home and are cared for by family members. The World Health Organization (WHO) iSupport program has been translated into simplified and traditional Chinese and culturally adapted to the Chinese populations in Australia, Mainland China, Taiwan, Hong Kong and Macau. The objective of this study was to explore family caregivers' experience in a 6-month randomized controlled trial of a facilitator-enabled iSupport intervention program that includes the utilization of the online iSupport and peer support activities.

**Methods:** A qualitative descriptive design was applied to address the study objective. Caregivers' interactions with peers and program facilitators in monthly online meetings were audio-recorded and transcribed verbatim for data analysis. Facilitators were required to document their support for caregivers in their monthly portfolios and submit for data analysis. Thematic analysis was used to analyse data collected from online caregiver meetings and facilitator portfolios.

**Results:** Five main themes were identified from data. First, caregivers were able to follow the group learning goal to complete their monthly learning activities using the online iSupport. They were also capable of selecting additional learning units from iSupport to meet their individual learning needs. Second, caregivers perceived that iSupport enabled them to change their responses to changed behaviours their care recipients had by which they reduced the sources of stressor in their daily care. Third, caregivers were willing and felt safe to share their stressors and seek help from peers and facilitators in group meetings. Fourth, caregivers demonstrated their enthusiasm to help their peers reduce their

stressors and social isolation by searching and sharing various electronic resources via Wechat or Whatsapp platform throughout the trial. In addition, facilitators were able to assess caregivers' learning needs and link them with relevant care services and resources accordingly.

**Conclusion:** Facilitator-enabled iSupport intervention in our study demonstrated advantages of engaging caregivers in learning iSupport, applying knowledge into daily care activities, sharing experiences with and supporting other caregivers.

**Keywords:**

Dementia, family caregivers, facilitators, internet-based dementia caregiver education, virtual caregiver support group

**iSupport Swiss: a community based participatory approach to culturally adapt the WHO online intervention for family caregivers of people with dementia**

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**Objective:** Informal caregivers of people with dementia are at high risk of developing mental and physical distress because of the intensity of the care provided. iSupport is an evidence-based online program developed by the World Health Organization (WHO) to provide education and support to informal everyday care. The study aims to describe the process and results of iSupport cultural adaptation in Switzerland.

**Methods:** We used a mixed-methods design, with a community based participatory research approach. The adaptation of iSupport followed WHO adaptation guidelines and developed into five steps: content translation, linguistic and cultural revision by the members of the Community Advisory Board, validation with health professions faculty, validation with formal and informal caregivers, and fidelity check appraisal by members of the WHO.

**Results:** Findings from each phase showed and consolidated the adjustments needed for a culturally adapted Swiss version of iSupport. We collected feedback and implemented changes related to the following areas: language register and expressions (e.g., from *lesson* to *chapter*; from *suffering from dementia* to *affected by dementia*); graphics and illustrations (e.g. from generalized objects' illustrations to featured humans' illustrations); exercises and case studies (e.g., from general, non-familiar scenarios to local and verisimilar examples); and extra features to add to the online version (e.g., short tailoring assessment questionnaire, interactive forum section, glossary). Additionally, based on the suggestions from the interviews with health professions faculty, we also created a training of trainers (ToT) version of iSupport for health care professionals.

**Conclusion:** Our results show that adopting a community based participatory approach and collecting lived experiences from the final users and stakeholders is essential to meet local needs and to inform the further development, testing and implementation of an online evidence-based intervention to a specific cultural context.

**Keywords:**

Informal caregivers, iSupport, dementia, online interventions, community based participatory research

**Digital technologies in iSupport implementation in Russia**

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**Objective:** More than 1.5 million people have been diagnosed with dementia in Russia. Although we have all the necessary doctors and medicines, there is no clear, expert-approved special care system for people with dementia: caregivers do not have a manual for working with people with cognitive impairments. Our adapted web-guide and mobile application aim to educate professional and informal caregivers, and society about the principles of taking care for people with dementia, it's any age prevention, creating an environment of equality.

**The objective** of this study is to explore the level of raising awareness of the Russian society about dementia after the implementation of our digital technologies.

**Methods:** Conducting an in-depth expert interview and a focus group with caregivers who got acquainted with the adapted ISupport guide were applied in order to evaluate the appropriateness of care practice for people with dementia in terms of medical standards and to uncover practical infelicities and improve them. Collected data and respondent's replies analyses, content-analysis that we made became the basic principles of our new application. The quantitative method allows us to track user activity and assess the level of social involvement in dementia issues. Moreover, we have collected caregivers' opinions after they used our application and web-version for the first time by virtue of a qualitative method.

**Results:** We have reached various aims during our ISupport implementation and working on the research project. First, the number of users of our mobile application is steadily growing (+ 4 people per day at the launch stage). Second, we have received a lot of feedback about our ISupport web version: "it is easy to use; it has a good design, sipid content and a logical structure, which in turn facilitates the process of caring for a person with dementia. Third, medical experts approved our adaptation, web-version and mobile application and recommended it for use in Russian-speaking countries.

**Conclusion:** we have come to both theoretical and practical results of ISupport implementation in Russia and successfully launched two digital projects. Thanks to the work we have done the dementia issue in Russia will become more popular among society and will prevent the disease of thousands of people.

**Keywords:** dementia; caregiving; raising dementia awareness; digital technologies implementation

## **S21: Treatment opportunities for personality disorders in later life**

### **The Influence of Personality Functioning and Pathological Traits on the Mental Well-being of Older Persons with Personality Disorders**

Symposium chaired by Prof. dr. S.P.J. van Alphen and Prof. dr. R.C. Oude Voshaar

**Presenter:** R.H.S. van den Brink

**Authors (and affiliation) of abstract:** R.H.S. van den Brink<sup>1</sup>; M.S. Veenstra<sup>1</sup>; S.D.M. van Dijk<sup>1</sup>; R. Bouman<sup>1</sup>; S.P.J. van Alphen<sup>2</sup>; A.D.I. van Asselt<sup>3</sup>; R.C. Oude Voshaar<sup>1</sup>

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**Background:** Why should you pay attention to personality pathology in geriatric psychiatry? To what extent is mental well-being determined by this? How does that relate to the influence of mental disorders? Does the Alternative Dimensional Model of Personality pathology (AMPD) as proposed by the DSM-5 provide more insight into this than the DSM-IV and DSM-5 categorical diagnoses of personality disorders?

**Method:** These questions were examined in baseline data of 145 patients included in our randomized controlled trial (RCT) into group Schema therapy enriched with psychomotor therapy in older patients with a personality disorder (see Oude Voshaar in this symposium). Mental well-being was measured by a combination of psychological distress (53-item Brief Symptom Inventory), positive mental health (Warwick-Edinburgh Mental Well-being Scale), assessment of own health (RAND-36), and satisfaction with life (Cantrill's ladder). Personality pathology was assessed according to the categorical personality model using the Structured Clinical Interview for Personality Disorder (SCID-II) as well as the AMPD DSM-5 model using the Severity Indices of Personality Problems (SIPP-short form) and the Personality Inventory for DSM-5 (PID-25). The relationship between personality pathology and mental well-being was investigated using multivariate regression analysis.

**Results:** Three quarters of the included people with a personality disorder also had another psychiatric disorder (beyond personality pathology). However, personality pathology was found to be responsible for the bulk of the mental health burden and outweighed the influence of these psychiatric disorders. Personality dimensions were highly predictive of mental well-being. This contrasted with the absence of any influence from categorical personality disorders. Although dimensions of personality functioning – and in particular Identity Integration – were the primary predictors of mental well-being, pathological traits added significant predictive value (particularly Disinhibition and Negative Affectivity).

**Conclusions:** Personality pathology seriously affects the mental well-being of patients and exceeds the impact of comorbid psychiatric disorders. Contrary to the assumption in the alternative DSM-5 and ICD-10 model, both personality functioning and pathological traits contribute to this impact on mental well-being. Screening and systematic assessment of personality pathology in geriatric psychiatry seems warranted.

**Schema therapy enriched with psychomotor therapy for cluster B and/or C personality disorders in later life; a randomized controlled trial.**

**Presenter:** R.C. Oude Voshaar

**Authors (and affiliations) abstract:** R.C. Oude Voshaar<sup>1</sup>; M.S. Veenstra-Spruit<sup>1</sup>; R. Bouman<sup>1</sup>; S.D.M. van Dijk<sup>1</sup>; A.D.I. van Asselt<sup>2</sup>; S.P.J. van Alphen<sup>3</sup>; R.H.S. van den Brink<sup>1</sup>

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**Background :** Different types of psychotherapy have been shown to be successful in treating personality disorders in younger age groups. Nevertheless, well-powered, randomized controlled trials evaluating effectiveness of these therapies in older are lacking. That is why we set up the first randomized controlled trial worldwide into the effect and cost-effectiveness of psychotherapy in older patients with a personality disorder.

**Method:** We randomized 145 patients (mean age 68 years, range 60 – 80, 65% females) with a cluster B and/or C personality disorder to either group schema therapy enriched with psychomotor therapy (GST+PMT) or to usual care (UC) in specialized geriatric mental health care. The effects were measured after 6 months (end of therapy) and 12 and

18 months (one-year follow-up). Primary outcome measure was psychological distress, as measured with the 53-item Brief Symptom Inventory (BSI-53). Secondary outcome measures were mental well-being, assessed with the Warwick-Edinburgh Mental Well-being Scale, and personality functioning assessed with the Severity Indices of Personality Problems – Short Form (SIPP-SF). Intention to treat analyses using linear mixed models were applied to compare GST+PMT with UC.

**Results:** Group schema therapy significantly outperformed usual care with an medium effect-size of 0.4 post-treatment, which faded out to a small effect-size of 0.2 at the end of follow-up on the primary outcome parameter. Interestingly, the lower effect-size during follow-up could be explained by a slower treatment response in the usual care condition as post-treatment results of schema therapy were fully maintained during follow-up. Similar results were found with respect to improvement of mental well-being and improvement of personality functioning, although effect-sizes of the latter were a little bit smaller. Age, sex, level of education, and/or cognitive functioning had no impact of these outcomes.

**Conclusion:** Schema therapy enriched with psychomotor therapy is more effective for the treatment of personality disorder in later life than usual care (which often consists of drug treatment combined with supportive nurse-led care and/or individual psychotherapy).

### **EMDR in older adults with PTSD and comorbid personality disorders**

**Presenter:** E.M.J. Gielkens<sup>1,2</sup>

**Authors (and affiliations) abstract:** E.M.J. Gielkens<sup>1,2</sup>; S. Sobczak<sup>1,3</sup>; N. Gerrits; E. Rosowsky<sup>7,8</sup>; L. Stas<sup>5,6</sup>; G. Rossi<sup>2</sup>; S.P. J. van Alphen<sup>1,2,4</sup>

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**Objectives:** Approximately one third of older adults ( $\geq 60$  years) with a posttraumatic stress disorder (PTSD) also suffer from a comorbid personality disorder. Emerging evidence shows that in Eye Movement Desensitization and Reprocessing (EMDR) therapy can be beneficial for personality disorders. Since personality disorders are associated with several adverse events, the present study aims to investigate whether EMDR in older adults with PTSD will improve personality functioning.

**Methods:** A multi-center feasibility study was conducted with 24 older PTSD-patients (60-83 years). PTSD was assessed with the Clinician-Administered PTSD Scale-5 (CAPS-5). All participants received weekly 1-hour sessions of EMDR therapy for PTSD up to a maximum of 9 months. The primary outcome was change in personality dysfunction, assessed by Severity Indices of Personality Problems–Short Form (SIPP-SF) at baseline and end of treatment. Secondary outcome was pre-post difference in the presence of (any) personality disorder according to DSM-IV criteria as measured with the



Structured Clinical Interview for DSM-IV Axis-II PDs (SCID-II). All analyses were adjusted for PTSD severity, therapy duration, and other treatment (co-interventions) which was kept constant.

**Results:** A linear mixed model approach showed an increase in SIPP-SF scores from pre- to posttreatment, a significant influence of pre-post CAPS-5 for the total sample ( $F(1,37.5)=6.95$ ),  $p=.012$ ) and a marginal significant effect of other treatment ( $F(1,21.9)=4.04$ ),  $p=.057$ ). No significant main effects of time, therapy duration (3, 6, or 9 months), CAPS-5 by time was found (all  $p>.05$ ).

**Conclusions:** EMDR treatment resulted in improved personality functioning. Other treatment next to EMDR had a negative impact on the increased of personality functioning.

### **Systems Training for Emotional Predictability and Problem Solving for older adults with borderline personality disorder symptoms**

Presenter: E. Ekiz

**Authors** (and affiliations) abstract: E. Ekiz<sup>1</sup>, A.C. Videler<sup>1,2</sup>; M. Ouwens<sup>1,2</sup>; S.P.J. van Alphen<sup>3-5</sup>

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**Objective:** Systems Training for Emotional Predictability and Problem Solving (STEPPS) is a 20-week group treatment program for patients with borderline personality disorders (BPD). STEPPS is an evidence-based treatment to reduce BPD symptoms. However, the mean age of patients studied thus far is 33 years. Studies evaluating STEPPS in older adults are lacking. Aim of this study was to investigate the feasibility of STEPPS in older adults with BPD symptoms.

**Method:** A naturalistic, pre- vs post-treatment pilot study design. Twenty-four patients (mean age 64 years) completed the Dutch version of the STEPPS program. Primary outcome was BPD symptoms and secondary outcome was psychological distress and maladaptive personality functioning.

**Preliminary results of the ongoing study:** The STEPPS pilot in older adults demonstrated a significant decrease in BPD symptoms (Cohen's  $d = 1.6$ ), improved self-control of emotions and impulses ( $r = 0.58$ ), and improved identity integration (Cohen's  $d = 0.5$ ). No significant differences were found for psychological distress.

**Conclusion:** STEPPS is feasible for older adults with BPD symptoms. The treatment program led to a decreased in BPD symptoms and improvement of emotion regulation skills in older adults.

**Future perspectives:** To further improve the feasibility of STEPPS in older adults a Delphi study was performed with seven experts in the field. The results of this Delphi study will additionally be discussed in this presentation. Most important recommendations were the addition of age-specific topics to the STEPPS program, e.g., changing social roles, life review, and/or physical limitations.



## S22: Social Connectedness, Ageing and Mental Health in Doctors

Being a doctor is tough, especially in a post-pandemic world. Never has the field of doctors' health been so stretched by need. Senior doctors, and medical leaders in particular, have been particularly taxed, as have their families. Unpacking some of the insights gleaned about medical leadership and wisdom in medicine, and conversely when this is lacking, is important for the sake of patients and doctors alike. In this symposium we will address new perspectives in doctors' health tailored to this new healthcare world. Topics include: (i) Systemic interventions to support senior medical leadership; (ii) Wisdom in medicine; (iii) The dysfunctional or disruptive physician in healthcare; (iv) Senior doctors and their families; (v) Medical retirement in a post-pandemic world. Strong audience participation will be encouraged in this symposium.

## Free/Oral Communications

### FC1: Effect of Transcranial Direct Current Stimulation (tDCS) on Left Dorsolateral Prefrontal Cortex (DLPFC) in Dementia with Lewy Bodies (DLB)

**Authors:** Carol Sheei-Meei Wang<sup>1,2,3\*</sup>, Kuo-Sheng Cheng<sup>1</sup>, Chia-Hung Tang<sup>2</sup>, Nien-Tsen Hou<sup>4</sup>, Pei-Fang Chien<sup>2</sup>, Ying-Che Huang<sup>4</sup>, Pai-Lien Chen<sup>5</sup>

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**Introduction:** tDCS application to the DLPFC is associated with the improvements of executive function, memory enhancement, language, processing speed, global cognitive symptoms and apathy over time after treatment. DLB is the second most common form of degenerative dementia. There is no FDA-approved medications that can slow, stop or improve the progression of cognitive declines in DLB. Identifying effective treatments is a critical issue for DLB. In neuropathology, extracellular  $\alpha$ -syn oligomers interfere with the expression of long-term potentiation (LTP), and influence memory and learning. tDCS has been proposed to affect long-term synaptic plasticity through LTP and long-term depression, thereby improving cognitive ability. So far, only two studies have evaluated the effect of tDCS in DLB. In this pilot study, we investigate the effect of tDCS on left DLPFC in DLB.

**Method:** Fourteen DLB aged 55-90 years (mean age 76.4, with 4 males and 10 females) were included in a double-blind, randomized, sham-controlled cross over design study. DLB diagnostics is according to DSM-5 criteria. CDR ratings for DLB participants ranged from 0.5 to 2. The active tDCS (or sham) process consists of daily sessions of active tDCS (or sham) for 10 consecutive days. The anodal electrode was placed over the left DLPFC and the cathodal electrode was placed over the right supraorbital area, with a current intensity of 2 mA and an electrode size of 25 cm<sup>2</sup> for 30 min in a session. Before and after these treatment sessions, all subjects received a series of neuropsychological tests, including CDR, MMSE, CASI, NPI and WCST. Chi-square test, Wilcoxon signed ranks test and Mann-Whitney U test were used to assess differences in participant demographic characteristics and to compare differences among groups.

**Results:** The active tDCS group showed significant improvements on the three items of CASI, 'language ability', 'concentration and calculation', 'categorical verbal fluency', after active stimulations. There is no improvement in MMSE, CASI, NPI and WCST scores in the sham groups.

**Conclusion:** These results suggest that left DLPFC anodal, and right deltoid cathodal tDCS, may have some cognitive benefits in DLB. Larger-scale trials are needed to confirm the effect of tDCS in DLB.

Key words: Transcranial Direct Current Stimulation, Dementia with Lewy Bodies, cognitive function, Wisconsin Card Sorting Test, left DLPFC

## **FC2: The effect of Maintenance phase of Transcranial Direct Current Stimulation (tDCS) in Alzheimer's Dementia**

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**Introduction:** Transcranial direct current stimulation (tDCS) has been proposed to affect long-term synaptic plasticity through LTP and LTD, thereby improving cognitive ability. In pathology, the amyloid deposits in AD disrupts the balance between long-term potentiation (LTP) and long-term depression (LTD) of neuronal cells and synaptic plasticity. An increasing number of studies have been concluded a positive therapeutic effect on cognition in AD. In brain stimulation, dorsolateral prefrontal cortex (DLPFC) was associated with improvements in memory enhancement, language, processing speed, global cognitive symptoms, and apathy over a period of treatment. Theoretically, the aftereffect of tDCS would need to be re-stimulated by tDCS to maintain its delayed plastic response benefits. In this pilot study, we investigate the maintenance effects of continuing tDCS at three different times, weekly, every two weeks, and every four weeks, for 12 weeks.

**Method:** Twenty-eight AD participants aged 55-90 years were enrolled (mean age 72.7, 77.3, and 76.2 in the three groups - maintained weekly (7 cases), biweekly (9 cases) and every 4 weeks (12 cases)). The anodal electrode was placed over the left dorsal lateral prefrontal cortex and the cathodal electrode was placed over the right supraorbital area. In each active session, we applied a current intensity of 2 mA and an electrode size of 25 cm<sup>2</sup> for 30 min. All subjects received a series of neuropsychological assessments including CDR, MMSE, CASI and WCST at (1) baseline, (2) post-10sessions of tDCS (in 2weeks), and (3) post-maintenance phase (total of 12 weeks). Chi-square tests, Wilcoxon signed rank tests and Mann-Whitney U tests were used to assess differences in participant demographic characteristics and to compare differences in test scores between groups.

**Results:** After 10 sessions of tDCS stimulations, the total CASI scores in the 1-week group improved significantly from baseline to 2 weeks. However, there are no significant difference in MMSE, CASI or WCST between baseline and after maintain phase stimulations in each group.

**Conclusion:** Although tDCS has a positive effect in AD, it is recommended to prolong the number of tDCS stimulations, such as 20 sessions in 4 weeks.

### **FC3: “Empowering Health & Social Service Providers in Addressing Social Isolation & Loneliness in Older Adults”**

**Authors:** *Bette E. Watson-Borg, David K. Conn, Claire Checkland*

Canadian Coalition for Seniors’ Mental Health

“Social isolation among older adults is associated with increased change of premature death; depression; dementia, disability from chronic diseases; poor mental health; increased use of health and support services; reduced quality of life; poor general health; and an increased number of falls.” (National Academies of Sciences, Engineering, and Medicine (2020).

Without question, the global pandemic has significantly exacerbated both the prevalence and awareness of social isolation and loneliness as a growing health and societal challenge for older populations.

“Because of growing calls for Canada’s health-care systems to identify, prevent and mitigate loneliness as part of COVID-19-related public health efforts, there is a unique opportunity to build capacity to identify and intervene with older adults who are experiencing social isolation or loneliness.” National Institute on Aging (2022).

Over the past two decades, the Canadian Coalition for Seniors’ Mental Health (CCSMH) has developed a number of internationally recognized clinical guidelines in support of mental health for older adults. CCSMH is responding to the growing mental health crisis of isolation and loneliness with the development of evidence-based guidelines, to support the vital work of health and social service providers across Canada. The focus of these guidelines is to develop a broad range of evidence-based, manageable, and stepped care approaches to identify and address social isolation and loneliness in older adults. It is recognized that this topic is extremely complex and vast in potential scope. Through the guidance of a national working group of experts, these guidelines will draw upon both academic and grey literature, as well as on the experience of a diversity of health and social service providers, older adults, and their caregivers. This project will also provide guidance, promoting wellness and reducing the risk of social isolation with targeted messaging, knowledge translation and useful tools for supporting social connection among those at highest risk.

This presentation will share the Guidelines’ preliminary recommendations, as well as data from two national surveys alongside other insights gained from ongoing research and stakeholder engagement.

## **FC4: Maintain Your Brain: a scalable 3-year online intervention which reduced cognitive decline in 55-77 year olds**

**Authors:** Henry Brodaty, Michael Valenzuela, Maria Fiatarone Singh, Perminder S. Sachdev, Michael Millard, John McNeil, Anthony Maeder, Louisa Jorm, Megan Heffernan, Kaarin Jane Anstey, J. Anupama Ginige, Tiffany Chau, Juan Carlo San Jose, Heidi Welberry, Nicole Kochan, MCLinNeuro

**Objective:** There is increasing focus on effective preventative interventions applicable at the population scale such as through technology and web-based approaches. We aimed to reduce cognitive decline with ageing using an online package of interventions delivered intensively for 12 months followed by monthly boosters for 24 months.

**Methods:** Invitations were sent to people aged 55-77 years from the 45 and Up study, a population-based cohort study of one in ten people aged 45 years and older in New South Wales, Australia (n=267,000). Participants were required to be eligible for at least two of four modules addressing physical inactivity and associated health risks (Physical Activity), adherence to a Mediterranean-type diet and health risks associated with poor nutrition (Nutrition), cognitive activity (Brain Training) and mental well-being (Peace of Mind). Participants received modules based on their risks, with 1:1 randomized allocation to active personalised coaching modules (intervention) or static information-based modules (control). The primary outcome was change in an online combined multi-domain cognitive score measured using COGSTATE and Cambridge Brain Sciences tests using intention to treat analysis. Secondary outcomes included specific cognitive domain and ANU-ADRI risk scores.

**Results:** From 96,418 invitations, 14,064 (14%) consented; 11,026 (11%) were eligible; and 6,104 (6%) completed all 10 baseline assessments. Over three years there was a significantly greater improvement in the global composite cognition z-score in the intervention group, ES = 0.106 (p<0.001). Significant benefits were also found in complex attention, executive function and learning and memory (all p<0.001), as well as on a validated dementia risk instrument (p=0.007).

**Conclusion:** An online platform that tailored physical activity, nutrition, brain training, depression and anxiety interventions to an individual's risk factor profile over three years significantly delayed cognitive decline in older adults. This platform is scalable and if rolled out at a population level may help reduce the prevalence of dementia globally.

## **FC5: The Maintain Your Brain online multidomain intervention for dementia risk reduction: qualitative exploration of lifestyle changes made, continued, or declined, and why**

**Authors:** Anne-Nicole Casey<sup>1</sup>, Tiffany Chau<sup>1</sup>, Megan Heffernan<sup>1</sup>, Henry Brodaty<sup>1</sup>

<sup>1</sup>Centre for Healthy Brain Ageing (CHeBA), University of New South Wales (UNSW) Sydney, Sydney, New South Wales, Australia

**Objective:** Explore end-user evaluations and feedback focused on lifestyle change in a large-scale multidomain online intervention targeting modifiable risk factors for dementia.

**Methods:** Online survey and semi-structured interviews at conclusion of the Maintain Your Brain (MYB) randomized controlled trial. Participants were 55-77 years of age at baseline, and had engaged in assessments, brain training, nutrition and physical activity, and mental health modules over three years. Of 5,260 participants invited, 2,386 completed online surveys and 1,589 of these respondents provided free text comments. Nearly 250 survey respondents agreed to be contacted for additional interviews; 70 of these were invited, 40 interviewed. Survey respondents and interview completers endorsed whether they had made lifestyle changes because of MYB participation and whether they would continue healthy lifestyle changes going forward. Interview participants endorsed whether they thought similar programs can be useful in delaying or preventing dementia, whether their views regarding this type of program had changed over time, answered open-ended follow-up questions and provided additional feedback. Data were summarized using descriptive statistics and explored using multiple qualitative methods.

**Results:** Of survey respondents, 90.5% endorsed intention to continue a healthier lifestyle; 63.2% endorsed that lifestyle changes had occurred. Interview participants thought similar programs could be useful in delaying or preventing dementia, but some were unsure. Trial participation had not changed many individuals' views about online lifestyle programs. Survey free-text and interview comments indicated diversity in pre-intervention knowledge, lifestyle and health-related behavior. Many respondents reported improved knowledge and awareness, some detailed relevant and continued lifestyle change. Those who were already well informed and/or leading healthy lifestyles explained that trial participation had confirmed their existing practices. Trial characteristics, personal characteristics, social relationships and significant events impacted whether respondents had made and/or continued changes. More flexible, adaptive individually tailored goals and timely feedback were requested to better support change.

**Conclusion:** Surveyed participants who engaged in the 3-year MYB online multidomain dementia risk reduction program reported lifestyle changes and intention to continue having a healthier lifestyle. Older adults in this study suggested that similar online programs need to provide flexible, individualized guidance and feedback to support lifestyle change.

## **FC6: The Valladolid Multicenter Study: ¿Is there ageism in liaison psychiatry? Referrals of patients over 65 years to 7 Liaison Psychiatric Units (LPU) in Spain**

**Authors:** Miguel Alonso Sanchez<sup>1</sup>, Eduardo Delgado Parada<sup>1</sup>, Leire Narvaiza Grau<sup>2</sup>, Monica Prat Galbany<sup>2</sup>, Andrea Santoro<sup>3</sup>, Maria Iglesias Gonzalez<sup>4</sup>, Cristina Pujol Riera<sup>5</sup>, Eduardo Fuster Nacher<sup>6</sup>, M<sup>a</sup> Desamparados Perez Lopez<sup>7</sup>

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**Introduction and objective:** Ageism is defined by the World Health Organization as stereotypes, prejudice, and discrimination towards others or oneself based on age. Ageism is thought to pose a risk to the physical and mental health of older adults, but little is known about how to measure it in LPUs. We propose that a form of ageism can be detected by comparing the referrals made by liaison psychiatry services among patients over age 65 at discharge with functional status and medical comorbidity. Our hypothesis is that the worse the functional index and medical comorbidity, the fewer referrals to psychiatric services and the more referrals to primary care physicians.

**Methods:** This is an observational, cross-sectional, multicenter study. We obtained data from a sample of 165 patients ( $\geq 65$  years) admitted to seven general hospitals in Spain referred from different departments to each LPU. Data was collected over a period of one and a half months. Psychiatric evaluations were performed while the patients were in the wards. Sociodemographic, clinical, and care variables were collected. Functional status was measured with the Barthel and Lawton index and comorbidity with the Charlson index.

**Results:** We obtained a sample of 165 patients with a mean age of 76,03 years old. The mean Barthel index was 87,18 previous admission and 61,15 at the time of our first visit. The mean Lawton index was 5,266667 and the Charlson index was 6,03. The different options for referral were primary care physician, psychiatric facilities, nursing homes, substance use centers, or exitus. Statistical analysis was performed using the nonparametric Kruskal-Wallis test to determine if there were significant differences ( $p < 0,05$ ) between the indices and referrals. Contrary to our hypothesis, statistical significance was observed only for the Lawton index, but with more referrals to psychiatric facilities among patients with the worst functional scores. No other statistical significance was observed. **Conclusions:** Functional status and medical comorbidity did not play a role in the referral of inpatients managed by LPUs. Further studies are needed to clarify whether there is any form of ageism in the referral of elderly inpatients attended by Psychiatric Liaison Units.

## **FC7: Social Support, Relationship Satisfaction, and Meaning and Purpose in Life as Predictors of Loneliness among Older Adult Couples**

**Authors:** Mary S. Mittelman, Steven Shirk, Cynthia Eptein, Maureen O'Connor,

**Background:** Meaning and purpose in life has demonstrated positive effects on physical and mental health and loneliness. We wanted to understand whether, among older adult couples, the impact of meaning and purpose in life on loneliness was mitigated by their assessment of the quality of their relationship with their partner, and their social support from family and friends.

**Method:** Participants were 101 nondemented older adults living with a spouse or partner and participating in an ongoing longitudinal study of couples. As part of their baseline visit, they completed a series of questionnaires to measure demographic information, physical and psychological well-being, loneliness, meaning and purpose in life, quality of dyadic relationship (measured by the Dyadic Adjustment Scale), and various aspects of social support (instrumental, informational, and emotional).

**Results:** The average age of participants was 74.7 ( $SD = 6.71$ ) and 49% were female. Bivariate correlations demonstrated statistically significant relationships between loneliness and meaning and purpose in life, relationship satisfaction, and emotional, informational and instrumental support but not age and gender. In a multiple regression analysis, meaning and purpose in life was the strongest predictor of loneliness ( $\beta = -0.322, p < 0.001$ ); relationship quality ( $\beta = -0.263, p = 0.005$ ), emotional ( $\beta = -0.229, p = 0.048$ ) and instrumental support ( $\beta = -0.203, p = 0.024$ ), also predicted loneliness,  $F(5,95) = 12.19, p < 0.001$ , adjusted  $R^2 = 0.36$ .

**Discussion:** In this study, all participants were older adults and members of a couple. Even when they rated their relationships with their partners as having high quality, they nevertheless expressed more loneliness when they had less meaning and purpose in life. While satisfaction with instrumental and emotional support had a positive impact on loneliness; perhaps surprisingly, relationship quality was less important than meaning and purpose in life. Apparently, having a sense of meaning and purpose in life is an ongoing need that extends to old age. This finding, if replicated in a larger longitudinal study has implications for social policy that facilitates inclusion of older adults in meaningful roles, rather than having them age out.

## **FC8: Revising Competencies in Geriatrics for Canadian Medical Students: Adding a Mental Health Perspective**

**Authors:** Cindy J. Grief, Thirumagal Yogaparan

In Canada, adults 85 years and older represent one of the fastest growing segments of the population<sup>1</sup>. Mood disorders and chronic illness often intersect, worsening health outcomes in late life<sup>2</sup>. In view of demographic trends, medical schools should ensure trainees are equipped with the knowledge, skills and attitudes to work with older adults. However, there continues to be much variation in how medical schools incorporate geriatric content into their curricula.

In 2009, the Canadian Geriatrics Society (CGS) outlined 20 competencies in geriatrics to inform medical school curricula, but uptake was minimal. Of note, there were significant gaps in these competencies, which omitted mention of late-life depression. Geriatric mental health experts did not provide input.

The objective of this project was to address gaps in geriatric competencies for medical students through an expert review process involving a biopsychosocial approach.

**Methods:** The CGS established a 15-member national working group with representation from geriatric psychiatry, family medicine, a 95-year-old senior, geriatrics and medical trainees. Potential competencies were derived from existing Canadian geriatrics frameworks [Geriatrics 5M, CanMEDs] and 2009 competencies. A modified Delphi process yielded rankings for each competency using a 7-point Likert scale.

**Results:** Between 2019 and 2021, 3 successive national surveys were completed. In the first (n=66), 34 competencies were identified. Agreement in the final survey was 87-95% (mean 90%). 51 participants completed all three. Significant topic omissions in the 2009 list of competencies were frailty, end-of-life care, delirium prevention, health promotion and the assessment and management of depression.

**Conclusions:** Three national surveys expanded the core competencies in geriatrics for medical school curricula from 20 to 31. Expert consensus was high. Themes mapped along existing geriatrics frameworks and incorporated a holistic lens incorporating the perspectives of an older adult and geriatric psychiatrist. In addition to late-life depression, the importance of addressing ageism was also highlighted.

Learning objectives for each competency are modifiable for level of training and individual program, offering flexibility. The CGS will continue to advocate for inclusion of updated, expanded competencies into training and licensure in geriatrics.

- 1) Statistics Canada 2021, Canadian Government, accessed 1 January 2023, <<https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-X/2021004/98-200-x2021004-eng.cfm>>
- 2) Hall CA, Reynolds III CF. Late-life depression in the primary care setting: challenges, collaborative care and prevention. *Maturitas*. 2014 Oct; 79(2):147-52.

## **FC9: Ethno-racial identity and cognitive impairment: A population-based study**

**Authors:** Mary Ganguli, Yingjin Zhang, Erin Jacobsen, Isabella Wood, Chung-Chou Chang



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Sponsored by NIH grants R37AG023651 and R01AG05854901

**Objective:** Health disparities between communities with greater and lesser advantages are a global concern. In the USA, self-identified race as African American (AA) is consistently associated with mild cognitive impairment (MCI) and dementia, compared to Americans of European descent. In a prospective population-based study, we sought to confirm this association and investigate potential explanatory factors.

**Methods:** The Monongahela-Youghiogheny Healthy Aging Team (MYHAT) and Seniors Project 15104 (SP15104) studies recruited adults aged 65+ years from a group of small towns of lower socioeconomic status in the US. MYHAT recruited by age-stratified random sampling from the voter registration list for all towns; SP15104 recruited by intensive community engagement from three towns with populations that are 60% AA. Based on the Clinical Dementia Rating (CDR), MCI was defined as CDR=0.5 and dementia as CDR > 1. Using Cox proportional hazard models, we modeled time to incident CDR > 0.5 from baseline as a function of race (AA vs. all other), other demographics, and several other covariates at baseline.

**Results:** The sample of 2120 individuals was 8% AA, and 62% female, with median age of 73y, and median educational level of partial college. During follow up of up to 14.5 years, 499 participants developed new-onset MCI/dementia (CDR >0.5). Cox models revealed that being AA was significantly associated with incident CDR > 0.5 (HR=1.45. 95% CI:1.01,2.10). Inclusion of age, sex, and education in the model increased the HR for race to 1.63 (1.1, 2.3). Adding number of regularly taken prescription drugs (reflecting overall morbidity), depression symptoms, preceding year alcohol consumption, and number of visits to emergency or urgent care together reduced the HR to 1.4 (0.96, 2.0), no longer statistically significant

**Conclusions:** In this population-based cohort study, self-identified African Americans had an about 40% elevated risk of developing MCI/dementia. Adjusting for demographics, the significant association between race and incident MCI/dementia was attenuated by variables reflecting depression, greater general morbidity, and lesser access to regular health services. These variables possibly reflect downstream effects of historic discrimination, but could still be modifiable risk factors for MCI/dementia. Addressing them could potentially mitigate ethno-racial disparities in cognitive impairment.

## **FC10: Telehealth for Older Adults: Developing telehealth competencies to ensure access, quality and equity across the lifespan**

**Authors:** Melanie T. Gentry, Allison Beito, Donad M. Hilty

**Background:** Telehealth has been an important method of health care delivery during the pandemic, particularly for older adults who have been more vulnerable to the physical and psychosocial impacts of the pandemic and associated isolation. Older adults have specific medical and mental health care needs that would benefit from having access to geriatric speciality services, however these services may be difficult to access especially for those living in rural areas. Though the use of technology and telehealth has greatly expanded during the pandemic,

many health systems and clinicians lack the necessary knowledge, skills and attitudes to fully integrate technology in the health care of older adults. General telehealth competencies are available to guide educators, however, competencies to address the unique needs of older adults have yet to be developed.

**Objectives:** This literature review was conducted to evaluate what approaches are needed for clinicians to gain skills and knowledge in order to competently deliver telehealth services to older adults.

**Methods:** The review was completed using the six-stage scoping review process in line with the PRISMA checklist in PubMed/Medline and other databases from years 2000 to 2023 based on concept areas of (I) education/competencies, (II) telehealth delivery and (III) older adults.

**Results:** From a total of 813 articles, the authors found 88 eligible for full text review and 16 papers sufficiency relevant to the search criteria. Some evidence exists for telehealth competencies specifically for clinicians caring for older adults. Themes that emerged include the role of interprofessional and experiential learning, telepresence, technology training and support, and adaptations for older adults. Education of clinicians and trainees increased knowledge of its usefulness and improved attitudes related to acceptance and utilization. Training rather than ad hoc exposure to telehealth technology was emphasized. Clinician/student-provided training improved access and acceptance to telehealth in older adults. Suggested adaptations for older patients included the involvement of caregivers in the visit, especially for patients with cognitive impairment.

**Conclusions:** It appears that training – more than ad hoc experience – for clinicians and trainees increases knowledge, skills and attitudes toward telehealth for the care of older adults. Additional research is needed to define training interventions, cross-sectional versus longitudinal approaches and specify competencies (i.e., skills) and optimal learning methods.

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## **FC11: Guided low-intensity behavioural activation intervention delivery preferences among people with dementia, informal caregivers, and professional stakeholders: a qualitative study (the INVOLVERA Study)**

**Authors:** Oscar Blomberg, Frida Svedin, Anna Cristina Åberg, and Joanne Woodford

**Background:** Despite a need to provide support to people with dementia and informal caregivers to live well with dementia, the availability of psychological interventions to enhance wellbeing and support mental health problems such as depression for people with dementia are limited. A potential solution is behavioural activation, an evidence-based intervention for depression that seeks to target behavioural avoidance. Behavioural activation can be delivered in a written self-help format, with support provided by an informal caregiver, who in turn receives guidance from a healthcare professional. However, it is necessary to develop and tailor self-help interventions to the needs and preferences of specific populations.

**Objective:** To explore the needs and preferences of people with dementia, informal caregivers, and professional stakeholders to ensure cultural appropriateness, relevancy, and acceptability of the intervention.

**Methods:** Participatory action research with co-design principles using semi-structured interviews and focus groups. People with dementia (n=8), informal caregivers (n=19), healthcare professionals (n=18), and community stakeholders (n=7) were provided with draft versions of the behavioral activation written self-help intervention and a proposed intervention delivery model. Open-ended questions explored preferences concerning preferred intervention delivery setting, type of support and guidance provided, perceived relevance of the intervention content and language, and ways to enhance relevancy, cultural appropriateness, and acceptability.

**Results:** Analysis resulted in an overarching theme: Tailoring and flexibility, and three categories: Intervention process, material and context; Support and guidance; and Time. Results informed adaptations to the intervention content and delivery model, including: (1) reducing the amount of material to minimise treatment burden; (2) increasing the relevance of case stories and illustrations to Swedish society and culture; (3) modernising the design and illustrations; (4) including a case story of a person with young onset-dementia; (5) increasing the flexibility of the delivery model (e.g., delivery outside of traditional health care settings); and (6) providing additional guidance to informal caregivers.

**Conclusion:** Stakeholders expressed a need for tailoring and flexibility throughout intervention delivery, and for cultural adaptations to intervention content to improve perceived appropriateness and relevance. A planned feasibility study will examine the feasibility, acceptability, relevancy and cultural appropriateness of the intervention and delivery model.

## **FC12: Ageism and mental health stigma: key barriers to accessing mental health services among Peruvian older adults**

**Authors:** Oscar Flores-Flores, Ivonne V. Carrión, Lorena Rey, Diego Otero-Oyague, Alejandro Zevallos-Morales, José Parodi, Trishul Siddharthan, Lesley Steinman, John Hurst, Joseph Gallo, Suzanne Pollard

**Objective:** To explore barriers towards mental health services for older adults with symptoms of depression and/or anxiety in a low-resource community in Lima, Peru. We explored these barriers from the perspective of older adults and health providers.

**Methods:** We conducted an interview-based qualitative study. The first set of interviews was carried out between October 2018 and February 2019, and the second, between January 2022 and September 2022. In the first sample, we interviewed 38 older adults  $\geq 60$  years with symptoms of depression (Patient Health Questionnaire-9  $\geq 10$ ), anxiety (Beck Anxiety Inventory  $\geq 16$ ), or those who had previous experience using formal mental health care irrespective of current symptoms. In the second sample, we included 20 health providers (8 psychologists, 2 general practitioners, 2 nurses, 4 psychiatrists, 4 social workers). We used an inductive thematic data analysis.

**Results:** We identified two main barriers: stigma towards mental health conditions and care, and ageism. Stigma and ageism interacted with each other and exacerbated other barriers to mental health services. Stigma led to negative labels for people with mental health conditions and shame among older adults to disclose their feelings to health providers. Looking at the health system, health care facilities were described as not being age friendly. Additionally, aside from psychologists and psychiatrists, most providers mentioned little previous training in mental health care, but even less about the nuances of treating mental health challenges in old age. Among older adults, other important barriers were the accumulated mistrust towards health professionals and lack of knowledge about existing services and how they work. Importantly, older adults mentioned competing priorities, for example, not having time to seek care because they needed to work to obtain food. Other barriers included hidden costs incurred for transportation to health centers or to obtain medications. For older adults with diminished physical mobility, lack of accompaniment to attend health appointments was another important barrier.

**Conclusions:** Community-based mental health interventions towards older adults need to address ageism and mental health stigma to improve access to care. Furthermore, training for health providers must be improved and expanded to prioritize older adult mental health care.

## **FC13: A qualitative exploration of older people's lived experiences of homelessness and memory problems – Stakeholder perspectives**

**Authors:** Penny Rapaport, Garrett Kidd, Martin Knapp, Jill Manthorpe, Caroline Shulman, Gill Livingston.

**Background:** The numbers of older people experiencing both homelessness and Alzheimer's disease and related dementias are growing, yet their complex health, housing and care needs remain undelineated and unmet. Older people experiencing homelessness have high levels of memory and cognitive impairment relative to stably

housed age equivalent populations. In this study we aim to address a critical gap in understanding what can improve the care, support and experiences of older people experiencing homelessness with memory and other cognitive impairments.

**Objectives:** To explore how stakeholders understand and experience memory problems among older people experiencing homelessness. We consider what they perceive to be meaningful outcomes for those living with memory problems and those supporting them and what gets in the way of achieving good care and support for these individuals.

**Method:** We conducted reflexive thematic analysis of qualitative interviews (n=49) with 17 older people (aged ≥50 years) experiencing memory and other cognitive problems and homelessness, 15 hostel staff and managers, and 17 health, housing and social care practitioners working in England.

**Results:** We identified four overarching themes. The population is not taken seriously; you ‘can’t see the wood for the trees’; risk of exploitation and vulnerability; and (dis)connection and social isolation. The transience of homelessness intensified the disorienting nature of memory and cognitive impairment. Older people experiencing homelessness and memory problems fall through gaps in service provision further fragmenting their lived experiences and intensified by cognitive difficulties. Those providing direct and indirect support required flexibility and persistence to advocate, provide care and safeguard individuals, with staff moving beyond traditionally commissioned roles to advocate, provide care and safeguard individuals.

**Conclusions:** Efforts to meet the needs of older people living with Alzheimer’s disease and related dementias and experiencing homelessness must reflect the complexity their lives and current service provision. These findings have been used to co-design a psychosocial care and support intervention for hostel staff to be tested in a feasibility trial.

## **FC14: Measuring the prevalence of sleep disturbance in people living with dementia in the community. A systematic review and meta-analysis**

**Authors:** Penny Rapaport, Tala Koren, Lucy Webster, Emily Fisher, Gill Livingston

**Objectives:** Sleep disturbance affects all aspects of mental and physical functioning and quality of life and may lead to or worsen Alzheimer’s disease. Sleep disturbances in people with dementia living at home predicts care home admission and carer distress. Estimates of the prevalence of sleep disturbance vary, and it is unclear how prevalence rates differ according to setting. We conducted the first systematic review and meta-analysis on the prevalence of sleep disturbances in people living with dementia in the community. We aimed to examine demographic predictors and whether overall prevalence has changed over time.

**Methods:** We searched Embase, MEDLINE and PsycINFO for studies reporting the prevalence of sleep disturbances in people with dementia living at home. We meta-analysed data and calculated the pooled prevalence of sleep disturbances in people with dementia overall and in dementia subtypes. We used meta-regressions to investigate the effects of study characteristics, publication dates and participant demographics.

**Results:** Eleven studies fulfilled the inclusion criteria. The pooled prevalence of any symptoms of sleep disturbance was 26% (95% confidence intervals (CI): 23-30%; n= 2719) and of clinically significant sleep disturbance 19% (95% CI: 13-25%; n= 2753). The pooled prevalence of sleep disturbance symptoms was significantly lower among people with Alzheimer's disease (24%; 95% CI: 16-33%, n=310) than Lewy body dementia (49%; 95% CI: 37-61%, n=65). Meta-regression analysis did not find that publication year, participant's age, sex and study quality predicted prevalence.

**Conclusion:** Sleep disturbances are common among people with dementia living in the community, especially in Lewy body dementia. There was no change in prevalence according to publication dates (between 2002 and 2018). This suggests that possible advances in treatment of sleep disturbance are not reflected in improvements for people living with dementia. This highlights the need to develop effective intervention strategies, reducing the prevalence of sleep disturbances in people living with dementia living at home in the community.

## **FC15: The Baycrest Quick-Response Caregiver Tool™ for Behavioral and Psychological Symptoms of Dementia: Background and mixed methods studies**

**Authors:** Dr. Robert Madan and Dr. Ken Schwartz

### **Goals and Objectives:**

By the end of the session, participants will be able to:

1. Describe the Baycrest Quick-Response Caregiver Tool
2. Describe the role for the Baycrest Quick Response Caregiver Tool in BPSD
3. Describe the results of studies to date

**Objective:** Behavioral and Psychological Symptoms of Dementia (BPSD) are common and are associated with poor outcomes and caregiver burden. A variety of frameworks and tools exist to assess and understand the symptoms and to plan interventions. The Baycrest Quick-Response Caregiver Tool™ (BQRCT) is different than other tools as it assists the caregiver in real time as the BPSD are occurring. A mixed methods feasibility study in family caregivers found favorable results. Scaling up this tool for long term care (LTC) staff can potentially benefit residents living with dementia. The goal of this presentation is for participants to describe this novel tool, its evidence, and its place within the known tools and frameworks for BPSD.

**Methods:** Participants will interactively learn about the BQRCT, how it is applied with caregivers, and how it works with other tools for BPSD. The training videos will be viewed and discussed. The evidence from a mixed methods study of this tool will be presented and compared to evidence for other tools. The methods and preliminary results (if available) for an ongoing study of the BQRCT in the LTC context will be presented.

**Results:** A mixed methods study of family caregivers and health-care providers of persons with dementia and BPSD found that the BQRCT was helpful and participants reported high feasibility ratings. The group of health-care providers found the tool useful and most would recommend it to peers and clients. Participants also provided specific suggestions for improvement, such as including more examples of complex behaviours. The current study in LTC involves the creation of new videos of complex situations in LTC. Participants in LTC homes will complete the online training, and surveys pre/post and at 4 weeks post-intervention. A focus group of a sample of 20 participants will be conducted.

**Conclusions:** The BQRCT complements and works synergistically with existing strategies for managing BPSD. Care teams can use various frameworks and tools flexibly either concurrently or at different times in the episode of care of persons with dementia and BPSD. These tools must address the diversity and personal background of the person with dementia and caregivers.

## **FC16: Memory Services National Accreditation Programme (MSNAP), United Kingdom The Royal College of Psychiatrists, UK**

**Authors:** Sujoy Mukherjee (Consultant Old Age Psychiatrist and Chair of MSNAP Accreditation Committee) and Jemini Jethwa (MSNAP Programme Manager)

**Objective:** MSNAP is a quality improvement and accreditation network for services that assess, diagnose and treat dementia in the UK. Accreditation assures patients, carers, frontline staff, commissioners, managers, and regulators that your memory service is of a good quality and that staff are committed to improving care. Our aims are to improve the quality of memory services nationally and internationally, through a thorough and supportive assessment against our standards.

**Methods:** Through a model of peer-reviews, MSNAP assesses memory services across the UK (currently 86 member services) against a set of evidence-based standards for memory services. The purpose of our standards is to improve the quality of care provided by memory services. The standards are drawn from relevant policies, guidelines and research literature and have been developed in consultation with our members, our partner organisations and patient and carer networks. MSNAP has launched a developmental membership option which is open to international members to receive an in-depth assessment against our standards.

**Results:** MSNAP peer reviews of memory services reveal a national picture of challenges faced by memory services within the UK, as well as areas of best practice. These findings demonstrate where further support or resources may be needed within memory services in the UK. For example, the peer reviews have highlighted commonly unmet standards relating to the delivery of Cognitive Stimulation Therapy (CST) and conducting audits on the capacity to provide psychosocial interventions. Not all services are currently providing people with dementia with access to art/creative therapies.

**Conclusion:** MSNAP is a unique programme which is recognised globally as being robust and well established in supporting memory services to deliver best practice. The data collected from our MSNAP peer reviews provides a real-time comprehensive oversight that can shape future practices and influence national and local policies to ultimately benefit patients and carers.

## **FC17: Effects of the CarFreeMe driving cessation intervention to identify and improve transport and lifestyle issues for people with dementia: Participant feedback and satisfaction after program completion**

**Authors:** Theresa L. Scott, Nancy A. Pachana, Jacki Liddle, Trudy McCaul, Donna Rooney, Elizabeth Beattie, Geoffrey Mitchell, Louise Gustafsson

**Objective:** Without intensive practical and emotional support to plan for, and eventually, cease driving, people with dementia are at high risk for depression, anxiety, grief, social isolation, unsafe and unlicensed driving and injury. This study focused on evaluation of a 7-module intensive support program targeted at people living with dementia and their care partners to manage driving cessation (“CarFreeMe”).

**Methods:** Our intervention was person-centered according to geographic location and needs of participants. Participants were encouraged to consider future transport arrangements, plan for lifestyle changes, form realistic expectations of life changes after driving cessation, practice using alternative transport, and supported in their emotional adjustment to the role loss. We collected program evaluation from PWD and care partners via survey, including open and closed questions. Participants reported their satisfaction with content and delivery on a scale of 1-10 (where 1 = not satisfied at all, 10 = extremely satisfied).

**Results:** We describe our program and report the results of evaluation from 41 participants (PWD = 54%) who completed the survey after program conclusion. There was overall satisfaction with the program, program Content was rated on average 8.6/10, program Presentation and Delivery was rated average 9.1/10. Content analysis identified ‘personalized support’, ‘finding and trying out alternative transports’, ‘psychoeducation’ and ‘a safe space to discuss grief and loss’ as most relevant and helpful to participants.



**Conclusion:** Findings indicated that PWD and care partners valued the individualized support for the cessation process, and highly valued the psychoeducation components and strategies to address the practical and emotional challenges. Additionally, feedback indicated that for PWD who had involuntarily retired from driving, more focused attention to coping with grief and loss was needed before moving on, accepting support, and finding alternative ways to get out and about.

## **FC18: Can rehabilitation improve functional independence of older people with dementia? A pragmatic randomized controlled trial (RCT) of the Interdisciplinary Home-based Reablement Program (I-HARP)**

**Authors:** Yun-Hee Jeon, Judith Fethney, Judy M. Simpson, Richard Norman, Luisa Krein, Mirim Shin, Lee-Fay Low, Robert Woods, Loren Mowszowski, Sarah Hilmer, Sharon L. Naismith, Henry Brodaty, Vasi Naganathan, Laura Gitlin, Sarah L. Szanton

**Objective:** The Interdisciplinary Home-based Reablement Program (I-HARP) integrates evidence-based rehabilitation strategies into a dementia-specific person-centred, time-limited, home-based, interdisciplinary rehabilitation package. I-HARP was a 4-month model of care, incorporated into community aged care services and hospital-based community geriatric services. I-HARP involved: 8-10 individually tailored home visits by occupational therapist and registered nurse; 2-4 optional other allied health sessions; up to A\$1,000 minor home modifications and/or assistive devices; and three individual carer support sessions. The aim of the study was to determine the effectiveness of I-HARP on the health and wellbeing of people living with dementia and their family carers.

**Methods:** A multi-centre pragmatic parallel-arm randomised controlled trial compared I-HARP to usual care in community-dwelling people with mild to moderate dementia and family carers in Sydney, Australia (2018-22). Assessments of the client's daily activities, mobility and health-related quality of life, caregiver burden and quality of life were conducted at baseline, 4- and 12-month follow-up. Changes from baseline were compared between groups.

**Results:** Of 260 recruited, 232 (116 dyads of clients and their carers, 58 dyads per group) completed the trial to 4-month follow-up (89% retention). Clients were: aged 60-97 years, 63% female, 57% with mild dementia and 43% with moderate dementia. The I-HARP group had somewhat better mean results for most outcome measures than usual care at both 4 and 12 months, but the only statistically significant difference was a reduction in home environment hazards at 4 months (reduction: 2.29 on Home Safety Self-Assessment Tool, 95% CI: 0.52, 4.08;  $p=.01$ , effect size [ES] 0.53). Post-hoc sub-group analysis of 66 clients with mild dementia found significantly better functional independence in the intervention group: 11.2 on Disability Assessment for Dementia (95% CI: 3.4, 19.1;  $p=.005$ ; ES 0.69) at 4 months and 13.7 (95% CI: 3.7, 23.7;  $p=.007$ ; ES 0.69) at 12 months.

significantly in people with moderate dementia, so did not result in better outcomes in the group overall. A different type of rehabilitation model or strategies may be required as dementia becomes more severe.

## **FC19: Remaining engaged through work in young onset dementia: first results of the WorkDEM study**

**Authors:** Marjolein De Vugt, Bo Smeets, Kirsten Peetoom, Christian Bakker

**Background:** Focus on the capacity and potential of persons with dementia is needed to enable people and their families to adapt to the changes dementia brings in their lives. For those with young onset dementia (YOD), support to remain in work for as long as possible can preserve one's self-esteem and sense of purpose in life. However, guidance on how to support people with YOD at their workplace is lacking. This study therefore aims to explore experiences, work values, and support needs of people with YOD in the workplace and other stakeholders involved.

**Methods:** In this qualitative study, semi-structured interviews were held with several target groups namely employees with an established dementia diagnosis, relatives of employees with YOD, employers and co-workers, occupational physicians, human resource professionals, and healthcare professionals involved in dementia care. A topic guide was developed, based on recent literature and consultation of experts, and addressed the following themes: experiences regarding the influence of dementia in the workplace, values such as the importance of work, and support needs in the workplace. Themes were explored in the period before and after diagnosis. The interview data were transcribed and analyzed by means of an inductive content analysis.

**Results:** In total 33 semi-structured interviews were conducted. Eight themes were derived from the interviews in people with YOD, namely 1) difficulties experienced at work, 2) long diagnostic trajectory and involvement of work-and care professionals, 3) Impact of YOD and coping with YOD, 4) Wish to work, 5) Diagnostic disclosure, 6) The role of the work environment, 7) Phasing out work and future perspectives, and 8) Perception and awareness of YOD. Data of the other target groups is currently being analysed. These results are expected in spring 2023.

**Conclusion:** This study will result into a better understanding of the possibilities of working with YOD. These insights can be used as a starting point to develop practical tools to support and provide guidance to people with YOD and their (work)environment to prevent loss of work or find meaningful alternatives.

## **FC20: Prevalence, Incidence, and Clinical Features of Lewy Body Dementia in the South Eastern of Spain**

**Authors:** Marina Ruiz, Natalia Pérez, Inmaculada Abellán Dementia Unit. Neurology Department. Hospital de Vicente del Raspeig, Spain.

**Conclusion:** The I-HARP model enhanced functional independence of people with mild dementia only but not

**Background:** Lewy body dementia (LBD) is the second most common degenerative dementia in people over 65 (1,2). LBD is underdiagnosed, with only one third of patients correctly diagnosed in daily clinical practice (3); data on the distribution of the disease are scarce. Our study was designed to measure the incidence, prevalence and clinical characteristics of LBD in south-eastern Spain. Healthcare system in Spain is free and universal.

**Methods:** Prospective epidemiological study of LBD in San Vicente del Raspeig between October 18, 2021, and October 17, 2022. The total population aged 60 or over based on the 2019 census was 11445 inhabitants (5227 males, 6218 females). Diagnosis of LBD was based on 2017 McKeith criteria. Only “probable” cases were registered for greater diagnostic certainty. Incidence was studied for the one-year period. Collected data included gender, age, cardinal symptoms for LBD, abnormal biomarkers, neuropsychiatric symptoms, medical treatment, years from diagnosis and GDS score (Reisberg) in the last visit. Protocol was approved by the ethical committee.

**Results:** Global prevalence was 0.67% among the population over 60. Annual incidence was 3.2/1000 person-year.

Mean age of prevalent cases was 78 years (SD 7.5). 68.8% were studied with at least one biomarker (mainly 123I-ioflupane and less frequent polysomnography or MIBG gammagraphy); most suffered 2 or 3 core symptoms (79.2%) (in descending order: parkinsonism, visual hallucinations, rapid eye movement sleep behavior disorder and fluctuations). Two out of five prevalent cases were in an early phase of the disease: 22.1% in mild cognitive impairment (MCI) and 16.9 % in mild dementia. Mean me of disease was 1.9 years (SD 2.2). Other neuropsychiatric symptoms appeared in up to 74% of patients (apathy 18,2%, anxiety 19,5%, depression 23,4%, minor hallucinations 22%, delusions 17%, auditory and tactile hallucinations 1,2%).

**Conclusions:** Prevalence is in line with previous reports. Higher incidence than previously reported may be due to high attention on MCI-LBD and our expertise as a referral Memory Unit. We found a wide dominance of aged women and high prevalence of neuropsychiatric symptoms.

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## **FC21: Loose functional connectivity within the striatum in behavioral variant frontotemporal dementia**

**Authors:** Huizi Li, Huali Wang, Dementia Care and Research Center, Peking University Institute of Mental Health

**Objective:** Previous studies have reported that the structure and function of the striatum are important in bvFTD, and the striatum can be divided into more subregions. Changes within brain regions has recently attracted increasing attention, but most studies have explored the relationship between the striatum and other brain regions. Therefore, the aim of this study was to explore the changes in the intra-striatal resting-state functional connectivity (RSFC).

**Methods:** We acquired fMRI data from 26 bvFTD patients and 36 healthy controls. The Human Brainnetome Atlas was used to define the spatial extent of the striatum and delineate its subregions. Intra- and extra-striatal FC values were then calculated for each individual and compared between bvFTD and control groups.

**Results:** Compared to healthy controls, bvFTD showed decreased intra-striatal FC. Both intra-hemispheric and inter-hemispheric functional connectivity were compromised. There was also a gradient reduction in terms of the functional connectivity within striatum: the left dorsolateral putamen showed most decrease and the left ventral caudate exhibited the least (Fig 1). The extra-striatal FC between striatum and the insula was also decreased.

**Conclusion:** The loose intra-striatal functional connectivity may underly the neural substrate of bvFTD.

## **FC22: Changes in inhibitory control in older adults: Diminished inhibitory efficiency or slowing of general processing speed?**

**Authors:** *Luís Pires<sup>1,2,3</sup>, Sara Martins<sup>1</sup>, Soraia Lopes<sup>1</sup>, Isabel M. dos Santos<sup>4</sup>, Chiara Guerrini<sup>5</sup>, Ana A. Gomes<sup>1,2</sup>, & José A. Leitão<sup>1,2</sup>*

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**Background:** Age-related losses in cognitive control efficiency in the face of response conflict are commonly reported in ageing research. However, it is unclear to what extent this effect reflects changes in actual inhibitory control, or the well-known age-related slowing of processing speed.

**Methods:** We compared young ( $n = 42$ ; 29 women; *mean age* = 19.6 years; *mean formal education* = 13 years) and older adults ( $n = 42$ ; 27 women; *mean age* = 68.7 years; *mean formal education* = 12.8 years) using a spatial Stroop task. Participants responded to the direction of an arrow, ignoring its position. Direction and position could be congruent, incongruent or neutral (respectively low, high and no conflict trials). The level of conflict in

trial  $n-1$  (high or no conflict) modulated the level of adaptive control in the  $n^{\text{th}}$  trial. We used multivariate analyses of variance to probe age-group effects on inhibitory efficiency, adaptive (high conflict  $n-1$  trial) and momentary (no conflict  $n-1$  trial). We analysed accuracy and direct as well as proportional reaction times, which respectively integrate and control for differences in general processing speed.

**Results:** Older participants showed a larger overall Stroop effect in both direct [Wilks'  $\lambda = .61$ ,  $F(2,81) = 25.99$ ,  $p < .001$ ] and proportional reaction times [Wilks'  $\lambda = .79$ ,  $F(2, 81) = 10.55$ ,  $p < .001$ ]. Controlling for differences in general processing speed did not impact age-group effects on momentary inhibitory efficiency [ $F(1,82) = 17.78$ ,  $p < .001$ ], but eliminated a trend for poorer adaptive inhibitory control in the older group [ $F(1, 82) = .198$ ,  $p = .657$ ]. As for accuracy, we unexpectedly found a larger Stroop effect for the younger group [Wilks'  $\lambda = .79$ ,  $F(2, 81) = 11.07$ ,  $p = .001$ ].

**Conclusion:** Older and younger adults are as effective in using previous response conflicts to prepare for current conflict resolution. Older adults' lower momentary inhibitory effectiveness likely reflects age-related slowing of processing speed as well as, to a degree to be determined in future research, larger strategic reaction times investment in accuracy enhancement.

**Funding:** BIAL Foundation (Grant 234/14)

## FC23: Dementia and Triadic (Doctor-Patient-Carer) Interactions in Primary Care

**Authors:** C. Balsinha 1, F. Barreiros 1, M.J. Marques 2, S. Dias 2, S. Iliffe 3, M. Gonçalves-Pereira 1

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Presenting author: Manuel Gonçalves-Pereira (gpereira@nms.unl.pt)

### Objective:

Primary care visits of persons with dementia often bring together triads composed of patients, family carers and general practitioners (GPs), as previously discussed (1). Communication dynamics potentially affect dementia outcomes, not least because primary care is a health setting where these triad encounters often occur naturally. Our aim is to present further data from Portuguese primary care consultations with persons with dementia, their carers and GPs.

### Methods:

We refer to the conclusion of our study 'Dementia in Primary Care: the Patient, the Carer and the Doctor in the Medical Encounter - Bayer Investigation Grant | NOVAsaúde Ageing 2018' (1). Fieldwork was interrupted during

the COVID-19 pandemic and resumed in 2022. Sixteen consultations with persons with dementia, their carers and GPs (purposive sampling) were audio- recorded and transcribed verbatim. Interactions were thematically analysed using NVIVO® software. The analytical framework combined codes derived from the transcripts with codes from the literature.

#### **Results:**

Dementia-related content took up less than half of consultations' time, despite their considerable length (as compared to the average in primary care). Most GPs assessments lacked breadth, although efforts towards positive attitudes were present. Themes specifically related to social health in dementia were not (or were poorly) covered. Frequently, carers facilitated GPs' assessment of dementia consequences, but their own needs were neglected. Patients' self-expression tended to be limited.

#### **Discussion:**

Our findings suggest that doctor-patient interactions in many GPs' consultations seemingly compromise patient-centred approaches. There are challenges regarding how to assess the biopsychosocial consequences of dementia in a context of fragmented care (2,3). Given the scarcity of evidence from live-recorded primary care consultations about triadic dynamics, our findings are important to guide further explorations.

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## **FC24: Transcranial Magnetic Stimulation (TMS) as a Treatment for Dementia due to non-Alzheimer's disease (non-AD): What is the Evidence?**

**Authors:** Maria I. Lapid, M.D., Sandeep R. Pagali, M.D., M.P.H., Rakesh Kumar, M.B.B.S., Brian N. Lundstrom, M.D., Ph.D., Paul E. Croarkin, D.O., M.S., Simon Kung, M.D., Mayo Clinic, Rochester, Minnesota, USA

**Objective:** There is no cure for dementia due to non-Alzheimer's disease (non-AD), and current treatments are symptomatic. Noninvasive brain stimulation therapies such as transcranial magnetic stimulation (TMS) are increasingly being investigated to improve cognitive function in dementia. We conducted a systematic review to investigate the effectiveness of TMS on cognition in non-AD dementia.

**Methods:** Comprehensive search of databases (Medline, Embase, Cochrane, APA PsycINFO, Web of Science, and Scopus) from 2000 to February 2023 using keywords related to TMS and dementia (PROSPERO, CRD42022326423). Here we report outcomes from randomized controlled trials (RCTs) of TMS on non-AD dementia populations.

**Results:** In total, 20 RCTs comprised of 660 patients, mean age 62 years (range 46-71). Diagnostic groups include stroke (n=8), Parkinson's disease (n=6), Frontotemporal dementia (n=3), Huntington's disease (n=2) and Progressive non-fluent aphasia (n=1). The most common site of stimulation was left (L) dorsolateral prefrontal cortex (DLPFC, n=13); other sites were primary motor cortex (n=2); Right (R) Broca's area, Brodmann area, Contralateral pars triangularis, R Inferior Frontal Gyrus (IFG) (all n=1); and multiple sites in 1 RCT (L and R IFG, L superior frontal gyrus, L DLPFC, L and R right anterior temporal lobe, supplementary motor area, anterior cingulate, and vertex). Studies used both low (1Hz, n=5) and high (50Hz, n=5) frequencies, or other high (5Hz, 10Hz, 20Hz) or combination low/high frequencies. Frequent duration of treatment was 10 days (n=7), range 1-40. Of 20 studies, 19 (95%) demonstrated improvement of global cognition (on MoCA, MMSE) and specific cognitive domains (learning and memory, language, executive function, problem-solving, attention, reaction time). The only RCT with no effect utilized a single session intermittent theta burst stimulation on the LDLPFC on PD patients. Adverse events in 7 studies included headaches (most common), dull skull pain, dizziness, insomnia, fatigue, anxiety, temporary decrease in hearing, and temporary decreased mental clarity.

**Conclusion:** There is favorable evidence that rTMS improves global and specific cognitive domains in non-AD dementia. Left DLPFC is the most common stimulation site, both low- and high-frequency are utilized, and 10 sessions is frequently used. Further studies are needed to determine optimal TMS treatments in cognitively impaired populations

## FC25: Use of antidepressants in older adults in Sweden 2006-2020

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<sup>5</sup> National Board of Health and Welfare (Socialstyrelsen), Stockholm, Sweden.

**Objectives:** Antidepressants are among the most prescribed medications in older adults. In this study we aimed to explore the trends in the use of antidepressants in older Swedish adults between 2006 and 2020.

**Methods:** We conducted a retrospective repeated cross-sectional study, where we included all older adults (65 years and older) registered in the Swedish National Prescribed Drug Register between 2006 and 2020. We estimated the use of antidepressants in older people for each year, across the 21 Swedish regions.

**Results:** The Swedish population of older adults increased from 1.2 million in 2006 to 1.7 million in 2020. There was an increase in antidepressant use from 12.4% in 2006 to 13.2% in 2019 and 13.8% in 2020. We found that the use of antidepressants varied across age groups, older adults 85+ had a higher use (18.2% in 2006, 18.2% in 2019 and 19.4% in 2020) compared to those 65-74 years of age (9.6% in 2006, 11.7% in 2019 and 12.2% in 2020).

Individuals who used antidepressants were generally older (mean age = 77.7) and more often women, compared to individuals who did not use antidepressants (mean age = 75.7). Moreover, individuals who used antidepressants also had a higher use of benzodiazepine compared to non-users (25.1% vs. 6.4% in 2006; 16.0% vs. 2.7% in 2019 and 15.6% vs. 2.5% in 2020), sleeping drugs (27.7% vs. 10.9% in 2006; 25.2% vs. 9.3% in 2019 and 24.6% vs. 8.9% in 2020), first generation antipsychotics (1.1% vs. 4.0% in 2006 and 0.3% vs. 1.3% in 2020) and second-generation antipsychotics (1.0% vs. 6.3% in 2006 and 0.8% vs. 6.3% in 2020).

Citalopram was the most frequently used antidepressant. However, its use declined from 2006 to 2020 and instead we observed an increase in the use of mirtazapine and sertraline. The prescription of tricyclic antidepressants (TCA), selective monoamine-A inhibitors and lithium was relative stable over time.

Overall, antidepressants were prescribed at doses close to the defined daily doses (DDD), except for TCA, mianserin, bupropion and venlafaxine which were often prescribed at lower doses.

**Conclusions:** We found a slight increase in antidepressant prescription in Sweden between 2006 and 2020, with older adults 85 years and older using more antidepressants compared to those 65-74 years of age. Use of antidepressants was associated with increased use of benzodiazepines, sleeping drugs (zolpidem and zopiclone), as well as first- and second-generation antipsychotics. Citalopram was the most prescribed antidepressant, but its use has declined over time.

## **FC26: What have staff got to do with it? Untangling complex relationships between residential aged care staff, the quality of care they provide, and the quality of life of people with dementia**

**Authors:** Katrina Anderson, Annaliese Blair, Aged Care Evaluation Unit, Southern NSW Local Health District, Australia

**Background:** Despite the integral role long term residential care staff play in the lives of residents with dementia, the mechanisms for supporting staff to bring about good quality of care (QOC) and quality of life (QOL) are poorly

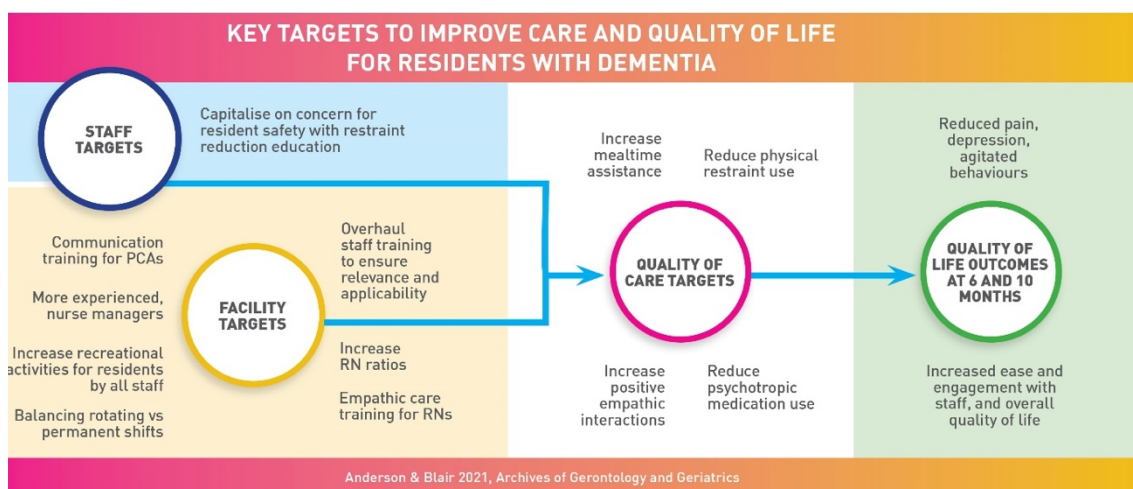


understood. This study focused on establishing the key mechanisms to improve QOC and in turn QOL of residents with dementia.

**Method:** Over a 10-month period we followed: 247 older adults with dementia from 12 not-for-profit residential care facilities, their families/care partners (n=225), managers (n=12) and staff (n=232). Facilities ranged in size from 10 to 137 beds, located across remote, rural and metropolitan areas of south eastern Australia. Measures included: staff surveys, family member and resident interviews, resident file audits, live resident and staff observations and organisational audits. Multilevel Modelling or Generalised Estimating Equations analyses were conducted for each of the 12 QOC variables, with 22 staff and control variables as the predictors, and for each of the 11 QOL variables, with 20 QOC and control variables as predictors.

**Results:** Analyses established significant associations between a large number of staff and QOC variables and between QOC and QOL variables.

**Conclusions:** The quality of the care provided to residents has strong, widespread influences on the QOL of residents. The most promising areas for intervening with staff were: increasing the relevance and applicability of staff training and qualifications, upskilling staff in empathic care provision, communication, and restraint reduction, using a mixture of permanent and rotating shifts, prioritising recreational activity provision by all staff and increasing assistance with meals. patients with cognitive impairment in rural hospitals.



## **FC27: Golden Angels: The impact of volunteer support for patients with dementia and delirium in Australian rural hospitals**

**Authors:** annaliese blair, catherine bateman, katrina anderson

Aged care evaluation unit, southern nsw local health district, australia

**Objectives:** evaluate the clinical outcomes for acute hospital patients with dementia, delirium or at risk for delirium supported by the person-centred volunteer program in Australian rural hospitals.

**Design:** a non-randomised, mixed methods, controlled trial.

**Participants:** older adults admitted to 7 rural acute hospitals. Intervention (n=270) patients were >65 years with a diagnosis of dementia and/or delirium or had risk factors for delirium and received volunteer services. Family carers (n=83) of intervention patients were interviewed. Staff survey and focus groups. Control (n=188) patients were randomly drawn from patients admitted to the same hospital 12 months prior to the volunteer program who would have met program eligibility criteria.

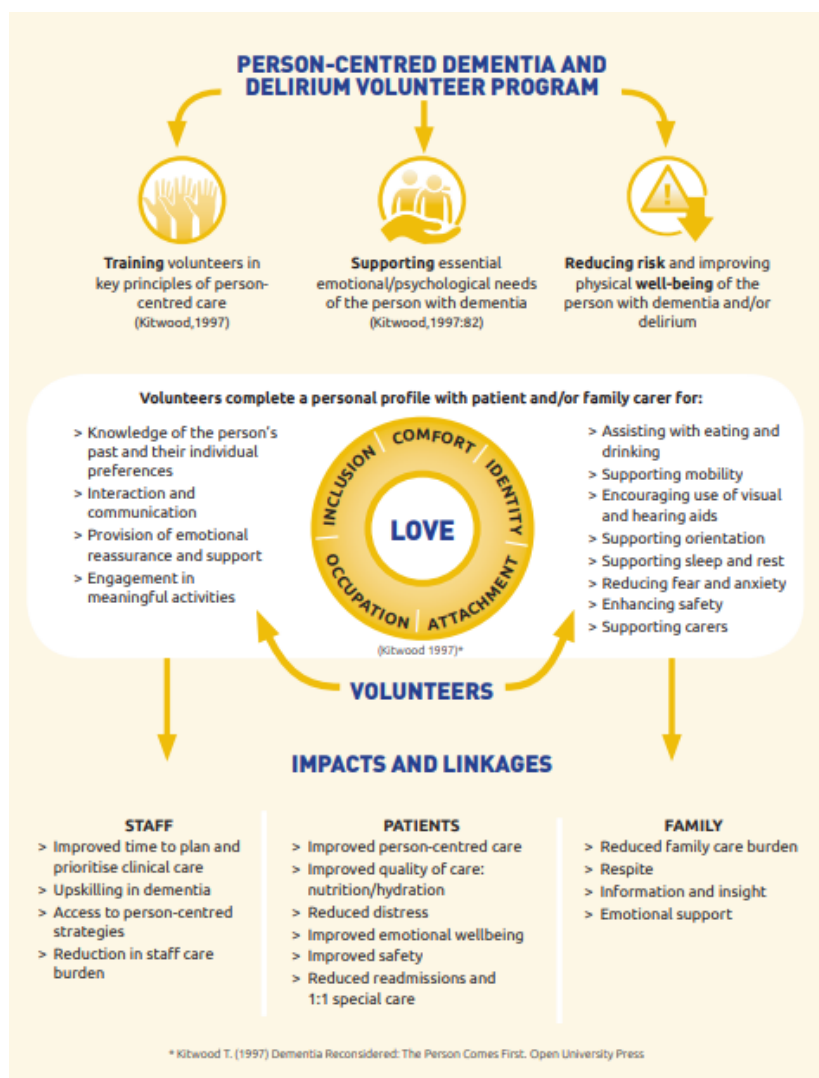
**Intervention:** trained volunteers provided 1:1 person centred care with a focus on nutrition and hydration support, hearing and visual aids, activities, and orientation.

**Measures:** medical record audits provided data on volunteer visits, diagnoses, length of stay (los), behavioural incidents, readmission, specialising, mortality, admission to residential care, falls, pressure ulcers and medication use.

**Results:** across all sites there was a significant reduction in rates of 1:1 specialising ( $p=.011$ ) and 28 day readmission ( $p=.006$ ) for patients receiving the volunteer intervention. Los was significantly shorter for the control group ( $p=.001$ ). All other patient outcomes were equivalent for the intervention and control group ( $p>.05$ ). Volunteers integrated themselves into the care team providing person-centred care, increased safety and quality of care and were an “extra pair of hands”, reducing care burden for staff and importantly for families: “for me, knowing someone was there ... i can't even tell you what a benefit that was”. 98% of staff rated the program as supportive of them in their care

Enablers were clear processes for screening, training and supporting volunteers. Key challenges included initial role delineation, staff/volunteer trust and sustainability.

**Conclusion:** appropriately trained and supported volunteers are cost effective and can improve the safety and quality of care for hospitalised patients with cognitive impairment in rural hospitals.



## FC28: Protective factors to older adult loneliness

**Authors:** Pérez-Rojo, G., López, J., & Noriega, C., Psychology Department, Health Faculty. Universidad San Pablo-CEU, CEU Universities

**Background:** Most studies about older adults' loneliness are related to risk factors that increase the probability of loneliness and its negative consequences. These issues are linked with the negative traditional perspective of aging that focuses on decline, illness, and dependency. Although the probability of these conditions increases with age, current older adults age in better conditions than years ago. Positive Psychology is a new perspective that focuses on people's strengths as protective factors of mental and physical health, including older people.

Considering the negative consequences of loneliness in older adults, knowing the factors that may protect older adults from loneliness is needed.

**Research Objective:** This study aimed to analyse whether sociodemographics, physical, mental or social characteristics act as protective factors against older adults' loneliness. Method: 274 Spanish people aged 65 and over completed an online survey that included sociodemographic information (sex, age), perceived health, quality of life, anxiety, depression, family functioning, gratitude, experiential avoidance, purpose of life, personal growth, and resilience. Loneliness was assessed using the Spanish version of the Three-Item Loneliness (Hughes et al., 2004). The average age was 70.46 (SD= 4.42) and 61.7% were women (N= 169) and 55.1% were married (N= 151). A regression model was tested.

**Results:** The results point out that women show higher scores on loneliness than men. The more loneliness, the lower perceived health, quality of life, family functioning, gratitude, life purpose, personal growth and resilience were. In contrast, the more loneliness the more experiential avoidance, anxiety, and depression. The regression model showed that depression ( $\beta = 0.202$ ;  $p \leq .01$ ), family functioning ( $\beta = -0.385$ ;  $p \leq .001$ ), experiential avoidance ( $\beta = 0.318$ ;  $p \leq .001$ ) and personal growth ( $\beta = 0.152$ ;  $p \leq .01$ ) were the best predictors of loneliness. This model explained 44.3% of variance.

**Conclusion:** Considering the Positive Psychology perspective when studying older adults' loneliness is needed. This perspective focuses on older adults' protective factors and not only on risk factors as a target for prevention and intervention programs that aim to reduce loneliness. Building a more resilient older adults group population may help them to cope with adversities like loneliness.

## FC29: Development of an Informant-Reported Lucidity Measure

**Authors:** Jeanne A. Teresi, Mildred Ramirez, Julie M. Ellis, Paloma Gonzalez-Lopez, Stephanie Silver, Katjia Ocepek-Welikson, Joseph P. Eimicke, Davangere P. Devanand, Jose A. Luchsinger

**Objective:** The aim was to develop a lucidity measure for use with front-line caregivers to describe lucidity episodes among individuals with dementia, neurological and other illnesses and identify associated individual and episodic event characteristics.

**Methods:** Qualitative: An external advisory board reviewed the clarity, breadth, and scope of the conceptual definition and item content. Modified focus groups were conducted with 20 staff and 10 family members who participated using a web-based survey. Data were extracted from Qualtrics for analysis using NVivo. Semi-structured cognitive interviews were conducted with 10 health professionals working with older adults with cognitive impairment.

**Quantitative:** A combined exploratory and confirmatory factor analysis was performed to test for dimensionality. The explained common variance (ECV), calculated as the percent of observed variance was estimated. Estimates of internal consistency such as ordinal alpha and McDonald's omega were computed in R and Mplus.

**Results:** Data were collected from 50 staff informants on behalf of 302 residents, 25 with lucidity events. The majority (74%) of those interviewed were certified nursing assistants. Most (58%) of the sample of residents were White and 21% Black or African American. One fourth (25%) were Hispanic or Latino. Most (80% to 90%) of those with lucidity events were reported to have memory deficits and at least 70% required maximal assistance in performing basic tasks such as dressing. Most events (60%) were of short duration (10 minutes or less), and included showing facial expressions (83%) and making eye contact (88%). One half spoke multiple sentences. About half were reported to hold a conversation, and speak coherently to convey needs; 40% were able to remember and mention the name of relatives. Staff reactions were of surprise (60%) shock (52%) and happiness (50%).

Data for item modification derived from the focus groups and cognitive interviews resulted in the final lucidity measure. Internal consistency estimates were high, with most ranging from 0.76 to 0.98. The ECVs were high for most scales, indicative of essential unidimensionality.

**Discussion:** The dimensionality and reliability analyses results were strong, and supportive of unidimensional scales with high internal consistency. The feasibility of conducting assessments of lucidity events was established.

## **FC30: The relationships between neuroticism, social connection and cognition**

### **Authors:**

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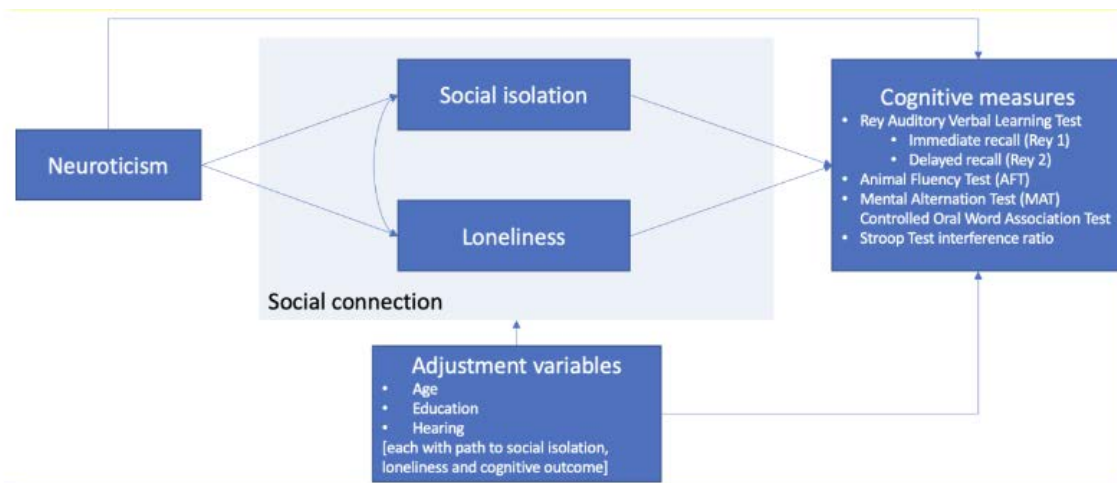
**Walter Wittich**, School of Optometry, Université de Montréal, Montréal, Québec, Canada.

**Katherine S. McGilton**, KITE Research Institute, Toronto Rehabilitation Institute – University Health Network, Toronto, Canada / Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Canada, Canada

**Background:** Social connection is associated with better health, including reduced risk of dementia. Personality traits are also linked to cognitive outcomes; neuroticism is associated with increased risk of dementia. Personality traits and social connection are also associated with each other. Taken together, evidence suggests the potential impacts of neuroticism and social connection on cognitive outcomes may be linked. However, very few studies have simultaneously examined the relationships between personality, social connection and health.

**Research objective:** We tested the association between neuroticism and cognitive measures while exploring the potential mediating roles of aspects of social connection (loneliness and social isolation).

**Method:** We conducted a cross-sectional study with a secondary analysis of the Canadian Longitudinal Study on Aging (CLSA) Comprehensive Cohort, a sample of Canadians aged 45 to 85 years at baseline. We used only self-reported data collected at the first follow-up, between 2015 and 2018 (n= 27,765). We used structural equation modelling to assess the association between neuroticism (exposure) and six cognitive measures (Rey Auditory Verbal Learning Test immediate recall and delayed recall, Animal Fluency Test, Mental Alternation Test, Controlled Oral Word Association Test and Stroop Test interference ratio), with direct and indirect effects (through social isolation and loneliness). We included age, education and hearing in the models and stratified all analyses by sex, females (n= 14,133) and males (n=13,632).



**Preliminary results of the ongoing study:** We found positive, statistically significant associations between neuroticism and social isolation ( $p < 0.05$ ) and loneliness ( $p < 0.05$ ), for both males and females. We also found inverse, statistically significant associations between neuroticism and all cognitive measures ( $p < 0.05$ ), except the Stroop Test interference ratio. In these models, there was consistent evidence of indirect effects (through social isolation and loneliness) and, in some cases, evidence of direct effects. We found sex differences in the model results.

**Conclusion:** Our findings suggest that the association between neuroticism and cognitive outcomes may be mediated by aspects of social connection and differ by sex. Understanding if and how modifiable risk factors mediate the association between personality and cognitive outcomes would help develop and target intervention strategies that improve social connection and brain health.

### **FC31: Profiles of dementia caregivers according to psychosocial variables. Importance of kinship.**

**Authors:** Cristina Huertas-Domingo, MA, Andrés Losada-Baltar, PhD, Laura Gallego-Alberto, PhD, Inés García-Bataloso, MA, Laura García-García, MA, and María Márquez, PhD.

**Objectives:** Caring for a family member with dementia may have important negative psychological consequences on caregivers. The present study aims to analyze the existence of different profiles in family caregivers of people with dementia according to the levels manifested in different psychosocial variables, which are grouped into psychosocial variables (dysfunctional thoughts, familism, experiential avoidance) and resources (leisure and social support). In addition, it aims to study whether there are differences among those profiles in the levels of distress (depressive, anxious and guilt symptomatology) depending on the relationship of kinship with the cared-for person.

**Methods:** 288 family caregivers of people with dementia divided into four kinship groups (wives, husbands, sons and daughters) participated. Face-to-face interviews were conducted assessing sociodemographic variables, familism (family obligations), dysfunctional thoughts, experiential avoidance, leisure activities, perceived social support and depressive, anxious and guilt symptomatology. A hierarchical cluster analysis was performed using Ward's method and contingency tables were run between the clusters obtained and the variable of kinship and distress variables.

**Results:** Five clusters were obtained: *Low psychosocial vulnerability-High resources* (mostly daughters), *Low psychosocial vulnerability-Low resources* (mostly daughters), *Mixed* (mostly sons), *High psychosocial vulnerability-High resources* (mostly husbands) and *High psychosocial vulnerability-Low resources* (mostly wives). Although with nuances, the clusters associated with lower distress are the Low psychosocial vulnerability-High resources profile and the High psychosocial vulnerability-High resources profile, and with higher distress the Low psychosocial vulnerability-Low resources profile and the Mixed profile.

**Conclusions:** High levels of dysfunctional thoughts, familism and experiential avoidance are not always associated with greater psychological distress. In fact, profile 2 (Low psychosocial vulnerability-Low resources), in which most caregiving daughters are distributed, seems to be particularly vulnerable to presenting higher levels of emotional. Therefore, the identification of profiles of potential protection and vulnerability to psychological distress in family caregivers could help to increase the effectiveness of interventions aimed at this population.

## **FC32: Neuropsychiatric symptoms: Disentangling the role of unmet needs using the Camberwell Assessment of Need for the Elderly (CANE) interview**

**Authors:** Ana Rita Ferreira<sup>1</sup>, Mário R. Simões<sup>2</sup>, Lia Fernandes<sup>1,3</sup>

<sup>1</sup>CINTESIS@RISE, Department of Clinical Neurosciences and Mental Health, Faculty of Medicine, University of Porto, Porto, Portugal

<sup>3</sup>Psychiatry Service, Centro Hospitalar Universitário de São João, Porto, Portugal

<sup>2</sup>University of Coimbra, CINEICC, PsyAssessmentLab, Faculty of Psychology and Educational Sciences, Coimbra, Portugal

**Objective:** As the world's population ages, the number of people with dementia is expected to increase. In addition to progressive cognitive and functional deterioration, dementia comprises neuropsychiatric symptoms (NPS). NPS present significant management challenges based on their high frequency and disruptive nature. Against the prevailing guidelines, their treatment is often over-reliant on psychotropic drugs and other restrictive care approaches, frequently without a thorough assessment of underlying and potentially modifiable causes, such as over- and under-stimulating environments, untreated medical illnesses, drug interactions, or unidentified unmet needs. Consistent with the latter, the unmet needs model proposes that these neuropsychiatric phenomena are needs-driven and constitute indicators of identifiable unmet physical, psychological, emotional, or social needs. Despite this backdrop, few studies have investigated this association using standardized and replicable measures. In this context, the present study aims to put the unmet needs model into a practical context in order to disentangle the contribution of the unmet needs, assessed with the Camberwell Assessment of Need for the Elderly (CANE), to the presence of NPS.

**Methods:** A cross-sectional study was conducted. Participants were assessed with validated, accessible, and replicable measures, including the CANE interview and the Neuropsychiatric Inventory (NPI). Other variables collected included residents' demographic characteristics, cognitive and functional impairment, and daily medication. Multivariate models were used to explore potential risk factors for NPS.

**Results:** Residents from four nursing homes entered the study. Results found that those with unmet needs assessed using CANE and those taking hypnotic/sedative medications had a higher risk of presenting at least one NPS, even after adjusting for other demographic and clinical-functional covariates.

**Conclusion:** Built on the main finding that unmet needs assessed with CANE can independently contribute to explaining the presence of NPS, a working model is proposed to find solutions for these symptoms based on uncovering unmet needs. The CANE, as a practical, low-cost, yet clinically relevant assessment of met and unmet needs may be used to signal need areas that can be useful for formulation and intervention purposes and may offer the first step towards individually-tailored non-pharmacological interventions for NPS.



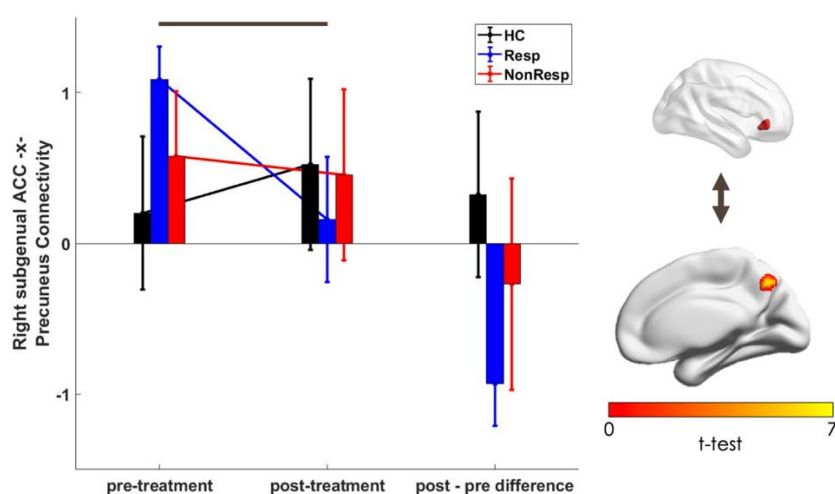
## FC33: Hilarious Gas for treatment resistant depression in older adults: is it really serious?

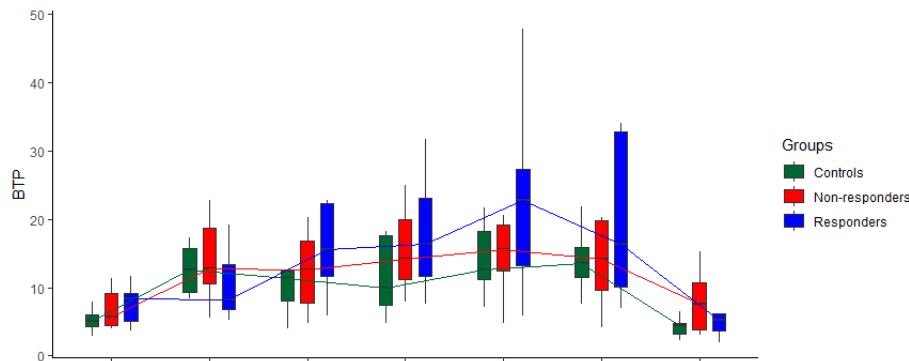
**Author:** Thomas Desmidt, University Hospital of Tours, France

Nitrous oxide ( $N_2O$  – also known as Hilarious Gas) has recently emerged as a potential fast-acting antidepressant, based on a number of randomized controlled trials (RCT) in young adults with treatment resistant depression (TRD). The antidepressant mechanisms of  $N_2O$  are not fully understood but may include an antagonist action on NDMA receptors, similar to ketamine.  $N_2O$  shows additional cerebral effects that may be particularly appropriate for TRD in older adults, including a significant cerebral vasodilatation that facilitates blood brain barrier opening and potentially limits resistance related to poor cerebrovascular functioning. Moreover,  $N_2O$  may prove to be particularly well-tolerated in this potentially fragile population, notably because it is not metabolized by the kidney or liver which organs may be impaired with aging.

In this talk, we will be reviewing the available data on the efficacy, safety and pathophysiology of  $N_2O$ , with a specific focus on older adults. We will also present results from our group showing a significant reduction in cerebral connectivity in the anterior cingulate cortex (ACC - as measured with pre and post treatment resting state MRI) and large increase in brain tissue pulsations (as measured with Ultrasound) with a successful treatment with  $N_2O$  compounds. Finally, perspectives on current studies in older adults from our group (one RCT in non-demented older adults with TRD and one RCT in neurocognitive disorders) will be discussed.

**Figure 1** – Changes in ACC connectivity after exposure to  $N_2O$  compounds



**Figure 1** – Changes Brain Tissue Pulsations as assessed with brain ultrasound during N2O exposure

## FC34: Cognitive reserve and depressive burden in older adults: variation according to reserve measurement

**Authors:** Federico Triolo (Aging Research Center, Karolinska Institute, Stockholm Sweden) and Serhiy Dekhtyar (Aging Research Center, Karolinska Institute, Stockholm Sweden).

**Objective:** Individual differences in the timing of dementia have been attributed to cognitive reserve (CR), thought to reflect lifelong engagement in stimulating experiences, which provide resilience against brain pathology. In older adults, dementia and depression are closely related, and some studies have linked CR with depression risk in old age. It is unclear if different ways of operationalizing CR exhibit similar association with old-age depression. We examined the association of two measures of CR with depressive burden in older adults: *activity-based CR*, capturing engagement in stimulating activities using proxy variables, and *residual-based CR*, indicating residual variance in cognition, not explained by the brain status.

**Methods:** We used data on 354 adults aged 60+ from the Swedish National Study on Aging and Care in Kungsholmen, followed for 15 years. Residual-based reserve was computed from a regression predicting episodic memory with a brain-integrity index incorporating six structural neuroimaging markers (white-matter hyperintensities volume, whole-brain gray matter volume, hippocampal volume, lateral ventricular volume, lacunes, and perivascular spaces), age, and sex. Activity-based reserve incorporated education, work complexity, social network, and leisure activities. Depressive burden was captured over the follow-up with the Montgomery-Åsberg Depression Rating Scale and time until clinically relevant level of symptoms (>6) was modelled using Cox proportional hazard models.

**Results:** Preliminary results indicate that, upon minimal adjustment (age, sex, brain integrity status), top tertiles (ref: bottom tertile) of both *activity-based* (HR: 0.77; 95% CI: 0.61-0.98) and *residual-based* CR (HR: 0.62; 95% CI: 0.44-0.98) were associated with a lower risk of depressive burden onset over 15 years. Upon further adjustment for anthropometrics, health behaviors, and chronic disease burden, the association of activity-based CR was

attenuated, whereas residual-based CR preserved its effect on depressive burden (HR [fully adjusted model]: 0.59; 95% CI: 0.40-0.88). Next steps include evaluating the ability of reserve measures to attenuate the association of brain integrity with depressive burden using interaction analysis.

**Conclusion:** Preliminary findings suggest that CR may be linked with depression development in older adults, although the association may vary depending on measurement of reserve. Association of activity-based reserve may be attributed to somatic disease pathways.

## **FC35: Depressive symptom transitions in older adults: effects of psychosocial, behavioral, and clinical factors**

**Authors:** Federico Triolo (Aging Research Center, Karolinska Institute, Stockholm Sweden) and Serhiy Dekhtyar (Aging Research Center, Karolinska Institute, Stockholm Sweden).

**Objective:** Depression evolves dynamically in old age. Studies of natural history of major depression in older adults suggest that 19–34% recover, 27%–32% remain chronically ill, and approximately 40% experience a fluctuating course. Another way of approaching depression from a longitudinal point of view is by adopting a symptom-based approach, that in addition to the evolution of clinically manifested diagnostic entities, also focuses on transitions involving subclinical/subsyndromal states, although few studies have attempted it. We examined psychosocial, behavioral, and clinical determinants of transitions across states that include no depression, subsyndromal-, and clinical depression.

**Methods:** We used data on 3086 adults aged 60+ from the Swedish National Study on Aging and Care in Kungsholmen, followed for 15 years. Markov-state transition models were used to capture transition patterns, as well as their associated determinants. Death and dropout constituted absorbing states. Depression was diagnosed in accordance with DSM-5; SSD was based on having at least 2 symptoms in the absence of DSM diagnosis. Determinants of transition patterns included index of social connections and support (i.e., psychosocial determinants); smoking, alcohol consumption, and physical activity (behavioral determinants); somatic disease burden and history of depression (clinical determinants).

**Results:** At baseline, 10% of the study population exhibited clinically relevant levels of depressive symptoms. Over a 15-year period, a total of 11,489 transitions were observed. Preliminary results indicate that behavioral factors (primarily smoking) were mostly associated with transitions from no depression to clinical depression, as well as from clinical depression to death. Mostly the same pattern was seen for clinical determinants, although higher burden of chronic diseases and previous depression also increased the likelihood of transition from no depression to SSD. Notably, of high baseline values of social connection and support were found to: 1) lower the likelihood of transitioning from no depression to either SSD or clinical depression; 2) lower the likelihood of transitioning from SSD to clinical depression; and 3) increase the likelihood of transitioning from clinical depression to no depression.

**Conclusion:** Clinical and behavioral factors are mostly implicated in lowering the occurrence of depression, whereas psychosocial factors may also be implicated in recovery.

## **FC36: Social determinants of modifiable dementia risk in Maori and Non-Maori: Results of the New Zealand Health, Work and Retirement study**

**Authors:** Susanne Röhr<sup>1,2</sup>, Rosemary Gibson<sup>1,3</sup>, Fiona Alpass<sup>1</sup>, Christine Stephens<sup>1</sup>

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**Background:** Dementia risk varies along the social gradient, which needs to be considered in risk reduction and prevention strategies. Revealing links of social determinants of health (SDOH) and modifiable health and lifestyle factors for dementia holds clues towards maximizing dementia risk reduction opportunities, especially for vulnerable populations. Therefore, the aim was to investigate associations of SDOH and a dementia risk score in Indigenous Māori and Non-Māori (mainly European descent) in midlife and early late-life.

**Method:** A subsample of the New Zealand Health, Work and Retirement study completed standardized face-to-face cognitive assessments (adapted 'Kiwi' Addenbrooke's Cognitive Examination/ACE-R) in 2010. We computed the Lifestyle for Brain Health (LIBRA) dementia risk score, comprising 8 risk factors (low/moderate alcohol consumption, heart disease, physical inactivity, chronic kidney disease, diabetes, smoking, hypertension, depression). Higher scores indicate higher dementia risk/poorer lifestyle (range= -1;+9.2). First, we assessed associations of LIBRA and cognition. Second, we performed adjusted regression analysis for area-based (socioeconomic deprivation, health care access, neighbourhood safety) and individual SDOH (education, employment status, net income, social loneliness) with LIBRA stratified for Māori and Non-Māori.

**Results:** In 918 participants (age:  $M= 62.9$  years,  $SD= 6.7$ , range= 48-75; females= 52.8%; Māori= 26.2%), a higher LIBRA score ( $M= 1.8$ ,  $SD= 1.6$ , observed range= -1; +7.4) was associated with lower cognitive functioning ( $b= -0.30$ , 95%CI= [-0.48;-0.11],  $p= .002$ ) and cognitive impairment (OR= 1.41, 95%CI= [1.10;1.81],  $p= .007$ ), adjusted for age, sex, education, ethnicity and area-based socio-economic deprivation. Higher area-based socio-economic deprivation was associated with higher LIBRA in Māori ( $b= .10$ , 95%CI= [0.02;0.18],  $p= .020$ ), but not in Non-Māori ( $b= 0.01$ , 95%CI= [-.03;0.05],  $p= .677$ ). Employment status and lower neighbourhood safety were associated with higher LIBRA in Non-Māori only. Health care access difficulties and social loneliness were associated with higher LIBRA in both populations, while education and net income were not.

**Conclusion:** SDOH are differentially associated with dementia risk in midlife and early late-life New Zealanders. Area-based socioeconomic deprivation was linked to dementia risk in Indigenous Māori, but not in Non-Māori. This points to systematic inequities in dementia risk, which require equity-focused policy-based public health approaches to risk reduction.

## **FC37: Prevalence of depressive symptoms and its association with probable sarcopenia, disability, frailty and comorbidities among older adults.**

**Author:** Emanuele Rocco Villani

**Objective:** Depression is the most frequent cause of emotional distress in old age and can reduce the quality of life of the elderly. Sarcopenia is a syndrome characterized by the loss of skeletal muscle associated with reduced physical strength/performance. In recent years, some studies have shown correlations between sarcopenia and depression. The aim of the present study is to evaluate the association between depressive symptoms, sarcopenia, functional dependence and comorbidity in the geriatric patient at the first geriatric outpatient evaluation ever performed.

**Materials and Methods:** older adults ( $\geq 65$  years of age) at their first access to the geriatric outpatient clinic of Modena County (Italy) between October 2020 and June 2021 were enrolled in this cross-sectional study. All participants were evaluated validated scales in order to perform a multidimensional geriatric assessment. The symptomatologic diagnosis of depression was performed through the GDS 4-item (cut-off  $\geq 2$ ). Frailty was evaluated through the Clinical Frailty Scale (cut-off  $\geq 5$ ). The probability of sarcopenia was evaluated through the SARC-F (cutoff  $\geq 4$ ). Functional dependence was assessed through the ADL scale and deemed as severe (ADL 0-2), moderate (ADL 3-5), absent (ADL 6). Comorbidity burden was assessed through CIRS.

**Results:** 229 patients (mean age  $82.4 \pm 7.9$  years, 67.6% female) were evaluated. Clinically significant depressive symptoms were found in 173 (75.5%) patients. Probable sarcopenia was reported in 118 (51.5%) patients while 100 (43.7%) and 64 (27.9%) patients were moderately or severely dependent, respectively. At multivariate logistic regression, probable sarcopenia (aOR 2.48, 95%CI 1.09-6.40), moderate functional dependence (aOR 2.62, 95%CI 1.17-5.87) but not severe (aOR 2.72, 95%CI 0.79-9.33) were associated with the presence of depressive symptoms. Conversely, frailty (aOR 0.97, 95%CI 0.39-2.40) was not associated with presence of depressive symptoms, while CIRS (aOR 0.79, 95%CI 0.66-0.96) was found to be protective.

**Discussion:** the study showed that a clinically relevant depressive symptomatology is prevalent among older adults and it is associated with higher probability of sarcopenia and moderate, but not severe, functional dependence. On the contrary, there was no association between depressive symptoms and frailty.

**Conclusion:** The prevalence of depressive symptoms is high among geriatric outpatient and can both be conditioned by and have an impact on the presence of sarcopenia and functional dependence.

## **FC38: Young Onset Dementia: Examining the experience through Family Systems Theory**

**Authors:** Cathal Blake

**Objective:** Research tends to focus on the issues couples face – i.e., the dyadic relationship between carers and the affected person. This study examined young onset dementia from the broader family systems approach, focusing on the impact on the entire family following a diagnosis.

**Methods:** Public patient involvement was utilised to explore the specific issues of relevance to people with young onset dementia. Participatory workshops with members of the Alzheimer Society of Irelands Dementia Research Advisory Team were held to develop questions for the focus group interviews. Focus group interviews involved people with young onset dementia and their family members. The sample (n = 44) included people with a formal diagnosis of young onset dementia (with various subtypes) living in the community, and their family members including children.

**Results:** Analysis of the qualitative data uncovered five main themes with related sub-themes including: initial onset of dementia; personal and social impact; behavioural and psychological symptoms of dementia; age-appropriate support and the shifting family roles.

**Conclusion:** It is clear from the current data that a diagnosis of young onset dementia results in significant challenges for the entire family system. The traditional model of care, which tends to narrow the focus to the person with dementia and primary caregiver, needs to be expanded to include the entire family/caregiving system.

## **FC39: The influence of social constructivism on children and young adults perspectives of parental young onset dementia: A thematic analysis of the narratives**

**Authors:** Cathal Blake

**Background:** Western countries have a significant cohort of children ( $\leq 18$ ) and young adults who live with a parent with a life limiting condition. Children and young adults' perspectives of certain parental illnesses have been well documented. However, the perspectives of children and younger adults of parental young onset dementia tend to be absent from the academic literature. Older adult children have reported on the impact parental young onset dementia, however, there is a necessity for research with younger adult children and children under the age of eighteen in relation to their perspectives of the condition.

**Objectives:** Utilizing cultural transmission theory, the current research explored if the social and cultural perspective influences the narratives of children and younger adults of parental young onset dementia.

**Methods:** One-to-one interviews were held with children and younger adults (n = 17: 29·41% male) who currently live with (or have lived with) a parent with a formal diagnosis of young onset dementia (with various subtypes). The participants ranged in age from 14 to 33 years old ( $\bar{x}$  = 21·18 years) with n = 6 eighteen years of age or younger ( $\bar{x}$  = 16·17 years). Participant narratives were analyzed using inductive qualitative thematic analysis.

**Results:** Detailed thematic analysis of the participant narratives uncovered five main themes (with related subthemes); making sense; lack of representation; threat to the family system; life has completely changed; systemic psycho-social support and education.

**Conclusion:** It is clear from the current data that the social and cultural perspective can significantly influence the narratives of children and younger adults of parental young onset dementia. Children are faced with more responsibility, shifting roles, changing relationships, and may be forced to postpone educational or employment plans. Furthermore, the social perception of dementia as can act as a barrier to children and young adults accessing and using health and social care providers.

## **FC40: Social health and subsequent cognitive capability: examining the potential mediating roles of depression symptoms and inflammatory biomarker**

**Authors:** Jean Stafford, Serhiy Dekhtyar, Ke Ning, Anna-Karin Welmer, Davide L Vetrano, Giulia Grande, Anna Marseglia, Vanessa G Moulton, Rosie Mansfield, Yiwen Liu, George Ploubidis, Giorgio Di Gessa, Marcus Richards, Daniel Davis, Praveetha Patalay, Jane Maddock

**Objective:** Social health (SH) markers, including marital status, contact frequency, network size, and social support, have been linked with increased cognitive capability. However, the underlying mechanisms remain poorly understood. We aim to investigate whether depression symptoms and inflammatory biomarkers mediate associations between SH and cognitive outcomes.

**Methods:** We used data from waves 1-9 of the English Longitudinal Study of Ageing, involving 7,136 participants aged 50 or older at baseline. First, we examined associations between SH (wave 1) and depression and inflammatory biomarkers (C-reactive protein (CRP) and fibrinogen) (wave 2) using linear regression models. Second, we tested associations between a) SH and b) depression and inflammation with subsequent standardised verbal fluency and memory in wave 3 and change between waves 3-9, indexed using slopes derived from multilevel models. We adjusted for age, sex, socio-economic position, cardiovascular disease, basic and instrumental activities of daily living, health behaviours, and baseline depression symptoms and cognition. We will also conduct causal mediation analysis.

**Results:** All SH markers, except contact frequency, were associated with lower subsequent depression, but not inflammatory biomarkers. Greater contact frequency (e.g. once-twice a week vs <once per year:  $\beta=0.18$  [0.01, 0.36]) and less negative support ( $\beta=0.02$  [0.00, 0.03]) were associated with higher verbal fluency. Larger network size (>6 people vs none:  $\beta=0.007SD/year$  [0.001, 0.012]), less negative ( $\beta=0.001SD/year$  [0.001, 0.002]) and more positive support ( $\beta=0.001SD/year$  [0.000, 0.001]) were linked with slower memory decline, and more positive support predicted slower verbal fluency decline ( $\beta=0.001SD/year$  [0.000, 0.001]). Depression symptoms were associated with lower memory and verbal fluency, and faster memory decline ( $\beta=-0.001SD/year$  [-0.001, -0.000]) and verbal fluency ( $\beta=-0.001SD/year$  [-0.001, -0.000]). CRP was associated with lower verbal fluency ( $\beta=-0.02$  [-0.04, 0.00]), whereas fibrinogen was linked with faster memory decline ( $\beta=-0.001SD/year$  [-0.003, -0.000]).

**Conclusion:** Depression symptoms and SH showed associations with subsequent cognitive capability and change. SH was linked with lower depression, but not inflammatory biomarkers. Findings highlight the potential for depression to underpin associations between SH and cognition, a pathway which we will test using causal mediation analysis. We will also examine whether findings replicate in the Swedish National Study of Aging and Care in Kungsholmen.

## **FC41: Music-assisted reminiscence therapy: Feasibility and use in practice**

**Authors:** Romy Engelbrecht, Sunil Singh Bhar, Joseph Ciorciari

**Objective:** Reminiscence therapy is the examination of past memories to improve current mood and psychological functioning and is an evidence-based treatment for symptoms of late life psychological distress. Music is sometimes used in such therapy to prompt or enhance the recollection of memories; however, there is limited empirical research on the use and value of using music in reminiscence therapy. This presentation will discuss the findings of two studies exploring the feasibility and use of verbal reminiscence therapy (VRT) and music-assisted reminiscence therapy (MRT) from the perspectives of the older adult and the staff who care for them.

**Method:** Study one surveyed 110 Australian workers in aged care to explore the extent to which VRT and MRT were used, how such interventions were delivered and viewed, and the benefits. Study two randomly assigned 8 older adults experiencing psychological distress to a single session of VRT or MRT. Pre and post measures of affect, memory experience, and a brief satisfaction interview were collected, along with measures of treatment fidelity.

**Results:** For staff, simple reminiscence was the most frequently used approach across both VRT and MRT. Staff reported that both VRT and MRT are viewed as successful and regularly used interventions, that occur in spontaneous and creative ways in response to older clients' needs. Staff reported outcomes such as enhanced social connections, improved affect and mood, and better care practices. Older adults reported that that VRT and MRT were equally acceptable and well tolerated. A pre-post pattern of improvement was observed for affect following VRT, and particularly MRT, suggesting both as promising interventions. MRT resulted in higher scores on



memory experience characteristics such as vividness, coherence, and accessibility. The high treatment fidelity achieved in this study indicates that the interventions can be successfully implemented with this population.

**Conclusion:** VRT and particularly MRT were viewed as successful, feasibility and acceptable interventions by older adults experiencing psychological distress, and direct care staff in Australia. These preliminary findings indicated MRT may provide therapeutic changes above and beyond VRT for older adults, and therefore large-scale clinical trials are warranted.

## **FC42: Evaluation of patients with cognitive impairment due to suspected idiopathic normal-pressure hydrocephalus at medical centers for dementia: a nationwide hospital-based survey in Japan**

**Authors:** Hiroaki Kazui, Mamoru Hashimoto, Shigetoshi Takeda, Yasuji Chiba, Tokiko Goto, Katsuhiro Fuchino

**Objective:** Treatment of idiopathic normal-pressure hydrocephalus (iNPH) requires collaboration between dementia specialists and neurosurgeons. The role of dementia specialists is to differentiate patients with iNPH from patients with other dementia diseases and to determine if other dementia diseases are comorbid with iNPH. We conducted a nationwide hospital-based questionnaire survey on iNPH in medical centers for dementia (MCDs).

**Methods:** We developed a questionnaire to assess how physicians in MCDs evaluate and treat patients with cognitive impairment due to suspected iNPH and the difficulties these physicians experience in the evaluation and treatment of patients. The questionnaire was sent to all 456 MCDs in Japan.

**Results:** Questionnaires from 279 MCDs were returned to us (response rate: 61.2%). Patients underwent cognitive tests, evaluation of the triad symptoms of iNPH, and morphological neuroimaging examinations in 96.8, 77.8, and 98.2% of the MCDs, respectively. Patients with suspected iNPH were referred to other hospitals (e.g., hospitals with neurosurgery departments) from 78.9% of MCDs, and cerebrospinal fluid (CSF) tap test was performed in 44 MCDs (15.8%). iNPH guidelines (iNPHGLs) and disproportionately enlarged subarachnoid space hydrocephalus (DESH), a specific morphological finding, were used and known in 39.4% and 38% of MCDs, respectively. Logistic regression analysis with “Refer the patient to other hospitals (e.g., hospitals with neurosurgery departments) when iNPH is suspected.” as the response variable and (a) using the iNPHGLs, (b) knowledge of DESH, (c) confidence regarding DESH, (d) difficulty with performing brain magnetic resonance imaging, (e) knowledge of the methods of CSF tap test, (f) absence of physician who can perform lumbar puncture, and (g) experience of being told by neurosurgeons that referred patients are not indicated for shunt surgery as explanatory variables revealed that the last two factors were significant predictors of patient referral from MCDs to other hospitals.

**Conclusion:** Sufficient differential or comorbid diagnosis using CSF tap test was performed in a few MCDs. Medical care for patients with iNPH in MCDs may be improved by having dementia specialists perform CSF tap tests and share the eligibility criteria for shunt surgery with neurosurgeons.

## **FC43: Particularities of late-life psychosis: from epidemiology to treatment option**

**Authors:** M. A. Pão-Trigo<sup>1</sup>, J. Sá Couto<sup>1</sup>, B. Luz<sup>1</sup>, M. Mota Oliveira<sup>1</sup>

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**Objective:** Psychotic disorders are not infrequent in late life and involve massive costs to society, affecting individuals and their caregivers. The epidemiology of late-life psychosis remains imprecise and despite its high prevalence, it remains a diagnostic and treatment dilemma. The aim of this article is to review the current literature regarding late-onset psychosis and whether it is recognized as a clinical entity on itself, differing from early-onset psychosis.

**Methods:** Review of the most recent literature regarding late-onset psychosis its clinical and epidemiological particularities. The research was carried out through the PubMed and UptoDate databases, using the terms “late-onset psychosis”, “late-life psychosis”, “dementia” and “elderly”.

**Results:** Late-life psychotic disorders may originate in an intricate interaction between several biological, psychological, social, and environmental factors. These may include functional status, other physical diseases, hospitalizations, physical activity, and stability of care. Some authors refer that older age, and the presence of suicidal ideation were associated with incident late-life psychosis. Assuming the significant load associated with psychotic disorders in late life, their assessment should identify the potential causes and distinguish predictive factors. Treatment should include a combination of nonpharmacological approaches and psychotropic medications, used cautiously.

**Conclusion:** Late-life psychosis differs from early-onset psychosis on several characteristics. The treatment must be directed towards the cause and adapted to each individual. Non-pharmacologic interventions are frequently used as first line treatment, and pharmacotherapy must be used carefully. The crescent number of senior population must alert to this entity and the specificity of its approach.

## **FC44: Prevalence of mental health outcomes and the impact of sex and mood or cognitive comorbidity in older adults during the COVID-19 pandemic**

**Authors:** Linda Mah, Benoit Mulsant, Tarek Rajji, Nicolaas Paul Verhoeff, Nathan Herrmann

**Introduction:** Older adults are at greater risk for developing severe illness from SARS-COV2 infection and may be more vulnerable to negative mental health outcomes as a result of public health guidelines that increase social isolation. We assessed mental health outcomes in older adults with normal cognition (NC), past history of major depressive disorder (i.e., remitted; rMDD), or mild cognitive impairment (MCI) to determine the prevalence of

depression, anxiety, general stress, and post-traumatic stress during the COVID-19 pandemic and the impact of diagnosis and sex.

**Methods:** The sample included 108 older adults (37 males, mean age=72.1 years): 71 older adults with normal cognition (NC) based on normal neuropsychological test performance and no psychiatric history, 21 rMDD participants based on DSM5 criteria, and 16 MCI participants based on NIA-AA criteria. Participants completed self-report measures of depression [Patient Health Questionnaire-9 (PHQ-9)], anxiety [Patient-Reported Outcomes Measurement Information System (PROMIS)], general stress [Perceived Stress Scale (PSS)] and post-traumatic stress [Impact of Events Scale Revised (IES-R)] through video- or teleconferencing. Prevalence rates of clinically significant psychiatric symptoms were expressed as the percentage of participants with total scores that exceed the normal cut-offs. Separate MANOVAs were used to examine the effects of diagnosis and sex. Non-normally distributed data (PHQ-9 and PROMIS total scores) were rank-transformed.

**Results:** Approximately 1/3rd of participants endorsed clinically significant symptoms based on scores exceeding the cut-off for normal: 33.7% on PHQ-9, 31.3% on PROMIS-Anxiety, 35.5% on PSS, 38.3% on IES-R. rMDD participants scored higher on all measures compared to NC participants ( $p$ 's < .005) while MCI participants scored higher on the PSS compared to NC ( $p$ =.035). Women scored higher on all measures compared to men.

**Conclusions:** These rates of approximately 1/3rd reporting clinically significant symptoms of depression, anxiety, general stress, and post-traumatic stress are higher than those described in population surveys of older adults but are comparable to prevalence rates of psychiatric symptoms in the general adult population. The effects of diagnosis and sex indicate that older adults with previous depression or current MCI, as well as women overall, are particularly vulnerable to developing clinically significant psychiatric

## **FC45: Clinical profiles for motoric cognitive risk syndrome in rural-dwelling older adults: the MIND-China study**

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**Objective:** Motoric cognitive risk syndrome (MCR), which is defined as a pre-dementia syndrome characterized by subjective cognitive complaints and slow gait in older individuals free of dementia and mobility disability, has

been associated with increased risks of dementia, functional dependence, and mortality. The aims of this study were to describe the prevalence and distribution of MCR and to explore the clinical profiles associated with MCR in rural-dwelling older adults.

**Methods:** The population-based cross-sectional study included 5,021 dementia- and disability-free participants (age  $\geq 60$  years; 56.48% women) in the baseline assessments (March-September 2018) of the Multimodal Interventions to delay Dementia and disability in rural China (MIND-China). The MCR syndrome was diagnosed when the participants had subjective memory complaints and gait speed  $\geq 1$  standard deviation (SD) below the age- (<75 and  $\geq 75$  years) and sex-specific means. We estimated the age- and sex-specific prevalence of MCR. We used logistic regression models to examine lifestyle and clinical factors associated with MCR while controlling for age, sex, and education.

**Results:** The overall prevalence of MCR syndrome was 13.58%, with the prevalence being 11.53% in males and 15.16% in females ( $P < 0.001$ ). The prevalence of MCR was increased with age, from 10.43% in people aged 60-69 years and 15.97% in those aged 70-79 years to 21.71% among those aged  $\geq 80$  years. The demographic-adjusted odds ratio (95% confidence interval) of MCR was 1.30 (1.08-1.57) for being overweight (body mass index 24-27.9 vs.  $< 24$  kg/m<sup>2</sup>), 1.65 (1.32-2.05) for having obesity ( $\geq 28$  kg/m<sup>2</sup>), 1.74 (1.41-2.15) for diabetes, 1.44 (1.20-1.73) for dyslipidemia, 1.59 (1.32-1.91) for having coronary heart disease, 2.17 (1.78-2.65) for having stroke history, 1.52 (1.24-1.86) for having osteoarthritis, and 3.40 (2.70-4.28) for having depressive symptoms. Ever (vs. never) smoking and alcohol consumption were related to odds ratio of 0.65 (0.48-0.86) and 0.71 (0.55-0.91), respectively, for MCR syndrome.

**Conclusion:** The MCR syndrome affects nearly 1 in 7 Chinese rural older adults, and the MCR prevalence appears to be higher in women than in men. Cardiometabolic risk factors (e.g., overweight/obesity, diabetes, and dyslipidemia), osteoarthritis, coronary heart disease, stroke, and depressive symptoms were associated with increased likelihoods of the MCR syndrome.

## **FC46: The effectiveness of a multicomponent intervention on caregiver burden and informal care time in home-dwelling people with dementia and their caregivers. Results from the stepped wedge randomized controlled LIVE@Home.Path trial**

**Authors:** Berge LI<sup>1,2</sup>, Angeles RA<sup>3</sup>, Allore H<sup>4,5</sup>, Vislapuu M<sup>1</sup>, Gedde MH<sup>1,6</sup>, Ptaschitz N<sup>1,7</sup>, Ballard C<sup>8</sup>, Aarsland D<sup>9</sup>, Selbæk G<sup>10,11,12</sup>, Vahia I<sup>13,14</sup>, Tzoulis C<sup>15,16</sup>, Nouchi R<sup>17</sup>, Husebo BS<sup>1</sup>

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**Background:** Deinstitutionalization of nursing care in European counties relies profoundly on the mobilization of the caregivers and municipal homecare services. Yet, caring for home-dwelling people with dementia (PwD) can be stressful and resource demanding. The LIVE@Home.Path trial tailored, implemented, and evaluated the multicomponent LIVE intervention on informal caregivers' burden in dyads of home-dwelling PwDs and their families.

**Method:** From 2019 to 2021, we conducted a 24-month multicenter, multicomponent, stepped-wedge randomized control trial including dyads of people  $\geq 65$  years with mild to moderate dementia with minimum 1h/week contact with their informal caregiver. The user-developed Learning, Innovation, Volunteer support, and Empowerment (LIVE) intervention was implemented by municipal coordinators over 6 months periods. In an intention-to-treat analysis, we applied mixed-effect regression models accounting for time and confounding factors to evaluate the effect of the intervention on Relative Stress Scale (RSS), Resource Utilization in Dementia (RUD) and Clinical Global Impression of Change (CGIC).

**Results:** A total of 280 dyads were included at baseline, mean age of PwD was 82.2 years, 63% female, 43% lived alone, 36% had Alzheimer's dementia, median MMSE was 20 (range 0-30) and median FAST score 4 (range 1-7). Caregivers were on average 66 years, 64% female, 49% were the PwDs child. At baseline, 80 dyads were randomized to intervention sequence 1 of which 67 received the intervention, corresponding numbers for sequence 2 and 3 were 97/ 57 and 103/50. During the active intervention period, time spent in personal activities of daily living significantly increased with 2.8 hours/months compared to 1.2 hours/months increase in the control period, total score of RSS was stable in the intervention period (0.36 points) (range 0-60), while it increased significantly in the control period (27.0 points), CGIC increased significantly only in the intervention period (0.5 points) (range: -5 worsening, 5 improvement).

**Conclusion:** Although caregivers reported more care time during the intervention periods, they did not experience more stress which may be related to their increased understanding of dementia. Increase in reported care time might also reflect the increased understanding of dementia, leading to more realistic evaluation of own time contribution.

## **FC47: To use or not to use? Multiple perspectives on residents' alcohol and tobacco use in residential care facilities**

**Author:** Lisanne Van de Graaf-IJzerman

**Objectives:** Residential care facilities (RCFs) provide 24/7 care to older adults with cognitive and/or physical disabilities. RCFs aim to provide person-centred care (PCC) to enhance the quality of life (QoL) of residents. Residents are dependent on their environment to fulfil their needs and wishes, such as drinking alcohol or smoking tobacco. Although alcohol and tobacco use can be experienced as a part of QoL in the final phase of life

and the motivation to quit these substances is low, it can cause severe health problems in older adults. In RCFs this may cause a dilemma between the QoL of individual residents and the health and safety problems of all residents. This study aims to explore multiple perspectives on alcohol and tobacco use within the RCF.

**Methods:** A qualitative research design was chosen, and semi-structured interviews were conducted. A various sample was purposively selected in two organizations on two types of units (psychogeriatric units and units providing care for residents with mainly physical disabilities): residents who use alcohol and/or tobacco and those who do not. Subsequently, four of these 16 residents were invited to participate in an in-depth case study. To explore the dynamics of the social environment, both formal and informal caregivers were invited to participate.

**Results:** Residents are satisfied with their current use and value their autonomy regarding alcohol and tobacco use. Residents acknowledge that their use could cause a nuisance to others. Multiple caregivers are involved in their use and residents experience dependency on these caregivers to smoke tobacco or drink alcohol. There was limited interaction between the residents and their (in)formal caregivers and amongst the caregivers on this topic. Moreover, caregivers tended to act from their own perspectives, based on their professional expertise, knowledge, and attitudes towards residents' alcohol and tobacco use.

**Conclusion:** A dilemma arises between protecting residents from the adverse (health) outcomes of alcohol and tobacco use and sustaining their QoL by optimizing their autonomy. Future research could assess how to integrate providing PCC to residents by offering choices and autonomy, while considering the addictive component of these substances, health, and safety risks for all.

## Posters

### P9: Clinical and Sociodemographic Factors Associated with Suicidal Risk in Older Adults in Latin America

**Author:** Andrea C. Casas

**Introduction:** Suicidal behaviors represent a serious public health problem in terms of mortality, morbidity and social impact. Suicide in the elderly is a statistical reality little studied in the Latin American context. Method: It's an observational study where we reviewed the records of the patients seen between January 2018 and December 2019 at the Psychogeriatrics Clinic of the Ramón de la Fuente Muñiz National Institute of Psychiatry; collecting sociodemographic, clinical information and evaluating the suicidal risk by the SAD PERSONS Scale. With the information obtained, we correlated variables with suicidal risk based on the Pearson and Spearman correlation indices.

**Results:** A total of 404 files were reviewed, finding that in the last 5 years 1.4% of the patients had made a suicide attempt, what was directly related to a history of violence ( $r=0.256$ ,  $p=0.011$ ). Suicidal thoughts in the past year (15.4%) and increased suicidal risk were associated with PAS use ( $r=0.123$ ,  $p=0.037$ ) ( $r=0.207$ ,  $p=0.001$ ) and depressive disorder ( $r=0.148$ ,  $p=0.012$ ) ( $r=0.27$ ,  $p=0.000$ ).

**Conclusions:** In the older adult population, some of the clinical and sociodemographic factors associated with suicidal risk described for the general population could continue to be considered risk factors, among them: being male, low level of education, diagnosis of depressive disorder, having medical comorbidities and the use of SPA.

## **P10: Feasibility of a Longitudinal Audiovisual Observation Protocol to Characterize EL in Advanced AD/ADRD**

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**Background:** Episodes of lucidity (EL) are clinically and potentially epidemiologically significant events that occur among individuals with advanced dementia. EL are characterized by a spontaneous return of abilities previously thought to have been lost and are predominantly reported near end of life. Audiovisual observation offers a valuable approach to studying EL, providing opportunities to characterize verbal/non-verbal features of EL as well as their surrounding contexts. Approaches to capturing and characterizing audiovisual data and potential verbal/non-verbal indicators of EL near end of life are lacking.

**Objective:** This study determined the acceptability and feasibility of a multi-faceted observational study protocol to characterize potential observable indicators of EL among people with advanced dementia near end of life.

**Methods:** This study incorporated longitudinal audiovisual observation, informant field interviews/case review of potential EL events by informants. We examined enrollment and retention rates, task load and usability ratings from clinician and research staff across data collection and processing tasks, and surveys and qualitative appraisal from participants and staff regarding feasibility and acceptability. The NASA TLX Task Load Index measures workflow assessment to generate a combined score between 0-20, with 0 indicating higher workflow assessment. The modified System Usability Scale (SUS) measures usability with a score of 0-100, with 100 indicating higher usability and a target score  $\geq 68$  indicating usability higher than 50% of the average score.

**Results and Conclusion:** Five eligible individuals were enrolled, yielding a 100% enrollment/retention rate, and 103 observations totaling 280 hours of observation across participants. NASA TLX Task Load Index scores of 2.9 over 4 months, with vast improvement over time indicate study procedures with iterative refinements were feasible. Average modified SUS score for clinician and research staff was 96 and 82.4 respectively, indicating high usability with notable improvement over time. Surveys and qualitative appraisal from participants and staff endorse high rates of acceptability and feasibility. Additionally, the study team identified 9 potential EL across 3 participants. Seven caregivers and two clinicians participated in case reviews to review the corresponding audiovisual data, resulting in 3 endorsed EL.

## **P21: Intermittent theta burst stimulation for treatment of behavioral and psychological symptoms of dementia in Alzheimer's disease and its effect on the use of antipsychotics – study protocol**

**Authors:** Blaž Plaznik Šporin, Jurij Bon, Aleš Oblak, Polona Rus Prelog

Behavioral and psychological symptoms of dementia (BPSD), such as agitation, psychosis and depression, develop in the majority of patients with Alzheimer's disease in the progression of the disease. The management of BPSD, especially in the hospital setting, frequently includes psychopharmacotherapy, particularly second-generation antipsychotics (SGAs). These are associated with significant side effects.

In recent years, repetitive transcranial magnetic stimulation (rTMS) and its accelerated protocols, continuous and intermittent theta burst stimulation (cTBS, iTBS), have proven effective in treating depression. There have also been published studies that showed their effectiveness in Alzheimer's disease, in both cognition and BPSD.

We will conduct a 6 week, double-blind, randomized, controlled trial in patients with Alzheimer's disease and BPSD, hospitalized at the University Psychiatric Clinic Ljubljana. The patients in the stimulated group will receive iTBS of the left dorsolateral prefrontal cortex for five days a week, for two consecutive weeks. The patients in the sham group will have the exact same procedural protocol, but will receive sham stimulation from the sham coil. We will evaluate BPSD before and after protocol using various clinical scales. We will look if the doses of the prescribe SGAs in the stimulated group differ from the placebo group and, if so, if the difference persists at the follow-up after four weeks.

## **P29: Prolonged Intermittent Theta-Burst Stimulation of the Left Dorsolateral Prefrontal Cortex for Older Adults with Treatment-Resistant Depression: Effectiveness and Safety**

**Authors:** Chih-Ming Cheng<sup>1,2,3</sup>, Chia-Fen Tsai<sup>1,2,3</sup>, Ya-Mei Bai<sup>1,2,3</sup>, Cheng-Ta Li<sup>1,2,3</sup>

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**Objective:** Treatment-resistant depression (TRD) is not uncommon in older people. Brain stimulation, such as 4-6 weeks of repetitive transcranial magnetic stimulation (rTMS) or theta burst stimulation (TBS) targeting the left dorsolateral prefrontal cortex, has been evidenced as an essential intervention for adult TRD and also documented in the current international treatment guideline. In 2018, Taiwan Food and Drug Administration cleared the rTMS as a treatment option for TRD and now rTMS is still a treatment at their own expense in Taiwan. Additionally, prolonged intermittent TBS (piTBS) protocol has been proven its similar antidepressant efficacy as standard 4-6 weeks rTMS/iTBS in adult TRD, but in a shorter treatment course of 2 weeks. For older adults with depression, 4-6 weeks of treatment course may burden their caregiver due to their limited ambulation and transportation ability. However, hitherto there was no study to investigate the antidepressant efficacy of left-sided prefrontal piTBS in treating older TRD.

**Methods:** A chart review was performed at a single Taiwan hospital from 2018 to 2020. 17-items Hamilton Depression Rating Scale (HDRS-17) was measured before and after the piTBS intervention. Maudsley Staging Method was used for the depression treatment refractoriness.

**Results:** We identified 23 old adults with TRD (mean [SD] age, 66.0[5.2]; 78% female) who underwent 10-20 sessions of daily piTBS (1800 pulses/session; 10sessions, n=18, 15sessions, n=4, 20session, n=1). On continuous



outcomes, mean(SD) HDRS-17 total scores improved from 20.5(6.62) to 11.8(7.7) after receiving piTBS intervention. The mean percent improvement of HDRS-17 was 46.0%±29.4%. Dichotomous outcomes showed response rate of 43.5% and remission rate of 34.8%. No seizures or other serious adverse events were noted, and no premature discontinuation was noted.

**Conclusion:** This study is the largest study demonstrating the piTBS protocol provides a comparable reduction in depression symptoms in older adults with TRD, similar to the effectiveness in adult TRD and the efficacy of standard sequential bilateral rTMS/iTBS in older TRD in the FOUR-D trial. Regarding desirable efficiency and effectiveness, piTBS may be an optimal form of rTMS in treating older adults with TRD. Further large comparative effectiveness trials with standard iTBS or high-frequency rTMS in this population are warranted.

### **P33: A Re-Evaluation Study and Literature Review on AD8 as a Screening Tool**

**Authors:** Cho-Hsiang Yang<sup>1</sup>, Yi-Ting Lin<sup>1</sup>, Tzung-Jeng Hwang<sup>1</sup>

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**Objective:** The 8-Item Informant Interview to Differentiate Aging and Dementia (AD8) was developed as a screening tool for dementia with a cutoff of 2 suggested by the initial study. However, various studies found different cutoff values, and many found a cutoff of 2 might result in a high false positive rate. Furthermore, a higher false positive rate in Taiwan was repeatedly shown when AD8 was self-administered in local government screening programs. This study aimed to test the performance of AD8, define its best cutoff value, review factors that may affect its performance, and reconsider its proper role in clinical practice.

**Methods:** We recruited 118 participant-informant dyads from a university teaching hospital. For each informant, the AD8 was administered first and then the Clinical Dementia Rating to minimize contamination effect. For each participant, two geriatric psychiatrists considered history, physical and mental status examination, laboratory testing, neuropsychological testing, and neuroimaging results to make the final consensus diagnosis based on the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. The receiver operator characteristic curve was used to assess the diagnostic performance of AD8.

**Results:** There were 59 subjects with normal cognition, 28 with mild neurocognitive disorder, and 31 with major neurocognitive disorder or dementia. To discriminate between dementia and non-dementia, a cutoff of 2 resulted in a sensitivity of 0.903, specificity of 0.598, and area under the curve (AUC) of 0.751. Moving the cutoff to 3 and 4 led to better specificity (0.7126, 0.8621) and greater AUC (0.776, 0.818), albeit some loss in sensitivity (0.8387, 0.7742). The best cutoff score was 4 based on the Youden index. Without considering the mild cognitive impairment group, the optimal cutoff remained at 4, with equal sensitivity and even higher specificity.

**Conclusion:** Our findings suggest the AD8 may perform better and have a lower false positive rate with a cutoff value higher than 2. A literature review found its performance could be affected by disease prevalence across various healthcare settings, education level, regions, respondents' personality and understanding of questions, conduct of test, flow of test administration, etc. We will discuss the details and best screening strategies at the IPA Congress.

## **P45: Not all days were created equal – better day orientation following the weekend in MMSE**

**Authors:** Daphna Shefet, Ido Lurie

**Background:** The Min-Mental State Exam (MMSE) is the most common exam for screening and follow-up of cognitive impairment. One of 30 points is allocated to correct orientation to the weekday (“day orientation”).

**Objective:** The purpose of this study is to assess whether day orientation correlates with the weekday in which the exam was conducted, hypothesis being that orientation would be better on the work day immediately following the weekend (in Israel – Sundays).

**Methods:** All digitally recorded MMSE scores from Shalvata MHC’s were collected. The percentage of correct answers to day orientation was compared between weekdays. Differences between in/correct answers were assessed by Chi-square tests, with Cramer's V for the effect size of the correlations. Differences in total score between groups were assessed by independent t- tests with Cohen's d for effect size ( $p=0.05$ )

**Results:** The cohort consisted of 2,049 MMSE taken by 1,376 patients [average age 80.3 (SD 9.3) 56.4% Female] between 2016 and 2022. Due to very few responses ( $n=7$ ) on Friday and Saturday, these days were excluded from analyses. Overall, 67.8% of exams were correctly oriented to the day. Correct response rate according to the weekday yielded a significant result ( $\chi^2 = 20.77$ ,  $p < .001$ , Cramer's V = 0.104), with the largest effect difference was found on Sundays (53.4%), and then on Mondays (38.9%). The relative odds ratio (OR) for providing a correct response was found for Sunday (OR=1.55,  $p=.001$ ), while for other days no significant OR was found. Patients who responded correctly showed higher final total scores in comparison with patients who did not respond correctly across all days. Similar analysis was carried out for orientation to the month, comparing between the first 5 days and last 5 days of the month, but no statistically significant difference for correct answers was found.

**Conclusion:** MMSE delivered on the first working day of the week may entail a better day orientation, and thus a higher total score. This finding may have significant implications for assessments (as in clinical trials) and thus treatment.

## **P47: Impact of the FindMyApps intervention on Social health in community-dwelling people with dementia: results from a randomized controlled trial**

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**Background:** Most frequently felt needs in dementia concern maintaining self-management and participation in meaningful activities. E-health interventions may support these aspects of social health but few have undergone large-scale evaluations. The effectiveness of the FindMyApps intervention, an app selection tool and tablet training, designed to support people to find and use tablet apps that meet their needs and interests, was evaluated.

**Methods:** A non-blinded, single-centre, randomized controlled trial and process evaluation were conducted in the Netherlands between January 2020 and November 2022. Participants were community-dwelling people with mild dementia (MMSE <26 and >17) or mild cognitive impairment, and their informal caregivers. FindMyApps was compared with digital care as usual (normal tablet computer and general advice). Data regarding primary outcomes (self-management and social participation of the person with dementia, sense of competence of the caregiver) and secondary outcomes (including quality of life) were collected with standardized instruments at baseline and after a three months intervention period. ANCOVAs were conducted on post-test outcome measures, corrected for baseline scores, to investigate group differences.

**Results:** Data collection was completed in November 2022 and analyses are underway. Of 150 dyads randomized, 128 completed the three-month follow-up (64 experimental, 64 control). Results of ANCOVAs investigating the effect and effect size of FindMyApps on the primary and secondary outcomes at three months, will be reported, as well as results of post-hoc analyses that explored the effect on outcomes of: previous tablet experience and education level of participants; observed use of the FindMyApps app; and reported adherence to recommended frequency of tablet use.

**Discussion and conclusions:** Results of this study will indicate whether FindMyApps is an effective intervention for supporting social health of people with mild dementia and MCI. Comparisons with previous studies of FindMyApps and other digital interventions for social health in dementia will be drawn and implications for professionals, concerning implementation of FindMyApps, and for researchers regarding further development, translation and evaluation of FindMyApps discussed. Finally, establishing feasibility and utility of randomized controlled trials in this field, the results of this study will set the bar for future evaluations of eHealth interventions in general.

## **P56: Exercising your worries away – what do older adults think about physical activity and technology interventions to reduce anxiety**

**Authors:** Dr Terence W. H. Chong<sup>a,b,c,\*</sup>, Dr Eleanor Curran<sup>a,b,c</sup>, Ms Jenny Southam<sup>a</sup>, A/Prof, Christina Bryant<sup>d</sup>, A/Prof Kay L Cox<sup>e</sup>, A/Prof Kathryn A. Ellis<sup>a,d</sup>, Prof Kaarin J. Anstey<sup>f,g</sup>, Dr Anita Goh<sup>h</sup>, Prof Nicola T Lautenschlager<sup>a,b,c</sup>

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**Objective:** Older adults have low levels of mental health literacy relating to anxiety which may contribute to delaying or not seeking help. Lifestyle interventions, including physical activity (PA), have increasing evidence supporting their effectiveness in reducing anxiety. The COVID-19 pandemic also highlighted the potential for technology to facilitate healthcare provision. This study aimed to investigate perspectives of older adults about their understanding of anxiety, possible use of PA interventions to reduce anxiety, and whether technology could help this process.

**Methods:** The INDIGO trial evaluated a PA intervention for participants aged 60 years and above at risk of cognitive decline and not meeting PA guidelines. Twenty-nine of the INDIGO trial completers, including some with anxiety and/or cognitive symptoms, attended this long-term follow-up study including semi-structured qualitative interviews. Transcripts were analyzed thematically.

**Results:** There was quite a diverse understanding of anxiety amongst participants. Some participants were able to describe anxiety as involving worry, uncertainty and fear, as well as relating it to physical manifestations and feeling out of control. Others had less understanding of the concept of anxiety or found it confusing. Participants generally believed that PA could potentially reduce anxiety and thought that this could occur through a "mindfulness" and/or "physiological" process. Technology use was a more controversial topic with some participants quite clearly expressing a dislike or distrust of technology or else limited access or literacy in relation to technology. Participants who were supportive of using technology described that it could help with motivation, information provision and health monitoring. Wearable activity monitors were described favorably, with online platforms and portable devices also being options.

**Conclusion:** Our results highlight the importance of increasing information and education about anxiety to older adults. This may increase awareness of anxiety and reduce delays in seeking help or not seeking help at all. Findings also emphasize the need for clinicians to support understanding of anxiety in older adults that they are seeing and provide information and education where needed. It is likely that PA interventions to reduce anxiety, with the option of a technology component with support, will be acceptable to most older adults.

## **P57: The ENGAGED study: dementia prevention co-design for people living with depression**

**Authors:** Dr Eleanor Curran<sup>a,b</sup> \* Prof Victoria Palmer<sup>c,d</sup>, Prof Charles Abraham<sup>e</sup>, Dr Terence W.H. Chong<sup>a,b,f</sup>, Dr Tom Rego<sup>a,b</sup>, Ms Kali Godbee<sup>d</sup>, Mr Barry Baulch<sup>g</sup>, Dr Sabah Khalid<sup>b</sup>, Ms Robyn Garlick<sup>b</sup>, Prof Nicola Lautenschlager<sup>a,b</sup>

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**Background:** People living with depression are at increased risk of poor health outcomes, including dementia. Interventions to reduce dementia risk (dementia risk reduction (DRR)), include physical activity, diet and vascular health interventions. These can also benefit depressive symptoms and broader health, making DRR an important part of holistic mental health care for depression. However, enabling engagement and adherence, and embedding interventions in mental health clinician practice are ongoing challenges that limit the impact of interventions and implementation in clinical practice. Improved intervention tailoring and new approaches to intervention design and implementation are urgently needed. Co-design approaches have been shown to improve engagement and the impact of complex interventions in diverse fields, but have not previously been used in DRR.

**Objective:** The ENGAGED study will examine DRR intervention needs specifically for people living with depression, then co-design a tailored DRR intervention for use in mental health clinical settings.

**Methods:** The study will adapt a co-design model for mental health settings that emphasizes lived-expertise, and incorporate processes and evidence from behavioral science. Participants will include middle-aged and older people living with depression, and mental health clinicians.

Semi-structured interviews with both participant groups will examine unmet intervention needs. Illuminated shared experiences and themes will be explored further through focus group discussions to develop consensus intervention priorities. They will also be analyzed to produce a contextualized model of relevant behavior change.

Participants and researchers will then work together to co-design intervention components and refine prototypes. Finally, mixed methods survey will evaluate the co- design process and participant experiences.

**Results:** This study will provide two key outputs to enhance future intervention tailoring and engagement:

- 1) a pragmatic blueprint for DRR intervention with people experiencing depression across diverse mental health clinical settings, ready for evaluation and implementation
- 2) a model of DRR behavior change that is specified to this population.

Evaluation findings will support methods development for applying co-design to cognitive and mental health research.

**Conclusion:** This research addresses the need for new approaches to tailored, integrated mental, physical and cognitive healthcare for people living with depression that emphasize stakeholder expertise and engagement to facilitate holistic support.

## **P64: Wearable sensing technology for Parkinson's disease: preliminary results from the DIGI.PARK pilot**

**Authors:** Reithe H, Erdal A, Torrado JC, Husebo BS, Patrascu M

**Background:** Assessment scales for motor symptoms in Parkinson's disease (PD) lack the sensitivity and resolution to monitor symptoms over time. Wearable sensors in people with PD have shown potential to assess motor symptoms. The DIGI.PARK study explores the use of consumer- and research-grade wearables such as Fitbit Sense (FS), Oura ring (OR) and Empatica E4 (EM) to track behavioral patterns and symptoms of PD over time.

**Method:** The DIGI.PARK pilot study (12.2021 to 12.2022) included N = 30 participants living in Bergen, Norway (N=15 persons with PD and N=15 controls). Outcome measures: self-reported diary of symptoms and behavior combined with data streams from three wearable devices (FS, OR, EM). Data was collected over 2 weeks: continuously by devices, and diary data every second day consisting of activities, sleep, medication timing (PD) and symptom occurrence (PD). The device data were segmented into 24-hour epochs. Heart rate (HR), heart rate variability (HRV), acceleration, blood volume pulse (BVP), inter-beat interval (IBI), electrodermal activity, metabolic equivalent of task (MET) and hypnogram were visualized as time series. The resulting graphs were annotated with the reported diary data and a manual checking procedure was applied to determine the correlation between sensor outputs and the logged instances of activity, sleep and symptoms.

**Results:** Self-reported behavior was discernable in the measurements of HR, EDA, BVP, HRV, acceleration, MET and hypnogram. We found considerable differences in device outputs regarding data type, data size, resolution, and periods of active measurements. Tremor symptoms were observable in the raw data provided by EM when worn on the affected hand. Behavioral patterns such as sleep, waking and physical activities were illustrated using aggregated data.

**Conclusion:** Sensor congruence with diary data support their usefulness for long term monitoring of behavioral patterns and symptoms in PD. For PD research, output from consumer- and research-grade devices have both shown usefulness. The choice of device should be tailored to the purpose and be mindful of the specific strengths

and weaknesses of different device types. Aggregated data allow for monitoring behavioral patterns over time, whereas raw data provided the resolution to discern symptoms.

## **P66: A systematic review of measures of social connection for people living in long-term care homes**

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**Background:** Social connection is important for health, quality of life and care in long-term care (LTC) homes. However, research on how to improve social connection in LTC has been limited by lack of consensus on best approaches to measurement.

**Research Objective:** We will present a systematic review of measures of social connection developed for use in LTC residents, which aims to identify all existing measures and evaluate their measurement properties including structural validity, internal consistency, reliability and construct validity.

**Method:** We are following Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) systematic review methods. We searched multiple bibliographic databases from inception to November 2021 for studies that were conducted in LTC resident populations, quantified any aspect(s) of social connection, and reported at least one psychometric property for the measure(s) of social connection. We conducted a second targeted search in April 2022 based on our list of identified measures, supplemented with a list of measures used in previous research in this population. We are currently evaluating the measurement properties reported for each identified measure in accordance with COSMIN guidelines.

**Preliminary results of the ongoing study:** We have identified 68 studies reporting on 35 measures used to assess multiple aspects of social connection in LTC homes. The majority (n=25) were measures of quality of life, wellbeing or life satisfaction, which included a social connection subdomain, whilst only 10 measures specifically target social connection. From our pooled evaluation of 20 measures to date, we have found that 20% (n=4) have sufficient evidence of structural validity, 15% (n=3) have sufficient internal consistency, 25% (n=5) have sufficient reliability, and 15% (n=3) have sufficient construct validity.

**Conclusion:** Many measures have been used to assess social connection in LTC settings, but few are specifically designed for this purpose and they often have insufficient evidence for psychometric properties. This review will provide detailed evidence of the quality of these measures to enable future researchers to prioritise higher

quality tools and will inform our development of a new person-centred social connection measurement tool for LTC residents in the Social Connection in Long-Term Care Home Residents (SONNET) study.

## **P71: Predicting amyloid- $\beta$ deposition status in amnesic mild cognitive impairment using neuropsychological profiles.**

**Authors:** Hyunji Lee, M.D.<sup>1</sup>, Young Min Lee, M.D., Ph.D.<sup>1,2</sup>, Je-Min Park, M.D., Ph.D.<sup>1,2</sup>, Byung-Dae Lee, M.D., Ph.D.<sup>1,2</sup>, Eunsoo Moon, M.D., Ph.D.<sup>1,2</sup>, Hwagyu Suh, M.D., Ph.D.<sup>1,2</sup>, Kyungwon Kim, M.D., Ph.D.<sup>1,2</sup>, Yoo Jun Kim, M.D.<sup>1</sup>

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**Objective:** Previous studies investigating neuropsychological profiles of cognitive impairment people have found a learning curve can be a useful indicator of AD diagnosis or progression. However, the data on the relationship between amyloid  $\beta$  ( $A\beta$ ) deposition status and the learning curve in amnesic mild cognitive impairment (aMCI) are limited. In this study, we investigate the role of the learning curve in predicting  $A\beta$  deposition status in patients with aMCI.

**Methods:** This is a cross-sectional study of 67 aMCI patients (N = 67; 33 aMCI with amyloid positive ( $A\beta$ -PET (+)), and 34 aMCI with amyloid negative ( $A\beta$ -PET (-))). All participants underwent Seoul Neuropsychological Screening Battery for a comprehensive neuropsychological test battery and brain MRI. To determine  $A\beta$  deposition status, each participant underwent amyloid PET scans using 18F-florbetaben. The learning curve was obtained using immediate recall of Seoul Verbal Learning Test-learning curve (SVLT-learning curve). The association of cognitive test scores and dichotomized  $A\beta$  deposition status was examined using logistic regression models in patients with aMCI. Receiver operating characteristic (ROC) curves were used to examine the predictive ability of cognitive test to detect  $A\beta$  deposition status in aMCI.

**Results:** Logistic regression models showed that SVLT-learning curve and Rey Complex Figure Test- delayed recall (RCFT-delayed recall) scores were significantly associated with  $A\beta$  deposition status. In ROC analysis to assess the predictive power, SVLT-learning curve (area under the curve (AUC) = 0.734, P = 0.001) and RCFT-delayed recall (AUC = 0.739, P = 0.001) independently discriminated  $A\beta$ -PET (+) and  $A\beta$ -PET (-). The combination of these clinical markers (SVLT-learning curve and RCFT-delayed recall) improved the predictive accuracy of  $A\beta$ -PET (+) (AUC = 0.833, P < 0.001).

**Conclusions:** Our findings of association of  $A\beta$  deposition status with SVLT-learning curve and RCFT- delayed recall suggest that these cognitive tests could be a useful screening tool for  $A\beta$  deposition status among aMCI patients in resource-limited clinics.



## **P75: Using music to reduce depressive symptoms among nursing home residents: Preliminary results of a Bayesian Network Meta-Analysis of Randomized Controlled Trials**

**Authors:** Declercq, I.J.N., , Gerritsen, D.L., De Vriendt, P., Van Hooren, S., & Leontjevas, R.

**Objective:** Reviews show that music interventions may be effective in reducing depressive symptoms among nursing home residents. Since interventions use various ways to include music, results on the effectiveness on depressive symptoms are often inconsistent. A previous review found that receptive music interventions (e.g., music listening) are more effective than active music interventions to reduce depressive symptoms among nursing home residents. Other research suggest that active music interventions (e.g., playing instruments, dancing) are more effective. Moreover, therapists seem to prefer using active music interventions. Because of its low costs, the previously found effectiveness and low side effects, it is important to gain more insight into components specific to the intervention that may contribute to its effectiveness in reducing depressive symptoms. This insight may help to fine-tune interventions and develop treatment protocols.

**Method:** A Bayesian Network Meta-analysis was conducted to calculate the relative effectiveness of interventions including music. In addition, different network-meta-regression analyses were conducted to explorer components that may contribute to the effectiveness of the included studies.

**Results:** Our search strategy resulted in N=22 eligible Randomized Controlled Trials (RCT), that included music in the reported interventions. Compared to Care as Usual, a multidisciplinary approach including music was the most effective (MD=-0.92, 95% CrI -2.8 to 0.97), followed by music interventions focused on sensory stimulation (MD=-0.43, 95% CrI -1.1 to 0.19), music interventions with reminiscence (MD=-0.38, 95% CrI -1.2 to 0.45) and cognitive interventions with music (MD=-0.31, 95% CrI -2.0 to 1.40). Level of depression ( $b=-0.88$ , CrI 95% [-1.81 to 0.06]), and being physical dependent ( $b=-0.29$ , CrI 95% [-1.20 to 0.61]), moderated the effectiveness of interventions, although this was not significant. We did not found any difference between active and receptive music interventions.

**Conclusion:** In the constructed network, interventions that included music, were not more effective in reducing depressive symptoms among nursing home residents when compared to the care as usual group. However, some subgroups seem to benefit more from music than others. To gain more insight in the effectiveness of music in reducing depressive symptoms, more research is needed, targeting those specific target groups.

## **P77: Barriers and facilitators to reframing ‘wandering’ as a meaningful activity for residents with dementia in care homes**

**Authors:** Lena O'Connell, Genna Cherry, Alys W. Griffiths, Iria Cunha

Up to 60% of people with dementia living in care homes will ‘wander’ (i.e. walk without a clear purpose) at some point, which may occur due to cognitive changes, issues with orientation or lifelong habits. Nonpharmacological interventions are considered the best approach to supporting wandering as they aim to address underlying causes while posing minimal risk to the individual. However, there are many benefits to wandering safely in care homes, including physical benefits of exercise, retaining autonomy over location, and maintaining self-identity. This study aimed to develop evidence to understand the perspectives of care home staff around wandering as a meaningful activity. Specifically, we sought to identify: i) attitudes towards wandering; ii) the barriers and

facilitators to supporting wandering in the care home; and iii) support needs to implement strategies across different care home contexts.

We conducted 20 semi-structured interviews with staff members including direct care staff, registered nurses, managers, and activities coordinators. Participants were recruited from a range of care homes across North England who provide care for older adults living with dementia, using purposive sampling to recruit participants with a range of experiences. Data were analyzed using framework analysis, a form of thematic analysis.

Four main themes were identified and refined by the wider research team. The *impact of the environment* on how residents moved around the care home, the *importance of life history and personhood* for staff to understand the motivations residents had for wandering, *individual factors* that contributed to each resident's unique experiences and the importance of the *care home culture* to whether residents were supported. Participants also highlighted a range of strategies that they engage with to support residents to wander safely.

Although this was a small-scale study, conducted in one region of England, it has implications for the ways that wandering as a behavior is conceptualized and supported in care homes. The importance of language and vocabulary was highlighted and requires further consideration. The results of this study will be used to develop further work to test strategies in care homes and produce guidelines for supporting residents to wander safely.

## **P79: Correlates of anticipatory grief in family caregivers of persons with dementia**

**Authors:** Isabel Bermejo-Gómez, Laura Gallego-Alberto, Isabel Cabrera, Laura Mérida-Herrera, Isabel Lozano-Montoya, Javier Gómez-Pavón, and María Márquez-González

**Objective:** Anticipatory grief is frequently experienced by family caregivers of persons with dementia. It is defined as the feelings of pain and loss that appear in the caregiver prior to the death of the person cared for, and it is linked to negative consequences for the physical and psychological caregiver's health. However, more research is needed about this construct. The purpose of this work was to explore the differences regarding gender and kinship in anticipatory grief in caregivers and to explore its associations with distress experienced by the caregivers.

**Method:** The sample consisted of 70 caregivers. The anticipatory grief was measured with the Caregiver Grief Scale (CGS; Meichsner et al., 2016). Also, frequency of problematic behaviours in the person with dementia and caregiver reactions to them (RMPBC; Teri et al., 1992), depressive symptomatology (CES-D; Radloff, 1977), guilt (CGQ; Losada et al., 2010), anxiety (Tension Sub-scale of POMS's Questionnaire; Fernández et al., 2000), emotional ambivalence (CAS; Losada et al., 2017) and the experiential avoidance in caregiving (EACQ; Losada et al., 2014) were measured.

Independent-samples T-tests were conducted to study if there were differences in anticipatory grief according to the gender of the caregiver and the kinship with the person with dementia. Secondly, Pearson correlations were conducted to study the associations between anticipatory grief and emotional distress variables.

**Results:** The results showed no significative differences according to the gender of the caregiver in anticipatory grief. However, a longer caregiver's age and being a spouse caregiver was related to a greater anticipatory grief. Regarding the person cared for, behavioral problems and caregivers' reaction to them were associated with anticipatory grief. With regard to caregiver's emotional distress, significant and positive correlations were also

obtained between anticipatory grief and its subscales with depressive symptomatology, guilt, anxiety, emotional ambivalence and experiential avoidance in caregiving.

**Conclusions:** The results suggest that anticipatory grief may have a relevant role in the well-being of dementia family caregivers. Therefore, it is necessary to consider this process in the assessment and intervention in this context with caregivers.

## **P80: Implicit emotional ambivalence and emotional distress in family carers of people with dementia: Exploratory study.**

**Authors:** Isabel Cabrera<sup>a</sup>, Inés García-Batallo<sup>a</sup>, Laura Mérida-Herrera<sup>a</sup>, Laura Gallego-Alberto<sup>a</sup>, Vanessa Da Silva<sup>a</sup>, Andrés Losada-Baltar<sup>b</sup>, Isabel Bermejo-Gómez<sup>a</sup>, and María Márquez-González<sup>a</sup>

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**Objective:** Caring for a relative with dementia is a chronic stress situation related to negative consequences such as elevated depressive and anxiety symptoms. A possible mediator variable explored to explain pathways from chronic stress to emotional distress is emotional ambivalence towards the care-recipient (the simultaneous experience of positive and negative feelings towards the care-recipient). Emotional ambivalence, measured with questionnaires, presents significant associations with depression and anxiety in family carers of people with dementia. However, the self-report of emotional ambivalence is susceptible to being influenced by social desirability. The aim of this study is to present preliminary results that analyze implicit ambivalence and its association with emotional distress in family carers of people with dementia.

**Methods:** 54 caregivers participated in the study (mean age = 61.2, SD = 12.92, 81.5% women). To explore implicit emotional ambivalence, we adapted a sequential priming paradigm developed to measure implicit ambivalence about significant others (Zayas & Shoda, 2015). Two priming stimuli were used: a) neutral (e.g., RRR) and b) valenced prime (i.e., the name of the care-recipient). The targets were positive and negative words that participants have to categorize as positive or negative.

**Results:** A facilitation-inhibition indexes for positive and negative targets were calculated by subtracting the mean reaction time (RT) for valenced prime from the mean RT for neutral primes. Positive values show a facilitation effect of the valenced prime (i.e., the name of the care-recipient), and negative values inhibition. Participants were classified depending on their results of this indexes: a) positive (facilitation of positive information, inhibition of negative information), b) negative (facilitation of negative information, inhibition of positive information), c) flat (inhibition of positive and negative information), and d) ambivalence (facilitation of positive and negative information). ANOVAS were performed to explore differences between groups in emotional distress. The preliminary results showed that the ambivalence group might present more depressive symptoms compared with the positive group.

**Conclusion:** This is the first study that analyzed implicit ambivalence in family carers of people with dementia. The preliminary results show the relevance of exploring implicit processes to explain emotional distress in this population.

## **P89: Reliability and validity of the PIL Meaning of Life Test and the Existential Scale in the Spanish elderly population. Preliminary data.**

**Authors:** Carina Cinalli Ramírez, José Adrián Fernandes Pires, Jesús Privado Zamorano & María Márquez González.

Reliability and validity of the PIL Meaning of Life Test and the Existential Scale in the Spanish elderly population. Preliminary data.

From the Logotherapeutic model (Frankl, 1994) the meaning of life (SV) is defined as the fundamental motivational force of the human being that guides him to face the different situations of life, granting coherence and personal identity even in adverse situations. Spiritual resources (self-distancing and self-transcendence) are abilities that help a person experience VS. Spiritual resources can be closed to situations of emptiness or existential crisis, making it difficult to face adverse situations. In old age, people must face changes and evolutionary tasks typical of this stage of the life span that could imply losses and be experienced as critical situations that facilitate crises of meaning.

In the field of aging, there are few investigations that focus on the study of meaning in life and the analysis of the variables associated with it, as well as the programs designed for its development. The few studies carried out show that having a high sense of life and a high level of spiritual development is associated with better physical and mental health and a better quality of life in general.

The objectives of this study are: 1) to present preliminary psychometric data from the application to older people of two scales to assess SV and spiritual resources in older people, specifically: Purpose in Life Test (PIL; Crunbaugh and Maholic, 1964) and the Existential Scale (Längle, Orgler, & Kundi, 2003); and 2) present descriptive data on these variables and their association with sociodemographic variables (gender, age, marital status) and psychological well-being (depression, anxiety, psychological well-being, and life satisfaction).

The sample is made up of 61 people, with a mean age of 71 years (DT = 5), of which 67% are women who have voluntarily completed an online survey scheduled through the Qualtrics program. As part of a research project that is currently underway, this paper completes the preliminary data on the reliability and validity of the instruments, the descriptors of these variables in the sample of elderly people evaluate.

Frankl, V.E. (1994). *La voluntad de sentido. Conferencias escogidas sobre Logoterapia.*

Barcelona: Herder.

Längle, A. Orgler, C. & Kundi, M. (2003). The existence scale: A new approach to assess the ability to find personal meaning in life and to reach existential fulfillment. *European Psychotherapy*, 4, 131- 151

## **P93: Characteristics of complex, non-pharmacological cognitive stimulation interventions for people with dementia in nursing homes: systematic review**

**Authors:** Julie Guicheteau<sup>1</sup>, Ümran Sema Seven<sup>2</sup>, Jana Boes<sup>1</sup>, Ina Monsef<sup>3</sup>, Sascha Köpke<sup>1</sup>, Ann-Kristin Folkerts<sup>2</sup>, Justina Doffiné<sup>2</sup>, Elke Kalbe<sup>2</sup>, Martin N. Dichter<sup>1</sup>

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**Objective:** Several guidelines propose the use of cognitive stimulation (CS) in people with dementia. Multi-component CS interventions seem most effective in improving cognitive function, quality of life, and behavioral and psychological symptoms of dementia. For successful implementation, it is important to analyze CS interventions in detail in order to identify frequently used and potentially effective components. The aim of this systematic review is to identify, describe and summarise multicomponent CS interventions conducted in nursing homes aiming to improve cognitive function, quality of life, mood, and behavior of people with dementia in nursing homes.

**Methods:** This review is based on established methodological frameworks for systematic evidence syntheses. We conducted a database search in February 2021, using PubMed, CENTRAL, PsycINFO, ALOIS and CINAHL. Two independent reviewers assessed all search results for eligible studies and assessed studies' methodological quality using the Cochrane Risk of Bias tool for RCTs and the Joanna Briggs Institute checklist for quasi-experimental studies. Evaluation and intervention development studies of any design examining multicomponent interventions CS were included. Components of included intervention programs were analyzed using the TIDieR and CReDECI 2 criteria following a narrative analysis.

**Results:** We identified 19,992 references and included 45 publications. We observed large heterogeneity regarding intervention components, delivery, materials, mode of delivery, intervention provider, and intervention duration. Intervention components included for example reminiscence therapy, activities of daily living, cognitive exercises or reality orientation. Risk of bias was generally low. Reporting of complex interventions was frequently insufficient. No study reported patient and public involvement (PPI) at any stage of the research process.

**Conclusion:** This systematic review is the first to describe complex CS interventions conducted in nursing homes in detail. Results indicate the need for more detailed intervention description for future studies based on TIDieR and CReDECI2 guidelines to allow reliable replication of these interventions. Despite enormous research activities, many questions regarding the implementation and efficacy are still unanswered as process evaluations are lacking. In addition, reproducibility of interventions is hardly possible due to limited reporting. Future studies should use established frameworks for the development, evaluation and implementation of complex interventions and apply PPI concepts.

## **P99: Mental Health wellbeing among older adults in nursing homes**

**Authors:** Beji Sedlackova Katerina; Holmerova Iva; Bartova Alzbeta

**Background:** Loneliness is a subjective phenomenon. It is experienced a lack of satisfying relationship to others, whether because the subject has too few relationships or because their existing relationships do not provide the desired form of closeness (Svenderson, 2017). As defined by Peplou and Perlman (1982), the definitions of

Loneliness share the same concept: an unpleasant, subjective experience resulting from inadequate social relationships. Loneliness and rumination are remarkable risk factors of depression among the elderly in the both community and nursing homes (Gan et al.,2015). A Norwegian study found that 56% of nursing home residents are feeling lonely (Dragaset et al.,2011). The study from Poland found that depression was observed in 33.8% long term care facility (Horwath, Scerbinska,2017). Furthermore, another study from China shown that 14.9% residents in long term facility reported suicidal ideation (Zhang et al.,2020). Associated with one being depressed in nursing homes include pain, risk of stroke, risk of heart attack, decreased cognitive function and is also linked to increased morbidity in nursing home residents, a relationship it has been also suggested for medical inpatients (Zammit, Fiorini, 2015).

**Methodology:** The scoping review has been selected as the appropriate methodology for this study. The general purpose for conducting scoping reviews is to identify and map the available evidence (Arskley,O'Malley, 2005). Scoping reviews can be useful tools to investigate the design and conduct of research on a particular topic and conducted to review current research and identify knowledge gaps on the topic (Munn et al.,2018). According to Arksey and O'Malley (2005) the scoping review methodology is divided into six steps framework: identifying the research question, searching for relevant studies, selecting studies, charting the data, collecting the data, summarizing and reporting results and consulting with stakeholders to inform or validate study findings.

**Results:** A total of 27 studies were included in the final synthesis, mixed designed studies (n=7) including questionnaires, surveys, Geriatric depression Scales, Satisfaction with life Scale, Loneliness Scale, face to face interviews and observations. Furthermore, were included quantitative studies (n=10) included one longitudinal study with 6 years follow up. Finally, were also included qualitative studies (n=10), the studies used a mixture of approach of interviews and observation. The majority of the participants were from long-term facilities (n=24), medical students and nurses were included (n=1) study and mixture of participants such as residents, family members and staff were included in (n=1) study. The most of the studies are from Norway (n=7), China (n=3), Finland (n=2), Turkey (n=2), Poland (n=2), US (n=2), Belgium (n=1), Sri Lanka (n=1), South Korea and Japan (n=1), Hong Kong (n=1), Malta (n=1), Taiwan (n=1), Iran (n=1), New Zealand (n=1) and Sweden (n=1). In Table 1, we provide a summary of the individual studies.

**Discussion:** This scoping review highlights the importance to continue support residents' well-being in the long-term care facilities, support their mental health and also to continue educate and support healthcare staff as they have the major impact on resident's welfare. Previous studies indicated the correlation between loneliness and depression with demographics factors such as being married, unmarried or widowed for that reason it was recommended by Mahammadi et al. (2016) pay more attention on reducing feeling of loneliness and anxiety by increasing their life satisfaction. We found that only one study was focused on resident's suicidal ideation (Zhang et al., 2020) who concluded from his cross-sectional study with 538 participants, age above 60 years old, from 37 nursing homes in China that 14.9% reported current suicidal ideation but we are worried that this number could be higher and we believe that needs to be done more research for the future to prevent any risk of suicide among elderly. One reason for the lack of information on suicide risk in long term facilities is that prior 2010, universal screening for suicidal ideation in these facilities had not been widely adopted nor recommended as an approach to prevent suicide (Mezuk et al.,2014).

## **P104: Heterogeneity of Response to methylphenidate in apathetic patients in the ADMET 2 Trial**

**Authors:** Lanctôt KL, Rivet L, Tumati S, Perin J, Vieira D, Rosenberg PB, Herrmann N, Lerner AJ, Padala PR, Brawman-Mintzer O, van Dyck CH, Porsteinsson A, Craft S, Levey A, Mintzer JE

**Background:** Apathy is the most common neuropsychiatric symptom in Alzheimer's disease (AD), however there are no approved treatments. In the recent Apathy in Dementia Methylphenidate Trial 2 (ADMET 2), methylphenidate treatment resulted in a significant reduction in apathy with a small to medium effect size. We assessed response in ADMET 2 to identify individuals likely to benefit from methylphenidate.

**Methods:** In ADMET 2, AD patients with clinically significant apathy were randomized to methylphenidate or placebo. Twenty-three potential predictors of treatment outcome chosen a priori for evaluation were divided into levels (e.g. anxiety present/absent). For each predictor, change in Neuropsychiatric Inventory apathy (NPI-A) due to methylphenidate for each level was estimated. Predictors with larger differences in effect ( $\geq 2$ pt NPI-A) between levels were selected. Participants were then grouped into 10 subgroups by their index scores, constructed based on model-based prediction of response (NPI-A  $\geq 4$ ).

**Results:** In total 177 participants (66% male, mean (SD) age 75.7 (8.0), Mini-Mental State Examination 18.9 (4.8)) had 3 month follow-up data. Six potential predictors met criteria for multivariate modelling. The median Index score was -1.33 (range: -8.35 to 6.83). Methylphenidate was more efficacious in participants with no NPI anxiety (change in NPI-A - 2.21, Standard Error (SE):0.60,  $p=0.0004$ ) or agitation (-2.63, SE: 0.68,  $p=0.0002$ ), and who were on cholinesterase inhibitors (ChEI) (-2.44, SE:0.62,  $p=0.0001$ ), between 52-72 years of age (- 2.93, SE:1.05,  $p=0.007$ ), had normal diastolic blood pressure (-2.43, SE: 1.03,  $p=0.02$ ), and more functional impairment (-2.56, SE: 1.16,  $p=0.03$ ) as measured by the Alzheimer's Disease Cooperative Study Activities of Daily Living scale. After 3 months of methylphenidate, 79% of participants with a higher index score ( $>$ median) responded ( $\geq 4$ pt NPI-A) and 49% of those with a lower index score responded.

**Conclusions:** Individuals who were less anxious or agitated, younger, on a ChEI, had normal diastolic blood pressure, and with more impaired function were more likely to benefit from methylphenidate when compared to placebo. Consistent with its potential activating effects, methylphenidate may be particularly beneficial for apathetic AD participants with lower baseline anxiety and agitation.

## **P105: Measuring clinically relevant change in apathy symptoms in ADMET 2**

**Authors:** Tuma% S, Herrmann N, Perin J, Rosenberg PB, Lerner AJ, Padala PR, Brawman-Mintzer O, van Dyck CH, Porsteinsson A, CraG S, Levey A, Shade D, Mintzer JE, Lanctôt KL

**Objective:** Treatments trials for apathy in Alzheimer's disease assess change scores on widely used assessment scales. Here, we aimed to determine whether such change scores on the Neuropsychiatric Inventory - Apathy (NPI-A) scale indicate clinically meaningful change.

**Methods:** Participants completing the Apathy in Dementia Methylphenidate Trial 2 (ADMET 2) were included. Participants in this randomized trial received methylphenidate or placebo for 6- months along with a psychosocial intervention. Assessments included Clinical Global Impression of Change in apathy (CGIC-A) and the NPI-A.

Participants in both groups with complete data at the six-month visit were included. CGIC-A was assessed as improved (minimal, moderate or marked), no change, or worsened (minimal, moderate or marked). For CGIC-A levels, mean and standard deviation (SD) of the change in NPI-A from baseline was calculated. Spearman correlation determined the association between change in NPI-A and CGIC-A, and Mann-Whitney U tests determined differences

between the 'no change' group and the 'improved' and 'worsened' groups. Effect size (mean NPI-A difference between either 'improved' and 'no change' / SD of overall change) were calculated. Differences were also assessed at 3 months as a sensitivity analysis.

**Results:** Overall, 177 participants were included (median age: 77years, Mini Mental State Examination score: 19.3 (4.8), baseline NPI-A [mean, SD]: 7.9, 2.3), change in NPI-A: -3.7 (3.9). On the CGIC-A, 69 were improved, 82 showed no change, and 26 worsened. The Spearman correlation between NPI-A change and CGIC-A was 0.41 ( $p=1 \times 10^{-8}$ ). The change in NPI-A among participants who improved was -5.3 (4.1) [ $W=1873$ ,  $p=3 \times 10^{-4}$ ], among those who worsened was -1.2 (3.1) ( $W=1426.5$ ,  $p=0.009$ ) compared to those with no change (-3.2 [3.4]). The NPI-A score for minimal clinical improvement was -4.5 (4.6) with a small effect size of -0.32, which was consistent at 3-months (-0.31).

**Conclusion:** A minimal clinically significant improvement over 3 and 6-months corresponded to a mean decline of 4.5 points on the NPI-A; however, there is considerable overlap in the NPI-A between levels of clinical impression of change.

## **P108: Relational aspects in dementia family caregiving: exploring caregivers' self-perceived caring style and its correlates in the caregiving stress and coping process**

**Authors:** Maria Marquez-González, Isabel Cabrera, Laura Mérida-Herrera, Inés García-Batalloso, Laura Gallego-Alberto, Andrés Losada-Baltar

Most research in dementia family caregiving field has been guided by the stress and coping model, which holds a caregiver-centered perspective look at the family caregiving scenario. This individualistic approach of mainstream caregiving research does not allow to explain the relational aspects and variables related to the interaction between caregivers and the person with dementia (PWD), which have been underexplored until today. However, more systemic and dyad-centered approaches are needed to enrich our understanding of this chronic stress scenario. How caregivers perceive their way of caring for the PWD may exert a central role in the stress and coping model, and it may be potentially related to characteristics of the PWD (problematic behaviors and functional capacity), and caregivers' distress and coping variables. This study aimed to develop and test a valid and reliable instrument to measure caregivers' self-perceived caring style and explore these potential associations.

This communication will present preliminary evidence from family dementia caregivers who volunteered to participate and were interviewed to assess sociodemographic data, stressors, psychological outcomes (anxiety and depression) and the following interaction-related variables: self-perceived caregiving interaction style, expressed emotion and quality of the relationship in the dyad (past and present). A sample of 100 participants is expected, as the project is currently going on.

The Caregivers' Self-Perceived Caring Style Scale (SPCSS) has been developed to measure 6 potential aspects of caregivers' way of caring for the PWD: calmness, tenderness/lovingness, acceptance/validation, control/structure, overprotection, hostility, and communication facilitation. Preliminary reliability and validity analyses support good



psychometric properties of the scale, as well as significant correlations between the different styles of caring and characteristics of the PWD, caregivers' gender and kinship with the PWD, depression and anxiety symptoms, quality of the dyad relationship and expressed emotion. Implications for caregiving research and for the development of effective interventions to alleviate caregivers' distress will be discussed.

### **P109: The role of family caregivers' emotional complexity in their relationship with the person with dementia and their emotional well-being and distress.**

**Authors:** García-Batalloso, Inés; Cabrera, Isabel; Mérida-Herrera, Laura; Losada-Baltar, Andrés; Olazarán, Javier; Márquez-González, María

**Objective:** Research in informal dementia caregiving has focused on the negative outcomes it implies as a chronic stress situation, even though positive feelings derived from the caregiving experience are also reported. This co-occurrence of positive and negative experiences is a form of emotional complexity that has barely been explored in caregivers although it could be relevant for understanding caregivers' vulnerability to distress. To explore this emotional complexity, profiles of caregivers according to their levels of positive and negative affect were created and compared with regard to their reported anxiety, ambivalence feelings, experiential avoidance, quality of the actual relationship, thoughts of institutionalizing the person with dementia (PWD), and social support.

**Methods:** 363 primary family caregivers were distributed in groups based on their reported depressive feelings and positive emotions related to caregiving and the PWD. Four groups were identified: (1) flat (low negative affect, low positive affect), (2) negative (high negative affect, low positive affect), (3) positive (low negative affect, high positive affect), (4) mixed (high negative affect, high positive affect). ANOVAS were performed to explore differences between groups.

**Results:** Caregivers in the positive and mixed profiles reported better actual relationships with the PWD and higher experiential avoidance. Caregivers with both negative and mixed profile showed higher anxiety than the other profiles, and the negative profile also reported higher thoughts about institutionalizing the care-recipient and more ambivalence. Caregivers in the positive group reported the highest social support.

**Conclusion:** The obtained findings converge in the idea that caregivers' positive emotions towards the PWD are closely related to the quality of the relationship, and may be involved in a delayed decision to institutionalize her/him. The presence of negative affect (depressive feelings) is associated with anxiety symptoms, even when positive emotions are reported, supporting the high prevalence of anxiety-depressive comorbidity in this population. Finally, the negative profile (low positive and high negative affect) is the one that reports more ambivalence. Taken together, these findings suggest that caregiving for PWD should be considered an emotionally complex situation with positive affect derived from the caregiving being key in understanding caregivers' well-being and distress.

### **P110: Development and validation of the Relationship Quality Scales in Caregiving (RQSC): preliminary results.**

**Authors:** Mérida, L., Cabrera, I., Gallego-Alberto, L., García-Batalloso, I., Da Silva, V., Losada-Baltar, A., Márquez-González, M.

**Objective:** Caring for a person with dementia is a chronic stress situation. The quality of the relationship between the family caregiver and the person with dementia (PWD) is a relevant variable to understanding caregivers' well-being. However, there are no specific scales that measure this variable in this context. This study aims to analyze the preliminary psychometric properties of the Relationship Quality Scales in Caregiving" (RQSC) " which measures caregivers' perception of different aspects of the relationship in the dyad before the onset of dementia and the present moment.

**Methods:** The sample was composed of 55 family caregivers of people with dementia. The Relationship Quality Scales in Caregiving (RQSC) include two subscales assessing the quality of the relationship, respectively, before the dementia onset (Past Relationship; PR) and in the present moment (Current Relationship; CR), and it also provides an index of the perception of change (Change score) in the relationship quality, namely: Actual Quality minus Past Quality. Internal consistency and factor validity (through exploratory factor analysis and parallel analysis) were explored. Construct validity of the instrument was also explored, analyzing its correlation with caregivers' reactivity to behavioral and psychological symptoms of dementia (BPSD), caregivers' ambivalent feelings towards the care recipient, and caregivers' depressive symptoms.

**Results:** The results from the EFA and parallel analyses suggest that both RQSC subscales have a unidimensional structure. Both the PR subscale and the CR subscale show good to excellent reliability and validity indexes. Significant negative correlations between both PR and CR subscales and reactivity to BPSD, ambivalent feelings, and depression have been found

**Conclusion:** The instrument seems to show good psychometric properties that recommend its use. The results support the relevance of caregivers' perception of their relationship with the PWD for understanding caregivers' wellbeing. However, these are preliminary results that should be replicated in future studies using a bigger sample and additional psychometric data.

## **P86: Effect of Virtual Reality on Stress Reduction and Change of Physiological Parameters Including Heart Rate Variability in People With High Stress: An Open Randomized Crossover Trial**

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**Introduction:** Although, attempts to apply virtual reality (VR) in mental healthcare are rapidly increasing, it is still unclear whether VR relaxation can reduce stress more than conventional biofeedback.

**Methods:** Participants consisted of 83 healthy adult volunteers with high stress, which was defined as a score of 20 or more on the Perceived Stress Scale-10 (PSS-10). This study used an open, randomized, crossover design with baseline, stress, and relaxation phases. During the stress phase, participants experienced an intentionally generated shaking VR and serial-7 subtraction. For the relaxation phase, participants underwent a randomly assigned relaxation session on day 1 among VR relaxation and biofeedback, and the other type of relaxation session was applied on day 2. We compared the State-Trait Anxiety Inventory-X1 (STAI-X1), STAI-X2, the Numeric Rating Scale (NRS), and physiological parameters including heart rate variability (HRV) indexes in the stress and relaxation phases.

**Results:** A total of 74 participants were included in the analyses. The median age of participants was 39 years, STAI-X1 was 47.27 (SD = 9.92), and NRS was 55.51 (SD = 24.48) at baseline. VR and biofeedback significantly decreased STAI-X1 and NRS from the stress phase to the relaxation phase, while the difference of effect between VR and biofeedback was not significant. However, there was a significant difference in electromyography, LF/HF ratio, LF total, and NN50 between VR relaxation and biofeedback

**Conclusion:** VR relaxation was effective in reducing subjectively reported stress in individuals with high stress.

## **P115: Testing the feasibility of a multicomponent neuropsychological intervention for individuals at-risk of dementia: the REMINDER program**

**Authors:** Ana Rita Silva, Salomé Pinho, Margarida Lima, Rosa Marina Lopes Brás Martins Afonso

**Objective:** Interventions aimed to optimize cognitive function and functionality in individuals at risk of dementia were scarce in validity studies. While some RCTs have been developed in cognitive training interventions, studies of multicomponent interventions (cognitive, social, and behavioral) integrating intervention targeting psychosocial risk factors (social isolation, depression, low cognitive reserve) is absent. Additionally, few efforts have been made to develop such validity studies with individuals at higher risk of dementia who still do not present objective cognitive decline, despite current recommendations in this regard. We aimed to start the validation of a 20-session multicomponent intervention – REMINDER program - with a feasibility test and a preliminary efficacy testing using a comprehensive outcome assessment protocol.

**Methods:** A feasibility randomized controlled trial (RCT) was conducted, recruiting

community-dwelling individuals between 60 to 75 years old with increased risk of dementia (LIBRA dementia risk score). Fifteen participants took part in twice-a-week sessions of the REMINDER program, during twelve weeks. Data on the acceptability, satisfaction and adherence to the REMINDER program was collected, and an association between pre and post intervention motivation and knowledge about dementia risk was examined. For the preliminary efficacy testing we considered as primary outcome a performance-based functionality measure (UPSA) and secondary outcomes will include global cognition, emotional status, and lifestyle habits, tested prior and after the intervention.

**Results:** Rates of satisfaction throughout the REMINDER program sessions were high (75%, mean) as well as the adherences that was superior to the main dementia risk reduction programs referred in literature. (83%). Post-intervention efficacy testing is ongoing, however, levels of knowledge about dementia risk increased 12% compared with pre-intervention (34% pre-intervention, to 46% post intervention;  $p=.045$ )

**Discussion:** Preliminary data on feasibility and efficacy of the REMINDER program suggests this program is an engaging and motivating tool for dementia risk reduction, justifying the future implementation of a large-scale RCT. We expect that, with a larger efficacy study we can demonstrate the REMINDER program effects in behavior change and in the adoption of protective lifestyles for dementia prevention, and that the comprehensive outcome assessment proves to be effective and, therefore, replicable in further studies.

## **P116: Cessation of caregiving due to institutionalization: Dementia family caregivers' profile. A 3 year longitudinal study**

**Authors:** Rosa Romero-Moreno; Samara Barrera-Caballero; Lucía Jiménez-Gonzalo; Cristina Huertas-Domingo; Javier Olazarán and Andrés Losada-Baltar  
Universidad Rey Juan Carlos

**Objective:** Caregiving of a relative with dementia is considered a chronic stressful situation that generates physical and psychological strain and that may have negative effects on caregivers' health. Many caregivers make the decision to enter their relatives in a nursing-home, however, there are few studies that analyze psychosocial (e.g., guilt) and biomarkers of cardiovascular risk (C-reactive protein, CRP) variables that are related to this decision during the caregiving process stress. The aim of this study was to analyze caregivers' differences between caregivers who finish the role of caring of their relatives with dementia and those who continue their caregiving role throughout the process of caring in a 3-year period.

**Methods:** The sample consisted of 294 family caregivers of people with dementia and was divided in two groups; a) caregivers who institutionalized their relatives during a 3-year period (12.7%); and caregivers who maintained their role as caregivers (87.3%).

**Results:** Preliminary results show that caregivers who institutionalized their relatives with dementia in some time point of the caregiving process presented at baseline more frequency of behavioral problems ( $t = -2.95$ ;  $p < .01$ ), more feelings of guilt ( $t = -3.52$ ;  $p < .01$ ) and compassion ( $t = -3.79$ ;  $p < .01$ ), reported less frequency of dysfunctional thoughts about caregiving ( $t = 1.99$ ;  $p < .05$ ) and presented higher levels of CRP ( $t = 2.72$ ;  $p < .01$ ), compared to caregivers who maintained their role as caregivers. In addition, caregivers who institutionalized their relative were younger ( $t = 2.13$ ;  $p < .05$ ) and reported more weekly hours ( $t = -3.46$ ;  $p < .01$ ) and more days

( $t = -3.01$ ;  $p < .01$ ) of home help compared to those caregivers who maintained their role. No significant effects were found for caregivers' gender ( $p = .38$ ), daily hours caring ( $t = 1.54$ ;  $p = .13$ ) nor time caring ( $t = -1.1$ ;  $p = .27$ ).

**Discussion:** The results of this study present several clinical implications. Knowing variables that are related to the decision of institutionalization could prevent it as well as it can be useful to accompany caregivers by providing support throughout the entire process.

## **P117: The role of hyperarousal for understanding the association among sleep problems and emotional symptoms in family caregivers of people with dementia. A network analysis approach.**

**Authors:** Lucía Jiménez-Gonzalo, Inés García-Batalloso, María Márquez-González, Isabel Cabrera, Javier Olazarán, Andrés Losada-Baltar.

**Objective:** Caregiving for a family member with dementia is a highly stressful situation that may last up to several years, and has been associated with symptoms of depression, anxiety, and sleep problems. These disorders frequently co-occur, with previous studies suggesting a bidirectional relationship between sleep and psychiatric disorders (i.e., anxiety and depression). Several models have highlighted the role of hyperarousal for understanding sleep disorders; however, there is little evidence about how sleep problems, depression and anxiety are linked together. Network analysis (NA) could help exploring the mechanisms underlying the associations between anxiety, depression, and sleep disturbances.

**Methods:** Participants were 368 family caregivers of a person with dementia. The depression-anxiety-sleep symptoms network was composed of 26 items. All the analyses were done using R (version 4.1.1).

**Results:** Symptoms of *tension*, *shakiness*, *restlessness*, *nervousness*, and *anxiety* were strongly connected with the symptom *feeling depressed*. Symptoms of insomnia were connected to *trouble focusing*, which was linked to *feeling that everything is an effort* and *apathy*. The strongest nodes in the network were *shakiness*, *tension*, *restlessness*, *nervousness*, and *restless sleep*. *Tension* was the node with the most predictive power, while *restless sleep* was the node with the highest betweenness. Central stability coefficient showed adequate indices.

**Conclusion:** Hyperarousal symptoms (e.g., *tension*, *restlessness*) were the most strongly connected symptoms and showed close connection with symptoms of depression. The strength of these nodes suggests a prominent role of hyperarousal to maintaining, or even fueling, anxiety and depressive symptoms. Besides, our results invite the hypothesis that sleep problems may trigger symptoms specific to depression via fatigue or energy loss. Even though this study is limited by its cross-sectional design, it is the first to examine the network structure of the associations between symptoms of depression, anxiety, and sleep problems in a sample of informal caregivers, and to explore the role of hyperarousal in this network. Future studies should explore the temporal association between symptoms and the network dynamics, including response to the potential treatments.

## **P128: The Valladolid Multicentre Study: Delirium characteristics in patients attended in seven liaison psychiatry services in Spain.**

**Authors:** Maria Iglesias González (1), David Sanagustín (1), Mikel Etxandi (1), Paola Punsoda Puche (1), Cristina Pujol Riera (2), Eduardo Fuster Nácher (3), M<sup>a</sup> Desamparados Perez Lopez (4), Eduardo Delgado Parada (5), Leire Narvaiza Grau (6), Monica Prat Galbany (6), Andrea Santoro (7).

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**Introduction and objective:** Delirium is an acute and fluctuating disorder characterized by a disturbance in attention and cognition that is commonly observed in hospitalized older adults; being present in up to 23% of patients admitted to a general medical service and as many as 85% of patients in the intensive care unit. Delirium causes complications such as increased morbidity, persistent functional decline, mortality, increased frailty and increased length of hospital stay. Nonetheless, it is often underdiagnosed, especially when it occurs in its hypoactive form.

The objective of this study is to describe characteristics and factors associated with the presence of delirium in patients  $\geq 65$  years treated by the liaison psychiatric units in seven general hospitals.

**Methods:** This is an observational, cross-sectional, multicentre study. We obtained data from a sample of 165 patients ( $\geq 65$  years) admitted to seven general hospitals in Spain referred from different departments to each liaison psychiatry unit. Data was collected for a month and a half period. Psychiatric evaluations were performed while the patients were on wards.

**Results:** We obtained a sample of 165 patients (78 women, 88 men) with a mean age of 76,03 years old (42.10%  $< 75$  years, 57,83%  $\geq 75$  years). Most of them were married and they lived accompanied (67,27%). Delirium was diagnosed in 20% of the consultations. A multivariate analysis was developed with the presence of delirium as the independent variable. The nature of the underlying pathology, the presence of a previous mental disorder, functionality using the Barthel and Lawton Brody Indexes and the prescribed pharmacological treatments were used as dependent variables. Cohen's kappa statistics were used to estimate the agreement between delirium diagnose made by psychiatrists and the diagnoses considered by the referring doctors. Low agreement was found for the presence of delirium (Kappa= 0,2341). We also explored the relationship between the presence of delirium and the mean length of stay, as well as the discharge destination of these patients.

**Conclusions:** There are still many difficulties in the diagnosis and treatment of patients with delirium. Better knowledge of the factors associated with its appearance would improve the management of these patients.

## **P130: Suicide risk after dementia diagnosis - what do we know and what to expect?**

**Author:** Chemin Lin

**Objective:** The purpose of this research is to review the association between the dementia diagnosis and suicide risk, to debate what to expect on this topic in the future, and to identify some strategies to control suicide risk after dementia diagnosis.

**Methods:** Non-systematic review of the literature with selection of scientific articles published in the last 10 years, using PUBMED as database and the following keywords: «suicide», «dementia» and «dementia diagnosis». Nine studies were included.

**Results:** Nowadays, suicide account for one million deaths worldwide per year. Suicide rates are up to 8 times higher in the elderly than in general population, in relative numbers. Dementia is an incurable diagnosis and usually result in loss of mental competence. After being diagnosed with dementia, people face emotional challenges and use to feel loss, anger, and uncertainty.

Different studies found dementia as an independent risk factor for suicide. Also, some factors that increase the risk for suicide in dementia are described: the existence of psychiatric comorbidity, such as depression, anxiety, psychosis and substance use; The initial stages of dementia, often within three months of diagnosis, because the person perceive a higher threat to his life, with progressive physical and cognitive impairment, increasingly higher levels of dependence and concern on becoming a burden for their family, and, at the same time, preserving intellectual and volitive capacities to plan and carry out suicide; And younger age at dementia diagnosis, with higher difficulties in adjusting to the diagnosis.

We are moving towards pre-symptomatic and early dementia diagnosis utilizing biomarkers and genetic tests. This implies that the diagnosis is made in younger people, so concerns have been raised about a potential increase for suicidal behavior.

**Conclusion:** The findings of this research highlight the importance of providing support and paying attention to people with recent dementia diagnosis, particularly in the first year and for patients aged < 75 years. We suggest active management of pre-existing mental disorders, suicide risk evaluation, assessment of patient and caregiver needs and restricting access to lethal means.

## **P131: Co-creating good care in the care home: perceived roles and responsibilities**

**Authors:** Marleen D.W. Dohmen, Mandy Visser, Johanna M. Huijg, Barbara C. Groot, Tineke A. Abma

**Background:** An intersubjective understanding of mutual roles and responsibilities in the care process is needed to effectively co-create good care for residents of the care home.

**Objective:** This study offers insight into the perspectives of professionals, informal caregivers, and residents on their own role and responsibilities and that of others, and examines how this affects their co-creative relationships.

**Methods:** We conducted semi-structured interviews with professionals (n=9), informal caregivers (n=10), and residents (n=10) from two psychogeriatric wards. An inductive thematic analysis was then performed, using Margaret Urban Walker's expressive- collaborative model of morality (1998) as a sensitizing concept.

**Results:** Professionals and informal caregivers both view themselves as the main responsible for the resident's wellbeing. Whereas professionals see themselves as experts on care for residents with psychogeriatric issues, informal caregivers see themselves as experts on the resident as a person. From these roles, both profess to know what is best for the resident. Further, professionals see themselves as someone naturally deserving trust due to

their expertise, whereas they are seen by informal caregivers as someone who needs to win their trust. Informal caregivers see themselves as a warrantor for the residents wellbeing, whereas they are seen by professionals as someone who needs to relinquish control over care, so they can return to being the resident's loved one. Although both professionals and informal caregivers ascribe a central role to the resident in the care process, their behaviors unintentionally urge residents towards a more passive role. Residents who are not generally compliant to the norms of the care home appear to view themselves as rebels. These (and more) differences in perceived roles and responsibilities lead to tensions in the co-creative relationships between professionals, informal caregivers, and residents.

**Conclusion:** Professionals, informal caregivers, and residents have differing perspectives on mutual roles and responsibilities in the care process, which hampers their co-creation of good care. This study implies that interventions aimed at improving the co-creation of good care may be focused on those involved first becoming acquainted with each other's perceived roles and responsibilities.

### **P134: Immediate stress responses to music during psychomotor stimulation in 2 study cases with dementia.**

**Authors:** Marlene C. Neves Rosa Sr, Dara Pincegher, Rui Martins, Rui Pedro Jesus, Sr., Susana L. Lopes, Natalia Martins Martins, Emanuel Silva,

**Background:** The use of music in older people with advanced dementia is possible because perception, sensitivity, emotion, and memory of music may remain intact after other types of memory disappear. Previous literature is controversial about stress biomarkers response to music introduction in therapy routines for people with severe cognitive impairment and neural-behavioural disorders. Particularly, for these patients, it is possible that they feel lower pleasure levels with music-based therapies.

**Objective:** To characterize the immediate physiological effects of listening to music during psychomotor stimulation in an old participant with combined dementia and depression disorder and in a participant with a dementia diagnosis.

**Methods:** Two study cases with dementia diagnosis participated in this study (P1: 84yrs; male Parkinson; FAB=9; P2: 85 yrs; female; Alzheimer; FAB=11; depression diagnosis) and were submitted to psychomotor stimulation (2 sessions). The first 20 min. of each session was dedicated to psychomotor stimulation without music (A), followed by 20 minutes with music (B). Heart rate was monitored (H10 Polar sensor) in a continuous mode. Cortisol levels were collected at the beginning of the session (T0) and then repeated at periods A and B ( $\mu\text{g/dL}$ ). The range between minimum and maximum HR values (beats per minute- bpm) and mean values for cortisol levels were considered for the stress response analysis.

**Results:** Salivary cortisol levels were higher at T0 for P1 (0.393 vs 0.203). During period A, the P1 slightly decreased their values ( $\downarrow 0,076$ ) and P2 had no changes. After introducing music, both P1 and P2 increased cortisol levels ( $\uparrow 0,085$ ;  $0,162\uparrow$ ). For both P1 and P2, a wide range of HR was detected during period B (P1: 13 vs 23 bpm) vs (P2: 15 vs 41 bpm).

**Conclusion:** Immediate responses to the music inclusion in a psychomotor intervention caused an augmented stress response in elderly participants with dementia, especially in P2. In specific, the depression diagnosis in this



participant may be associated with a low capacity to handle emotions during new experiences, causing a higher stress response.

### **P135: Electroencephalography-Based Neuro-emotional Responses during interactive scenario therapy in the person with dementia – case study**

**Authors:** Marlene C. Neves Rosa Sr., Dara Pincegher, Emanuel Silva, Susana L. Lopes, Natalia Martins Martins, Filipa Ribeiro, Mariline Ferreira, Duarte Fernandes, Mariana Moreira, Rui Martins, Rui Pedro Jesus, Sr., Alice Gabriel, Rafael Pinheiro

**Background:** Immersive technologies have the potential to control cognitive and behavioural symptoms in people with dementia. A safe environment can be designed through a specific interactive scenario, according to the preferences and experiences of each user.

**Objective:** Mapping neuro-emotional responses during the interactive scenario therapy experience in a case study, with dementia, using electroencephalography (EEG).

**Methods:** A participant, 78 years old and diagnosed with moderate to severe Alzheimer's disease (female; Mini Mental State Examination score of 17 points; frontal assessment battery score of 8 points), underwent EEG analysis (EMOTIV EPOC X) using a protocol with interactive scenarios tailored to the participant's needs and preferences, the scenarios were designed from reminiscence strategies. The protocol included a stimulus that alternated between motor and cognitive activities (3 minutes), and breath-centered relaxation (1 minute). The scenarios used in this study were: setting up a living room; composing a cake recipe; shopping in the market to make a cake; looking for objects in the park; organizing a birthday party. These variables are provided, on a scale of 0 to 100, after processing by the algorithms of the EmotivPRO v3.0 software.

**Results:** The values found in the EEG analysis will be described without stimulus and with stimulus respectively. Thus, engagement (68.57 to 71.86); arousal (57.86 to 49.86), focus (61.57 to 57.00), interest (54.86 to 49.57), relaxation (33.86 to 30.86), and stress (53.71 to 43.00). The EEG data showed an increase in engagement when the patient was stimulated (68.57 to 71.86). Relaxation also increased (30.86 to 33.86) when the stimulus was removed. The stress level, as analysed by the EEG, was also higher in the period without stimulus and reduced in the period with the stimulus (53.71 to 43).

**Conclusion:** During a stimulus period in interactive therapy, there was an increase in engagement, which was related to an increasing focus during the stimulus. Lower values were observed compared to the period without stimulus, indicating a period of recovery after a period of concentration/arousal. Therefore, therapy with an interactive and familiar scenario, using a circuit of stimulus-breathing exercises, promotes a positive and adequate neuro-emotional response in a person with dementia.

### **P141: BRIGHT (Building Resilience in Geriatric Health Today)**

**Authors:** Melissa Hu, Sophie Cheng Xiaolin, Jetaime Muk, Seow Su Yin, Iris Rawtaer

**Aims:** Geriatric depression and anxiety are increasingly relevant conditions in the ageing population of Singapore. Subsyndromal depression and anxiety in older adults is estimated at 20-50% of the population and often go undetected despite adverse effects on quality of life (Preisig et al., 2001), suicidality (Sadek and Bona, 2000), disability and inappropriate usage of medical services (de Beurs et al., 1999; Wagner et al., 2000), and cognition (Yoachim et al., 2013). BRIGHT is an early intervention group coaching programme to empower older adults to self-manage physical and mental health ailments so as to decrease healthcare utilization and expenditure. This paper aims to present the findings from three pilot runs of BRIGHT with older adults in the community setting.

**Methodology:** BRIGHT consists of 4 half-day workshops with both didactic and interactive components that leverage on the group-based therapy setting to promote psychoeducation, self-reflection, and reminiscence. This was delivered by a multidisciplinary team comprising psychiatrists, psychologists, and medical social workers. Simple digital literacy skills were taught and a mobile application to promote active lifestyles was utilized.

Groups are kept small at less than 15 participants each who were referred from community partners. They have been screened for subclinical depression and anxiety using the Geriatric Depression Scale (GDS), Geriatric Anxiety Inventory (GAI), 12-item Short Form Survey (SF-12), and Health Confidence Score (HCS). The same scales were administered again immediately upon completion of the programme to capture (1) reduction in depressive and anxiety symptoms, (2) quality of life, (3) improvement in health confidence, and (4) participant satisfaction.

**Result:** Average participant satisfaction was 82.2% - most qualitative feedback was positive but one group preferred the sessions to be conducted in Mandarin instead of English. GDS, GAI, HCS, and SF12 PCS scores improved by an average of 2.285, 0.969, 0.685, and 1.733 respectively. However, SF12 MCS scores decreased by an average of 1.795.

**Conclusion:** Preliminary quantitative data shows that BRIGHT appears to be an effective early intervention modality for older adults with subclinical depressive and anxiety symptoms. After an iterative process of refining the programme content, plans are underway to “train the trainers” so as to increase scale and sustainability.

## **P144: Are the older community-residents who did not respond to the administrative survey high risk group? Early detection and continuous support by the visiting nurse**

**Authors:** Mika Sugiyama, Hiroki Inagaki, Kae Ito, Tsuyoshi Okamura

**Background:** Clinically, the older adults who do not respond to administrative surveys are at high risk for dementia and other diseases in many cases. The aim of this study is 1) to examine this hypothesis, and 2) to establish a support system to reach out to them and help them live well, in the community-based participatory research (CBPR) in Chiyoda-ward, Tokyo, Japan, using a mail survey as a starting point to visit older community-residents who did not respond to the administrative survey.

**Methods:** The participants were residents aged 65+, living in Chiyoda ward, Tokyo, Japan in 2021 (N=4009, mean aged 74.2±6.6, female 54.9%). We conducted the survey by following three steps. First, we distributed self-administered questionnaire to all participants by mail. Second, a survey request letter was mailed to the older

adults who did not return the survey (N=675, aged70+). We conducting visit investigation by visiting nurses for old-old people (N=87), and conducting assessment to evaluate risks of dementia and physical health. Third supporting people with high risk of dementia through cooperation among various organizations and various professions, and conducting watching support by visiting nurses as prophylactic care.

**Result:** For the investigation by mail, 2050 participants sent back the investigation form. Of the 87 people living alone or in aged households who responded to the request for a visit survey, we were able to conduct home-visit surveys for 46 participants (implementation rate: 52.9%). As a result of the comprehensive assessment, 15 participants (mean aged 81.9±5.0, female 53.6%, MMSE: 25.2±2.8), were regarded as participants with high risk of dementia, and 3people of them were started watching support work.

**Discussion:** We established a support system for people living with dementia that consist early detection and continuous support by the visiting nurse. There were many cases in which the home-visit nurses investigation led to continuous support. For the further research, it is necessary to review the long-term outcomes of those who received early support concerning whether they could maintain their quality of life.

## **P146: How to introduce EDI principles to multigenerational programs?**

**Authors:** Dr Molly Hebditch, Dr Stephanie Daley, Brighton and Sussex Medical School

**Objective:** The Time for Dementia (TFD) is an educational programme for healthcare students to learn from 'experts by experience' through longitudinal contact with a family affected by dementia. Since 2014, over 1,900 families have taken part. In December 2021, as a result of a student complaint about racism, expectations of inclusivity, diversity and inclusion (EDI) were examined and an anti-discriminatory practice plan for TFD was developed.

One of the proposed outputs of this plan was the creation of a communique to outline the expectations on EDI for circulation to participant families and students in TFD. Several considerations were acknowledged to be important: i) Generational differences and expectations about anti-discrimination; specifically, the use of language; ii) The complexity of addressing this issue with people with dementia; who may have difficulties with recall or disinhibition due to their condition; iv) The need to enhance understanding of different perspectives and needs between families and students.

**Methods:** The iterative development (January-September 2022) of the final communique included;

1. The formation of a working group including student inclusivity representatives and Tfd families to develop the communique.
2. A draft set of 'inclusivity principles' was created and feedback was sort from a sample of TFD participants independent of the working group (n=15).
3. As a result of feedback, these principles were amended by the working group.
4. The circulation of these inclusivity principles to the families taking part in TFD from July 2022.
5. A qualitative research study was conducted on the reception of these principles (n=14).

**Results:** This poster will present the communique that was developed, the results of the thematic analysis on its reception, and key reflections on its development.

**Conclusions:** Universities have a responsibility to prevent and effectively deal with discrimination on placements and this includes educational programs with 'experts by experience'. Educational programs with people with

dementia and their carers, who are volunteers, not patients, need special consideration. While this marks the start of TFD engagement with EDI issues, we hope by sharing our experiences will offer inspiration and confidence to other educators in psychogeriatrics to engage with these issues.

## **P148: Montessori as a tool to engage the elderly with dementia – literature review**

**Authors:** mgr Natalia Segiet, mgr Gabriela Początek, prof. dr hab. n. med. Aleksandra Klimkowicz-Mrowiec

**Objective:** The aim of this review was to describe the usage and efficacy of Montessori senior methods of engaging the elderly with dementia reported in the existing literature.

**Methods:** Three databases were searched (PubMed, EMBASE, Scopus) using the key words “Montessori” “senior”. No date restrictions were placed. Inclusion criteria specified: language of the article (English), type of article (research) and the necessity of the Montessori intervention being directed at seniors.

**Results:** The search initially identified 15 articles. After eliminating duplicates and evaluating titles and abstracts three studies were included in the review. One focused on staff-led Montessori interventions, and two analyzed the effectiveness and benefits of elderly-led interventions – residents of facilities who were screened using MMS and trained to provide activities for their less lower cognitive functioning peers were selected. The total number of participants from all studies was: 55 people (10 leaders and 45 participants). All three studies reported positive, statistically significant improvements in participants’ functioning. All studies used the MPES to assess psychological variables (constructive engagement (CE), passive engagement (PE), other engagement (OE), pleasure (P)).

In first study (Skrajner&Camp, 2007) (CE:  $p<0.01$  and  $p<0.001$ ); OE:  $p<0.001$ ,  $p<0.01$ ; NE:  $p<0.05$ ,  $p<0.01$ ; P:  $p<0.01$ ,  $p<0.05$ ) classes conducted using the Montessori method were significantly more effective than those conducted using the traditional method among the same group of seniors.

Other two studies reported improvement among observations during Montessori classes scores vs scores during regular activities – Camp and Skrajner, 2004 - CE:  $p<0.01$ ; OE:  $p<0.001$ ; P:  $p<0.06$ ); Orsulic-Jeras, Judge, Camp, 200 - CE:  $p<0.01$ , Affect Rating Scale: Pleasure:  $p<0.001$  (treatment),  $p<0.03$  (time), Anxiety/Fear:  $p<0.003$  (treatment),  $p<0.003$  (time)).

**Conclusion:** The research identified indicates the positive impact that Montessori-based programmes can have on elderly people with dementia. More studies need to be conducted, because the number of participants in the current study is relatively small. Further research with larger number of participants is needed to fully prove the effectiveness of Montessori programs implemented delivered to or by older people.

## **P156: The Development of the PET@home Toolkit using the refined Experience-Based Co- Design Method (EBCD+)**

**Authors:** Reniers, P.W.A. Leontjevas, R., Declercq, I.J.N., Enders-Slegers, M.-J., Gerritsen, D.L., & Hediger, K.

**Objective:** The relevance of pets in long-term home care is increasingly recognized due to their positive effects on health outcomes in clients, and the growing numbers of pet-owning clients receiving long-term care at home (LTCH). In the Netherlands, there is a lack of supportive materials concerning pet-related issues in LTCH. The aim of this project was to develop materials to support care for LTCH-clients with pets. Using a participatory research approach, LTCH-clients with pets, family caregivers, and professional caregivers collaborated using the Experience-Based Co-Design (EBCD) method that we fine-tuned for frail clients (EBCD+) to create the PET@Home Toolkit.

**Methods:** The project started with a literature review on the roles of pets for older adults. To determine if similar roles were also relevant in LTCH, individual interviews were conducted with LTCH-clients, family caregivers, and professional caregivers. Thereafter, the original EBCD-method was used including group interviews with (1) LTCH-clients and family, (2) professional caregivers (3) mixed groups of (1) and (2). Participants could participate in multiple phases. Professional caregivers preferred online and weekday meetings and LTCH-clients and family caregivers preferred in person and weekend meetings. Therefore, we organized additional interviews, and separate online and in-person groups. Hence, the EBCD+ method included a review, complementary interviews, the original EBCD-method and continuous refinement and testing of instruments.

**Results:** The review and complementary interviews revealed similar roles related to pets in LTCH (e.g. Relational Aspects, Physical Health, and Social Aspects) to those as in the review on older adults. Based on the results, preliminary tools were developed, e.g., an information brochure. Furthermore, we conducted 14 semi-structured interviews, 6 focus groups, a psychology students workshop, and 4 online meetings with experts in human-animal interaction, education, and animal interest organizations (e.g., a veterinarian). It resulted in the Toolkit with different instruments, e.g., information brochure, e-learning module, and infographic.

**Conclusion:** We successfully used the EBCD+ method to develop an extensive and practically applicable Toolkit to support caregivers and their pet-owning LTCH-clients. The PET@home Toolkit will be available via the University Knowledge network for Older adult care Nijmegen ([www.ukonnetwerk.nl](http://www.ukonnetwerk.nl)).

## P162: Ageism among Lebanese Healthcare Workers and Students

**Authors:** Rita Khoury, Sabine Allam, Alondra Barakat, Sara Moussa

**Objective:** Ageism, defined as stereotyping, prejudice, or discrimination against older people, is an emerging public health concern [1]. Ageist attitudes and behaviors in health care are found to negatively affect the physical and mental well-being of older individuals [2]. This study is the first to investigate ageism and its determinants in Lebanese healthcare settings.

**Methods:** We diffused an online survey including the Fraboni Scale for Ageism (FSA) [3] and other variables to nurses, physicians, nursing, and medical students at an urban university hospital in Lebanon. We obtained online consent from participants prior to filling the survey. The study was approved by the Institutional Review Board of St. Georges Hospital University Medical Center (IRB-REC/O/066-21/3321).

**Results:** We recruited 233 participants (47.2% medical students, 21.5% nurses, 20.6% physicians and 10.7% nursing students). Mean age was 29.2 (Standard Deviation—SD = 12) years. Almost two-thirds were female. Half the sample came from rural areas. Almost 60% currently live or have lived with an adult aged  $\geq 60$  years. The FSA total score ranged between 33 and 87 (mean 58.9; SD 10.2). The mean/SD scores were 22.6 (4.5), 17.2 (3.2) and 19.1 (4.3) for the antilocution, discrimination and avoidance subscales of the FSA respectively. There was a positive correlation between age and FSA total score ( $p=0.041$ ), in addition to discrimination and avoidance

subscores ( $p=0.0001$ ). Originating from rural areas was associated with significantly lower discrimination scores. Living or having lived with an older individual was associated with significantly lower overall ageism and discrimination scores. In addition, students (nursing and medical) were found to have lower ageist perceptions and attitudes compared to healthcare professionals (nurses and physicians). Table 1 shows the results of bivariate analyses performed. Regression analyses showed that only living or having lived with an older person remained significantly associated with lower ageism scores ( $p=0.036$ ) after accounting for other covariables.

**Conclusions:** Lower ageism was found among students compared to practicing nurses and physicians. Having lived with an older person was a protective factor against ageism. Specific anti-ageism interventions may need to be implemented to mitigate its impact in healthcare among students and practitioners.

Table 1: Bivariate analyses of FSA total score and subscores on covariates of interest

|  | FSA total score mean (SD) | p-value | Antilocution subscore mean (SD) | p-value | Discrimination subscore mean (SD) | p-value      | Avoidance subscore mean (SD) | p-value      |
|--|---------------------------|---------|---------------------------------|---------|-----------------------------------|--------------|------------------------------|--------------|
| <b>Gender</b>                              |                           | 0.38    |                                 | 0.39    |                                   | P=0.1        |                              | P=0.99       |
| Men (n=73)                                 | 57.98 (10.56)             |         | 22.2 (5.1)                      |         | 16.67 (3.26)                      |              | 19.1 (4.36)                  |              |
| Women (n=160)                              | 59.26 (10.09)             |         | 22.76 (4.2)                     |         | 17.39 (3.03)                      |              | 19.11 (4.33)                 |              |
| <b>Origin</b>                              |                           | 0.064   |                                 | 0.062   |                                   | <b>0.029</b> |                              | 0.38         |
| Capital and suburbs (n=117)                | 60.1 (10.2)               |         | 23.1 (4.5)                      |         | <b>17.6 (3.03)</b>                |              | 19.35 (4.38)                 |              |
| Rural Areas (n=116)                        | 57.6 (10.1)               |         | 22.04 (4.36)                    |         | <b>16.7 (3.15)</b>                |              | 18.85 (4.28)                 |              |
| <b>Residence</b>                           |                           | 0.9     |                                 | 0.49    |                                   | 0.42         |                              | 0.11         |
| Capital and suburbs (n=175)                | 58.8 (10.36)              |         | 22.71 (4.65)                    |         | 17.26 (3.1)                       |              | 18.85 (4.27)                 |              |
| Rural Areas (n=58)                         | 59 (9.9)                  |         | 22.24 (3.88)                    |         | 16.88 (3.15)                      |              | 19.88 (4.44)                 |              |
| <b>Healthcare professional group</b>       |                           | 0.05    |                                 | 0.2     |                                   | 0.25         |                              | <b>0.017</b> |
| Students (nursing/medical) n=135           | 57.76 (10.20)             |         | 22.27 (4.72)                    |         | 16.96 (3.26)                      |              | <b>18.53 (4.15)</b>          |              |
| Healthcare worker (nurses/physicians) n=98 | 60.37 (10.13)             |         | 23.03 (4.08)                    |         | 17.44 (2.89)                      |              | <b>19.9 (4.46)</b>           |              |
| <b>Exposed to adults • 60 years old</b>    |                           | 0.082   |                                 | 0.57    |                                   | <b>0.002</b> |                              | 0.18         |
| No (n=98)                                  | 60.2 (10.9)               |         | 22.8 (4.9)                      |         | <b>17.9 (3.3)</b>                 |              | 19.5 (4.3)                   |              |
| Yes (n=135)                                | 57.9 (9.6)                |         | 22.4 (4.1)                      |         | <b>16.6 (2.8)</b>                 |              | 18.8 (4.3)                   |              |

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## **P169: IMPROVING THE MENTAL HEALTH CARE NEEDS OF OLDER ADULTS IN NEPAL.**

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**Introduction:** Average life expectancy in Nepal has been increasing annually (1991: 54 y/o, current: 72 y/o). The growth rate of the elderly population is faster than that of the total population in Nepal.

**Objective:** With only one Geriatric Psychiatrist in Nepal, Dr. Nidesh Sapkota, who received fellowship training at Saint Louis University (SLU), there is a need to develop a Geriatric Mental Health Program, similar to the model created in India by Dr. George Grossberg.

Working with the Patan Academy of Health Sciences School of Medicine (PAHSSM) in Nepal, the objective is to develop added mental health resources for the aging population by teaching and integrating evaluative materials from our Geriatric Psychiatry clinic at SLU.

**Methods:** We received funding from Graduate Medical Education to spend 1-month at the PAHSSM with Dr. Sapkota in May 2023. The goal is to learn about Psychogeriatric issues in Nepal by observing faculty and trainees working with geriatric patients and assessing the country's unmet needs for this population. The framework of the pre-existing program will be updated with current science in Psychogeriatrics with the support of the Nepalese government and WHO.

The methodology includes training healthcare providers to use screening tools, developing educational programs, and mental health and aging conferences with educators, researchers, and physicians from around the world, as well as establishing an exchange program for residents in Nepal and SLU for Geriatric Psychiatry training.

**Results:** Results of this pilot grant will be shared at future IPA meetings.

**Conclusion:** This experience will lead to opportunities to assess mental health disorders influenced by cultural and social differences. This can give us a better understanding of the lack of mental health needs and how we can close the gap, primarily for low-middle income aging populations across the globe.

Increased understanding of cultural differences impacting mental illness amongst other ethnic communities specifically how various forms of dementia are experienced, viewed and treated can lead to more appropriate interventions.

This project will help initiate a Global Geriatric Mental Health program at SLU that can draw attention to the disparities of the burden of mental illness across the globe by providing access to care within/between countries.

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**Objective:** Although various clinical indicators of suicide have been recorded, the previous suicide attempt is meaningful as one of the most robust risk factors predicting subsequent suicide attempts but there are lacking in biomarkers for evaluating suicide attempts. This study aimed to analyze the correlation of changes in oxygenated hemoglobin concentration with lifetime suicide attempt during verbal fluency test.

**Method:** A total of 60 patients with major depressive disorder (MDD) were enrolled. Demographic, clinical, physical, and psychological evaluations were conducted. We evaluated the suicidal behaviors through MINI suicidality item. We indicated verbal fluency test to examine prefrontal activation during the cognitive execution while fNIRS was observed.

**Results:** 54 of enrolled patient with MDD (23 those with a lifetime history of suicide attempt; 31 those without a lifetime history of suicide attempt) are eligible for the subject. The patients were 35.19% of those with a lifetime history of suicide attempt. The values of the changes in oxygenated hemoglobin involving the entire regions of prefrontal cortex were smaller in those with a lifetime history of suicide attempt. The biggest difference is in right VMPFC, the mean score of those with a lifetime history of suicide attempt and those without a lifetime history of suicide attempt were 0.095(SD, 1.032) and 0.610(SD, 1.038) although the statistically non-significance. We discovered that a small value of changes in oxygenated hemoglobin was related to lifetime suicide attempt through multivariable logistic regression analysis. After adjusting for age, sex, years of education, and HAMD, there was a significant difference in the right VMPFC [OR = 0.491(95% CI=0.235~0.916), p = 0.036].

**Conclusions:** Study result indicated that the values of the changes in oxygenated hemoglobin were smaller in who attempted suicide before during cognitive execution. The adjusted regression analysis was presented significant result in right VMPFC. Therefore, the changes in oxygenated hemoglobin measured by fNIRS can be applied as a biomarker for suicidal behavior such as lifetime suicide attempt.

## **P187: A patient with early-onset Alzheimer's disease presenting with a unique form of Capgras syndrome**

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**Background:** Capgras syndrome is a delusion in which the patient believes that a particular individual has been replaced by an imposter. It is observed in patients with psychiatric disorders such as schizophrenia but also occurs in patients with a neurodegenerative disease including Lewy body disease and Alzheimer's disease. Here we report a patient with early-onset Alzheimer's disease who presented with a unique form of Capgras syndrome.

**Case presentation:** An early 60's right-handed woman with 12 years of education, visited our outpatient clinic for evaluation of her memory impairment. Neurological examination was not remarkable. A MMSE score was 25/30 and a neuropsychological examination indicated mild impairment of attention and episodic memory, and relatively preserved visuospatial function. Six months after the initial visit of our clinic, she started to claim that she met several imposters of her husband. She called each imposter in different name, described each as a slightly different appearance, and expressed different level of sense of familiarity. An additional examination of face recognition using photographs of her husband revealed that there was a difficult to recognize her husband especially viewed from the side of his face. In addition, she showed a difficulty in discriminating between two different unknown faces and in judging approximate age of face in photographs. Brain MRI showed no significant atrophy and IMP-SPECT showed an extensive hypoperfusion in the bilateral, right-side dominant temporal, parietal, and occipital lobes. Both FP-CIT SPECT and MIBG scintigraphy were negative. Florbetapir PET was positive. Thus, a diagnosis of early-onset Alzheimer's disease was made. Acetylcholinesterase inhibitors and antipsychotics were used to treat her Capgras syndrome, but the symptom lasted for more than a year.

**Discussion:** There are several possible factors that may induced patient's unique Capgras syndrome: (1) psychodynamic background- the patient and her husband had been in a long-term common-law relationship; (2) mild impairment in face recognition; (3) dysfunction of right hemisphere, which is known to be strongly related to Capgras syndrome. The combination of these factors may result in the occurrence of multiple imposters of her husband with different degrees of familiarity.

## **P189: TELEMATIC CONTROL OF BEHAVIORAL DISORDERS IN PATIENTS WITH DEMENTIA**

**Authors:** Tatiana Calderón Prieto, Mercedes Fernández, Estel Vall-Ilosera

**Objective:** We want to assess the use of a telematics tool against the ordinary follow-up in consultations in the control of Behavioral and Psychological Symptoms of Dementia (BPSD) in a group of patients with dementia.

**Methods:** A randomized prospective clinical study with two parallel intervention groups Unicentro of the Geriatrics service of the General Hospital of Hospitalet (CSI).

Two groups of patients/caregivers were compared: a control group (CG) that followed regular controls in the office and another telematic group (TG) that followed controls on the TECUIDE platform. The follow-up has been carried out for one year.

Data on age, gender, comorbidity, treatment received, analytical parameters, and functional, nutritional, and sensory status were collected, as well as the Reisberg GDS scale and the self-administered Cummings Neuropsychiatric Inventory (NPI).

**Results:** 72 CG patients. 76 TG patients. mean GDS of CG: was 4.5, and the mean GDS of TG: was 4.7. Total group baseline SPCD: Delusions: 48.6%, hallucinations: 43.8%, agitation/aggression: 46.6%, depression 66.4%, anxiety 5.7%, euphoria: 12.3%, apathy: 76%, disinhibition: 39%, irritability: 57.5%, abnormal motor behavior: 43.2%, sleep disorder, 37%, eating disorder: 46.6%.

Mean NPI at the beginning of the study: GC: 5.3, TG: 6. Mean NPI at the end of the study: GC was 4.5 and GT was 4. That is, the average SPCD is higher in the TG than in the GC at the beginning of the study, while at the end of the study, the GC exceeds the TG.

When comparing the BPSD at the beginning and end of the study, a decrease is seen in all in general in the TG and an increase in hallucinations and sleep disturbances in the CG.

In the analysis of drugs, an increase in the consumption of neuroleptics in the CG was observed with a statistically significant difference ( $p$  0.039).

**Conclusion:** The TECUIDE telematic program is an effective tool for the control of patients with dementia, reducing BPSD and the consumption of drugs (neuroleptics, benzodiazepines, and antidepressants).

## **P197: Delirium in nursing homes (DeliA) - an interdisciplinary health services research project**

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**Background:** Delirium is a potential emergency with serious consequences. Little attention has been paid to residents of nursing homes, although they are at extreme risk for developing delirium. Health Care Professionals (HCPs) such as nurses and general practitioners are assumed to know little about delirium in nursing homes.

**Objectives:** The German project DeliA (delirium in nursing homes) comprises three sub- studies and two reviews. The sub-studies have the following objectives: (1) to determine the prevalence of delirium and its sub-types in German nursing homes; (2) to describe and assess the quality of delirium care practices (prevention, diagnosis, therapy) of HCPs in nursing homes; and (3) to develop a Technology Enhanced Learning (TEL) to increase the delirium- specific knowledge of HCPs in nursing homes. The reviews aim to (a) summarize the prevalence of

delirium reported in international studies and (b) to find out how, why and under what context education for HCPs in nursing homes works.

**Methods:** A systematic review of the reported prevalence of delirium in nursing homes will be conducted (a). The prevalence study (1) will assess delirium and its proposed associated factors in at least 50 nursing homes using validated measurements. Medication schedules of participating residents will be analyzed to determine potential for delirium. To describe current practice, process-oriented semi-structured guided interviews will be conducted with 30 representatives of the (nursing home) medical service and the nursing service of nursing homes (2). As a theoretical basis for the TEL, a realist review will be conducted to understand the active ingredients of educational interventions and to develop an initial program theory (b). The curriculum for the proposed TEL will be developed based on a synthesis of existing curricula and evaluated by Delphi experts for relevance, comprehensiveness, and content. A final feasibility study will assess the potential increase in knowledge about delirium among HCPs (n = 50) in nursing homes (3).

**Expected Results:** It is expected that the project and the dissemination of its findings will raise awareness among HCPs and the public about delirium in nursing homes. The developed TEL and its underlying program theory will be further tested.

## **P200: Association between sleep disturbance and subjective well-being among community- dwelling older people: a serial multiple mediation model**

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**Objective:** Sleep disturbance is negatively associated with subjective well-being in older people, but the potential underlying mechanisms of this association remain unclear. This study aimed to disentangle the pathways linking subjective versus objective sleep disturbance to subjective well-being through the serial mediation effect of loneliness and depression among community- dwelling older people.

**Methods:** This cross-sectional study was conducted in Sakai city of Japan. A total of 212 aged 65 and over participated in this study. The Athens Insomnia Scale, UCLA Loneliness Scale, Geriatric Depression Scale, and Self-perceived well-being were used to assess subjective sleep quality, loneliness, depression, and subjective well-being, respectively. A non-wearable actigraphy device was used to evaluate the objective sleep quality. Total sleep time, sleep latency, sleep efficiency, wake after sleep onset, number of awakenings, and average activity during sleep were recorded. Serial multiple mediation analysis was performed using SPSS PROCESS Version 4.1 macro. This study was approved by the Institutional Review Board of Osaka University.

**Results:** Subjective sleep disturbance was found to impact subjective well-being through three significant mediation pathways: (1) loneliness ( $B=-0.024$ , 95% CI= $-0.055$ ,  $-0.004$ ), which accounted for 25.72% of the total effect, (2) depression ( $B=-0.020$ , 95% CI= $-0.044$ ,  $-0.001$ ), which accounted for 20.94% of the total effect, and (3) loneliness and depression ( $B=-0.008$ , 95% CI= $-0.019$ ,  $-0.001$ ), accounting for 8.93% of the total effect. The total mediating effect was 55.58%. As for the objective sleep disturbance, the wake after sleep onset can indirectly impact subjective well-being through loneliness ( $B=0.005$ , 95% CI= $0.001$ ,  $0.010$ ), depression ( $B=-0.005$ , 95% CI= $0.011$ ,  $-0.001$ ), and both ( $B=0.002$ , 95% CI= $0.001$ ,  $0.004$ ); the number of awakenings can indirectly impact subjective well-being through loneliness ( $B=0.041$ , 95% CI= $0.012$ ,  $0.085$ ), depression ( $B=-0.034$ , 95% CI= $-0.076$ ,  $-0.002$ ), and both ( $B=0.018$ , 95% CI= $0.005$ ,  $0.036$ ); the average activity during sleep can also indirectly impact subjective well-being through loneliness ( $B=0.137$ , 95% CI= $0.034$ ,  $0.275$ ), depression ( $B=-0.128$ , 95% CI= $-0.282$ ,  $-0.010$ ), and both ( $B=0.055$ , 95% CI= $0.011$ ,  $0.118$ ).

**Conclusion:** These findings provided new insights into possible avenues for improving subjective well-being among older people through sleep-based interventions with a multi-faceted approach to mental health.

## P201: Effect of Virtual Reality-based Biofeedback in Highly Stressed People

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**Objective:** Virtual Reality (VR)-based Biofeedback (BF), a relatively new intervention, is rapidly increasing for the treatment of mood disorders. However, research on whether VR-based BF is more effective than traditional BF is still lacking.

**Methods:** A total of 131 adults from the community enrolled in the study. Participants scored  $\geq 10$  on Patient Health Questionnaire-9 (PHQ-9) or  $\geq 9$  on Panic Disorder Severity Scale (PDSS) were randomly assigned to VR or BF group. Those who have not met the criteria of PHQ-9 and PDSS were classified as the control group. All participants visited three times across 3 months and received either VR-based or conventional BF intervention. The control group received the same treatment as the VR group. Also, on each visit, the participants completed Montgomery-Asberg Depression Rating Scale (MADRS), State-Trait Anxiety Inventory (STAI), and Visual Analogue Scale (VAS).

**Results:** The analysis included 118 participants in total (VR: 40, BF: 38, Control: 40). There was no significant difference in demographic variables among the 3 groups. After the treatment, VR and BF groups exhibited significant decreases in MADRS, PHQ-9, STAI, and VAS compared to the baseline within each group ( $p < 0.005$ ). Importantly, compared to the BF group, the VR group showed a significantly greater decrease in STAI ( $p < 0.05$ ). Further analyses revealed that scores of MADRS, PHQ-9, STAI, and VAS also significantly decreased in highly stressed group compared to the control group.

**Conclusion:** Findings suggest that the application of VR-based BF was effective in reducing anxiety and depressive symptoms in highly stressed people. Compared to conventional BF, VR-based BF can be a cost-effective treatment option especially for relieving anxiety.

## **P207: Pilot testing of the Health and Social Care Professionals' Knowledge & Attitudes towards Later Life Sexuality (HSCP-KALLS) instrument**

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**Objective:** Due to a lack of validated assessment instruments, this study aimed to pilot test the newly developed *Health and Social Care Professionals' Knowledge & Attitudes Towards Later Life Sexuality (HSCP-KALLS)* instrument. The HSCP-KALLS instrument is designed to assess health and social care professionals' knowledge (46 items) and attitudes (40 items) towards later life sexuality including components related to dementia, sex worker services and Lesbian, Gay, Bisexual, Transgender, Intersex or Queer/Questioning (LGBTIQ+).

**Methods:** A group of health and social care professionals ( $n = 22$ ) and Healthcare-related educator ( $n = 2$ ) were invited to complete the HSCP-KALLS instrument. Feedback on items phrasing and the experience of completing the instrument was sought.

**Results:** Written feedback regarding either phrase of items or use of the instrument was not specifically addressed by participants. A high level of internal consistency was revealed for both the knowledge and attitude items ( $\alpha = 0.84$  &  $0.88$ , respectively). A decent level of knowledge ( $M=39.75$ ,  $SD=4.90$ ) and positive attitudes ( $M=161.04$ ,  $SD=13.50$ ) towards later life sexuality were demonstrated by participants. Participants had greater knowledge on items related to ageing, intimacy, and sexuality (95%), with a lower level of knowledge on items related to sexuality diversity (e.g., LGBTIQ+). Providing more trainings about later life sexuality was frequently addressed in the knowledge written feedback. Participants generally demonstrated positive attitudes towards later life sexuality. However, a high proportion of ambivalent responses were noted on some attitude items (e.g., A9 & A18) that participants indicated in written feedback that their responses would depend on circumstances.

**Conclusion:** Preliminary reliability and feasibility of using the HSCP-KALLS instrument has been encouraging, with further testing in large samples now, required to robustly establish psychometric properties. Supporting later life sexuality is essential and the use of HSCP-KALLS instrument can inform and identify professional development needs of health and social care professionals to improve care provision for older people by supporting their expression of sexuality in healthcare settings.

## **P208: The activities of Initial- phase Intensive Support Team for Dementia (IPIST) in Japan**

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**Objective:** The Intensive Initial Support Team for Dementia (IPIST) is a multidisciplinary outreach team that provides intensive initial assessment and support for dementia in Japan, introduced based on the Memory Service in the UK. All municipalities are required to establish at least one team, which consists of at least one physician and two professional staffs such as public health nurses and care workers. IPIST usually complete the work within approximately six months, including consultation with medical specialists and introduction of public supports. IPIST sometimes faces "complex case" that is difficult to manage. Because complex cases often have psychiatric problems, accessibility to psychiatric resources is important for IPIST. This study investigated the percentage of psychiatric professionals among IPIST members and the characteristics of complex cases they face.

**Methods:** Through all 1741 municipalities in Japan, a questionnaire was distributed to each IPIST regarding the complex cases they experienced during April-September 2020. The questionnaire asked for the characteristics of each IPIST (e.g., specialty of the team physician, availability of staff with psychiatric expertise, etc.) and which of the 12 categories each complex case fit into, allowing multiple choice.

**Results:** We could collect responses from 1291 IPISTs. 43.3% of IPISTs had a psychiatrist, 43.1% had an internal medicine physician, 13.4% had a neurologist, and 17.0% had some other physician as their team physician. In addition, 59.4% of the teams had medical staff members with psychiatric experience, including psychiatrists. A total of 7340 cases were reported as complex cases. While the most common category for difficulties in case management was "refusal of services" (19.5%), factors requiring psychiatric intervention such as "behavioral and psychological symptoms of dementia" (16.0%), "co-occurring mental illness" (7.3%), "complaints from neighbors" (7.1%), and "trash-house" (4.3%) were also frequently observed.

**Conclusion:** The survey revealed that many IPISTs already had psychiatrists and other professionals with clinical psychiatric experience, and that they managed a lot of complex cases with issues that would be the target of psychiatric intervention. We believe early psychiatric engagement is important in many complex cases in outreach support for community residents with suspected dementia.

## **P14: "Invisible hence inexistent?": Sexual violence in older adults**

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**Objective:** Although sexual violence (SV) is increasingly recognized as a major public health problem, older people are ignored in policies and practices on SV. Research on prevalence and impact of SV in older adults is limited and Belgian figures on the subject are non-existent. This mixed-methods study aimed to better understand the nature, magnitude and mental health impact of SV in older adults in Belgium.

**Methods:** We conducted face-to-face interviews through structured questionnaires with 513 older adults (70+) across Belgium and 100 old age psychiatry patients. Quantitative data were triangulated with qualitative data from 15 in-depth interviews with older SV victims.

**Results:** Over 44% of Belgian older adults and 57% of old age psychiatry patients experienced SV during their lifetime, 8% and 7% respectively in the past 12-months. Lifetime exposure to SV was associated with depression ( $p=0.001$ ), anxiety ( $p=0.001$ ) and PTSD in older adults with chronic disease/disability ( $p=0.002$ ) or lower education level ( $p<0.001$ ). A minority of victims (40%) disclosed their experiences to their informal network and 4% sought professional help. Older victims are willing to share their experiences, but ask health care workers to initiate the conversation.

**Conclusions:** This study highlights the importance of recognizing older adults as a risk group for SV and the need for tailored care for older victims. Health care professionals working with older adults need to be qualitatively trained to initiate a conversation around SV and its mental health impact in old age through training, screening tools and care procedures.

## **P18: Frailty and Long -COVID in a elderly population living with dementia:a observational study in a cohort of people with dementia in charge of Memory Clinic in Modena**

**Authors:** Barbara Manni, Sonia Braglia, Rossella Di Feo, Andrea Fabbo

**Background:** A significant number of patients with COVID-19 experience prolonged symptoms well known as Long-COVID that can occur between 3 to 24 weeks after acute phase. Most frequent symptoms expressed are fatigue, and cognitive dysfunction, but few studies have investigated the effect in outpatients 'elderly population. A recent Study followed hospitalized seniors for COVID-19; 22% complain "Brain Fog" one year later correlated with cognitive impairment. It is a challenge to recognize symptoms as "Brain Fog" or fatigue in a frail population affected by dementia (pwd) that yet experience cognitive impairment and disability. This observational study wants to evaluate the effect of COVID on clinical, cognitive, functional and frailty indices before infection and after in a sample of older pwd matching with control group in outpatients setting.

**Methods:** We collected 67 pwd and COVID infection between March 2020 and 2022 followed by Memory Clinic with pre and post geriatric assessment compared with 41 older people with dementia in control group without COVID-19. The geriatric assessment describes comorbidity (CIRS), cognitive performance (MMSE), functional assessment (IADL, ADL), psychological and behavioral symptoms (NPI) and frailty evaluation (CFS) at baseline T0 (within 6 months before COVID infections), at T1 (4-6 months after ) and T2 (12 months after). Death is recorded for both groups

**Results:** Both groups are similar for demographic and clinical characteristics at the baseline. We calculated Delta value T0-T1 and T1-T2 for clinical variables and compared case and control group. As compared to control group, COVID group showed significantly worsening in comorbidity in T1 and in disability (ADL) in T1 and T2, meanwhile challenging behavior improve during the time. Both in T1 and T2 COVID group develops in worst frailty compared to control group. None difference in mortality between groups. A possible information bias is that it is not possible to exclude presence of asymptomatic covid case in control group.

**Conclusion:** COVID infection in older pwd seems to chance and speed up the natural frailty curve in people with dementia. Is it an effect of a hidden Long COVID? The study open new hypothesis in neurodegenerative implication of prolonged neuroinflammation caused by COVID brain infection.

## **P24: Dementitude® - Applying the Model of "LAN" to Understand the Experience of People with Dementia**

**Authors:** Chi Man, Kenny Chui

Understanding the self-perception of people with dementia and their interaction with the surrounding others is highly vital to exploring the unmet needs of people with dementia. In preserving the personhood through the person-centred care approach, the synchronization with the experience of the person with dementia and listening to his/her voice of interpreting the surrounding things should be promoted. What is the meaning of the dialogues and the behavior of people with dementia? How can the "LAN" be applied to guide the care providers and the care partners in maintaining a good quality of care? In-depth interviews and participatory observations were conducted during interviews in the community care and residential care homes of Hong Kong. Following the theoretical framework blending interpretivism and the sociocultural perspective on dementia, the finding was not only being used for getting more familiar with the experience of people with dementia but also designing the content of educational programme to the care providers and the care partners in Hong Kong.

"LAN" model stands for "L-listening to the experience and voice of people with dementia; A-assess the condition of people with dementia through person-centred care approach; N-Needs of people with dementia to preserve personhood". As the care providers and the care partners are trying to synchronize the experience of people with dementia, the subjective views and feeling of people with dementia formed by their interpretation will be the key to respond their unmet needs. A particular educational programme was designed for the care providers and care partners. Focusing on the synchronization of the experience of people with dementia with LAN model, the participants got reflection and insights on this idea, which is similar to the "LAN" cable technology. The care providers and care partners found that just like a LAN cable to "plugin" from one device to another device so that the information could be synchronized. In satisfying the needs of people with dementia, the participant should learn from the lens and interpretation of people with dementia. A proper caring attitude with this "LAN" model, called as Dementitude®, was introduced. The evaluation of the educational training showed a significant improvement in the positive perception of dementia among the participants.



## **P25: Promote DemenTitude® - Cultural Adaption of Progressively Lowered Stress Threshold Model with Social Work Perspective in Hong Kong**

**Author:** Chi Man, Kenny Chui

Social work principles integrated with the Progressively Lowered Stress Threshold (PLST) model create new inspiration for understanding distressed behaviour among people with dementia in Hong Kong. Social work emphasizes the individuality and uniqueness of every human, whose experiences, perceptions and feelings should be respected. This research aimed to explore the self-perception of people with dementia and the interpretation of their surroundings to understand the rationale behind the distressed behaviour based on the PLST model. In-depth interviews and participatory observations during interviews in the residential care homes of Hong Kong were conducted. Following the theoretical framework blending interpretivism and the sociocultural perspective on dementia, the interpretation of data did not focus solely on what was expressed explicitly but also upon how the experiences, perceptions and interpretations of people with dementia had affected their self-perception and distressed behaviour.

Beyond the six principles of care from the traditional PLST model, the research finding in Hong Kong identified the new principles with the adaption of the local context. The seventh principle, known as DemenTitude®, got the review and approval by one of the original authors, Prof Kathleen Buckwalter, in understanding more distressed behaviour among people with dementia. The new principle involves four key elements as follows: (i) Understand the self-perception and subjective views of people with dementia to synchronize the feeling and impact of dementia; (ii) Avoid using words that stigmatize the person with dementia; (iii) Avoid excess disability and psychosocial restraint & (iv) Assist the person with dementia to create a comfortable relationship with their surroundings and to experience meaningful engagement. Truly listening to the voice of people with dementia and how to minimize different natures of distress with cultural sensitivity is essential to promote a good quality of dementia care in Hong Kong. With the updated finding from the local context and the voice of people with dementia beyond behavioural and psychological symptoms of dementia (BPSD), the paradigm shift should be advocated from the medical model to person-centred care and even further develop a proper caring attitude with the perspective of social work professions, called as DemenTitude®.

## **P32: Effects of vitamin D3 and marine omega-3 fatty acids supplementation on indicated and selective prevention of depression in older adults: results from the clinical center sub-cohort of the VITamin D and OmegA-3 Trial**

**Authors:** Chirag M. Vyas, David Mischoulon, Grace Chang, Nancy R. Cook, JoAnn E. Manson, Charles F. Reynolds III, Olivia I. Okereke

**Objective:** To test vitamin D3 and omega-3s for late-life depression prevention under the National Academy of Medicine framework for indicated (targeting subthreshold depression) and selective (targeting presence of high-risk factors) prevention.

**Methods:** VITamin D and OmegA-3 Trial (VITAL) is a 2x2 factorial trial of vitamin D3 (2000 IU/day) and/or omega-3s (1 g/day) for cardiovascular and cancer prevention (enrollment: November 2011-March 2014; end date: December 31, 2017). In this targeted prevention study, we included 720 VITAL clinical sub-cohort participants who completed neurobehavioral assessments at baseline and 2 years (91.9% retention). High-risk factors were: subthreshold or clinical anxiety, impaired activities of daily living, physical/functional limitation, medical comorbidity, cognitive impairment, caregiving burden, problem drinking, and low psychosocial support. Co-primary outcomes were: incident major depression (MDD), adjudicated using DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition); change in mood (Patient Health Questionnaire-9 [PHQ-9]). We used exact tests to determine treatment effects on MDD incidence and repeated measures models to determine treatment effects on PHQ-9.

**Results:** 11.1% had subthreshold depression, 60.8% had  $\geq 1$  high-risk factors, MDD incidence=4.7% (5.0% among completers), and mean PHQ-9 change=0.02 points. Among those with subthreshold depression, the MDD risk ratio (95% confidence intervals)=0.36 (0.06 to 1.28) for vitamin D3 and 0.85 (0.25 to 2.92) for omega-3s, compared to placebos; results were also null among those with  $\geq 1$  high-risk factors [vitamin D3 vs. placebo: 0.63 (0.25 to 1.53); omega-3s vs. placebo: 1.08 (0.46 to 2.71)]. There were no significant differences in PHQ-9 change comparing either supplement with placebo.

**Conclusion:** Neither vitamin D3 nor omega-3s showed benefits for indicated and selective prevention of late-life depression; statistical power was limited.

## **P34: How does active ageing policies and practice reconfigure cognitive impairment? Findings from an ethnographic study.**

**Author:** Christine Carter

**Objective:** Active ageing is the maintenance of positive subjective well-being, good physical, social and mental health in later life. It aligns with the 'successful ageing' narrative where obligation to undertake activities is deemed beneficial to health status (Swallow 2019). How this narrative plays out for people with mild cognitive impairment (MCI) which is not dementia has not been considered.

My PhD investigated experiences of people over 60 with MCI who engaged within an active ageing intervention. The APPLE-tree (AT) programme stands for Active Prevention in People at risk of dementia through Lifestyle, Behaviour change and Technology to build Resilience (Cooper et al 2019). It aims to facilitate active ageing in people who are limited by cognitive impairment. I explored how older people with memory impairments situate themselves within this active ageing health intervention and how policies and practices reconfigure MCI.

**Methods:** I adopted an ethnographic approach, undertaking participant observations and semi structured interviews with participants. I followed two 20 week programs, undertaking 65 field notes and conducting 16 interviews with participants. I used reflexive thematic analysis to analyse the results through Nvivo.

**Results:** Four themes with sub-themes were identified.

- **Arrival into the intervention – learning, listening, knowing, and doing active aging.** Participants navigated fears and uncertainties of MCI with their expectations of active ageing.
- **Being an individual in a group experience – retaining a sense of self whilst embracing the collective unknown.** Participants reconfigured their MCI through a tension between individual responsibility and a collective group experience.

- **Managing uncertainly and attempting to create certainty through navigating knowledge.** Active ageing changed how participants viewed and dealt with MCI with attempts to clarify knowledge of dementia risk.
- **Being an active ager; actively able to be active and participate in active ageing.** Individuals demonstrated engagement through sharing achievements, ability and inabilities.

**Conclusion:** Active ageing is a collective habitus, with absence of clear knowledge and direction creating a mismatch between rhetoric and lived experiences of people with MCI. Ultimately results inform the development of concepts in social gerontological theory and active ageing

### **P43: Hormone therapy and the decreased risk of dementia in women with depression: a population-based cohort study**

**Author:** Dahae Kim

**Background:** The literature has shown depression to be associated with an increased risk of dementia. In addition, hormone therapy can be a responsive treatment option for a certain type of depression. In this study, we examined the association between hormone therapy, including lifetime oral contraceptive (OC) use, and hormone replacement therapy (HRT) after menopause with the occurrence of dementia among female patients with depression.

**Methods:** The South Korean national claims data from January 1, 2005, to December 31, 2018, was used. Female subjects aged 40 years or older with depression were included in the analyses. Information on hormone therapy was identified from health examination data and followed up for the occurrence of dementia during the average follow-up period of 7.72 years.

**Results:** Among 209,588 subjects, 23,555 were diagnosed with Alzheimer's disease (AD) and 3023 with vascular dementia (VD). Lifetime OC usage was associated with a decreased risk of AD (OC use for < 1 year: HR, 0.92 [95% CI, 0.88–0.97]; OC use for ≥ 1 year: HR, 0.89 [95% CI, 0.84–0.94]), and HRT after menopause was associated with a decreased risk of AD (HRT for < 2 years: HR, 0.84 [95% CI, 0.79–0.89]; HRT for 2–5 years: HR, 0.80 [95% CI, 0.74–0.88]; and HRT for ≥ 5 years : HR, 0.78 [95% CI, 0.71–0.85]) and VD (HRT < 2 years: HR, 0.82 [95% CI, 0.71–0.96]; HRT for 2–5 years: HR, 0.81 [95% CI, 0.64–1.02]; and HRT for ≥ 5 years: HR, 0.61 [95% CI, 0.47–0.79]).

**Conclusions:** In this nationwide cohort study, lifetime OC use was associated with a decreased risk of AD, and HRT after menopause was associated with a decreased risk of AD and VD among female patients with depression. However, further studies are needed to establish causality.

### **P51: Correlation between skin conductance and anxiety in virtual reality**

**Authors:** Dongjun Kim<sup>1,5</sup>, Hyewon Kim<sup>2</sup>, Kiwon Kim<sup>3</sup>, Minji Kim<sup>4</sup>, Hong Jin Jeon<sup>1,5,6,7</sup>

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**Introduction:** Despite the advantages of Virtual Reality (VR), the increase in anxiety caused by motion sickness makes it difficult to apply to patients with depression and anxiety. We studied correlation between skin conductance and anxiety in VR.

**Methods:** We conducted a clinical study of 81 healthy volunteers with high stress, which was defined as a score of 20 or more on the Perceived Stress Scale-10 (PSS-10). We used STAI-X-1 to measure anxiety, and Galvanic Skin Response to measure skin conductance. This study used an open, randomized, crossover design. The videos consisted of two types, less dizzying video (G1) and more dizzying video (G3). We divided into two groups with exposure order, G1 after watching G3 (Order 1), and G3 after watching G1 (Order 2).

**Results:** Anxiety significantly decreased in the Order 2 group ( $p < 0.035$ ), whereas there was no significant change in anxiety in the Order 1 group. In both groups, skin conductance significantly increased after exposure to dizzying video. The skin conductance of the Order 1 group mean (SD) was 1.61 (1.07) ( $p < 0.0001$ ), and the Order 2 group was 0.92 (0.90) ( $p < 0.0001$ ). There was no significant difference between two groups ( $p = 0.077$ ).

**Conclusion:** It is possible to reduce skin conductance and anxiety by viewing less dizzying VR video first and then viewing more dizzying video later.

## **P52: Gardening for others as meaningful activity for people living with dementia**

**Authors:** Nancy A. Pachana, Kristen Tulloch, Theresa L. Scott, Tamara De Regtn, Nick Steiner

**Objective:** Time in nature is increasingly recognised as beneficial for people living with dementia, with research often focusing on the benefits of physical activity, proximity to natural environments and social interactions. However, limited research has investigated the role of purpose while gardening for people living with dementia. Purposeful activities are often lacking in programs for people living with dementia, who are sometimes excluded and have their capabilities underestimated, especially those with younger-onset dementia. Yet, these purposeful activities may be key to supporting people living with dementia to retain a sense of self-worth and connection to their communities.

This project documented participants' experiences of purposeful activity in the form of volunteering at a farm producing food for community members in need.

**Methods:** Individuals living with dementia participated in farming activities over several weeks to help grow food for people in need. During this time, participants completed 'walking interviews', discussing the tasks undertaken, their perspectives on these tasks, how these activities fitted in with their own ways of being, and how they felt spending time in nature. Walking interviews provide contextual and environmental cues that may facilitate emotional and sensory connection in a way that traditional interviews do not. Their shorter and more flexible time frame provides additional adaptability for people living with dementia.

**Results:** Walking interviews were audio-recorded, transcribed and thematically analysed. These analyses describe participants' experiences at the farm, related to purpose in life. These included participants' connection to times in their lives when they provided support, assistance or service to others, and their experience of engaging with the natural environment.

**Conclusion:** This research contributes to understanding of benefits of purpose-focused time in nature, including that it provides an opportunity for people living with dementia to connect with different points in their lives when they have held other forms of purpose. Tips on setting up such a safe, enjoyable, inclusive gardening project are provided. Additional research into meaningful engagement in natural settings is warranted for people living with dementia, especially when it involves activities with benefit to communities.

This project was supported by the Australian Association of Gerontology's Hal Kendig Research Development Program.

## **P59: Associations Between Smoking, Alcohol Consumption, Physical Activity and Depression in Middle-Aged Premenopausal and Postmenopausal Women**

**Authors:** Eunseo Heo<sup>1</sup>, Hyewon Kim<sup>1</sup>, Juhwan Yoo<sup>2</sup>, Kyungdo Han<sup>3</sup>, Maurizio Fava<sup>4</sup>, David Mischoulon<sup>4</sup>, Mi Jin Park<sup>5</sup>, Hong Jin Jeon<sup>5,6</sup>

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**Background:** Changes in lifestyle factors are known to affect mood. However, there is insufficient evidence supporting the association between smoking, alcohol consumption, physical activity and depression in middle-aged women who are likely to experience rapid hormonal changes.

**Methods:** We used a nationwide database of medical records in South Korea. 901,721 premenopausal and 943,710 postmenopausal women aged 40 years or older included in this study. Information on smoking, alcohol consumption, physical activity was identified from health examination data and followed up for the occurrence of depression using claims data.

**Results:** Compared with never-smokers, ex-smokers and current smokers among premenopausal and postmenopausal women showed an increased risk of depression in a dose-dependent manner (aHR 1.13 for ex-smokers; aHR 1.23 for current smokers). Compared with non-drinkers, mild drinkers showed a decreased risk of depression (aHR 0.98 for premenopausal women; aHR 0.95 for postmenopausal women), and heavy drinkers showed an increased risk of depression both among premenopausal (aHR 1.20) and postmenopausal women (aHR 1.05). The risk of depression due to smoking and heavy alcohol consumption was higher in premenopausal women than in postmenopausal women. Compared with those who had not engaged in regular physical activity, those who had engaged showed a decreased risk of depression both among premenopausal (aHR 0.96) and postmenopausal women (aHR 0.95).

**Conclusions:** Smoking and heavy alcohol consumption increased the risk of depression, and the increased risk was prominent in premenopausal than in postmenopausal women. Regular physical activity decreased the risk of depression both in premenopausal and postmenopausal women.

## **P61: The use of the errorless learning method in the rehabilitation of activities of daily living and instrumental activities of daily living**

**Authors:** MSc Gabriela Początek<sup>1</sup>, MSc Natalia Segiet<sup>2</sup>, Professor Aleksandra Klimkowicz-Mrowiec, MD, Ph.D.<sup>3</sup>, Professor Agnieszka Gorzkowska, MD, Ph.D.<sup>4</sup>

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**Objective:** The aim of this review was to describe the usage and effectiveness of errorless learning in activities of daily living (ADL) and instrumental activities of daily living (IADL) rehabilitation methods reported in the literature over the past 10 years.

**Methods:** Two databases were searched (PubMed, EMBASE) using the key words “errorless learning and ADL and IADL”. Articles published in the last 10 years in English were considered.

**Results:** 4 studies were identified that included 94 people with Alzheimer's disease (AD) and 129 people with stroke (104 with amnesia and 25 with ideational apraxia ).

One study on AD patients showed that it is possible for them to re-learn relevant IADL activities using the errorless learning (EL) and spaced retrieval (SR) techniques and to maintain these gains for at least 3 months ( $t = 2.811$ ;  $df = 22.246$ ;  $p = 0.010$ ).

In another study on AD patients, participants with AD had to re-learn three IADLs. All three learning methods (including EL) had similar efficiency ( $F(2,94)=21,99$ ). However, the intervention resulted in greater improvement in actual IADL task performance than in explicit knowledge.

In another study, structured ADL re-training in stroke survivors with amnesia significantly increased functional independence (MD: 4.90, SE=1.4, 95% confidence interval) and shortened time of hospitalisation (mean difference: 5.22, SE= 1.4, 95% CI: 1.8, 8.7).

The fourth study presented a model in which patients with post-stroke ideational apraxia attended tea making training sessions during which progress was monitored and feedback was provided via a computer system. A qualitative analysis of errors was conducted before training, and the most common errors observed were those related to kettlebell and continuous perseveration. After training, the frequency of errors decreased for all error types except for skipping a step.

**Conclusion:** The results of the studies discussed demonstrate the wide range of applications of error-free learning protocols in both AD patients and post-stroke patients. A clearly specified but flexible training protocol, together with information on error distribution, provide pointers for further refinement of task model approaches in ADL and IADL rehabilitation.

## **P63: Best Practice Guidance on Human Interaction with Technology in Dementia Update June 2023 – Recommendations from the INDUCT and DISTINCT Networks**

**Authors:** Rose-Marie Dröes<sup>1</sup>, Yvette Vermeer<sup>2</sup>, Sébastien Libert<sup>2</sup>, Gianna Kohl<sup>2</sup>, Sophie Gaber<sup>3</sup>, Sarah Wallcook<sup>3</sup>, Harleen Rai<sup>4</sup>, Aline Cavalcanti Barroso<sup>4</sup>, Esther Gerritzen<sup>4</sup>, Joeke van Santen<sup>1</sup>, Floriana Mangiaracina<sup>1</sup>, Kim Beentjes<sup>1</sup>, David Neal<sup>1</sup>, Josephine Tan<sup>1</sup>, Sara Bartels<sup>5</sup>, Hannah Christie<sup>5</sup>, Pascale Heins<sup>5</sup>, Golnaz Atefi<sup>5</sup>, Rose Miranda<sup>6</sup>, Annelien van Dael<sup>6</sup>, Fanny Monnet<sup>6</sup>, Kate Shiells<sup>7</sup>, Ángel C. Pinto Bruno<sup>8</sup>, Angie Alejandra Diaz<sup>9</sup>, Mauricio Molinari Ulate<sup>9</sup>, Aysan Mahmoudi Asl<sup>9</sup>, Simone Fielding<sup>10</sup>, Beliz Budak<sup>10</sup>, Viktoria Hoel<sup>11</sup>, Wei Qi Koh<sup>12</sup>, Jaroslav Cibulka<sup>13</sup>, Lieve Van den Block<sup>6</sup>, Lara Pivodic<sup>6</sup>, Dymna Casey<sup>12</sup>, Georgina Charlesworth<sup>2</sup>, Karin Dijkstra<sup>14</sup>, Teake Ettema<sup>1</sup>, Manuel Franco Martin<sup>9</sup>, Paul Higgs<sup>2</sup>, Iva Holmerova<sup>7</sup>, Camilla Malinowsky<sup>3</sup>, Orie McDermott<sup>4</sup>, Franka Meiland<sup>1</sup>, Louise Nygard<sup>3</sup>, Martina Roes<sup>10</sup>, Henriëtte van der Roest<sup>9</sup>, Justine Schneider<sup>4</sup>, Olga Stepankova<sup>13</sup>, Annemieke van Straten<sup>8</sup>, Elaine Toomey<sup>12</sup>, Frans Verhey<sup>5</sup>, Marjolein de Vugt<sup>5</sup>, Karin Wolf-Ostermann<sup>11</sup>, Martin Orrell<sup>4</sup>

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**Objective:** INDUCT (Interdisciplinary Network for Dementia Using Current Technology), and DISTINCT (Dementia Inter-sectorial strategy for training and innovation network for current technology) are two Marie Skłodowska-

Curie funded International Training Networks that aimed to develop a multi-disciplinary, inter-sectorial educational research framework for Europe to improve technology and care for people with dementia, and to provide the evidence to show how technology can improve the lives of people with dementia.

**Methods:** In INDUCT (2016-2020) 15 Early Stage Researchers worked on projects in the areas of Technology to support everyday life; technology to promote meaningful activities; and healthcare technology. In DISTINCT (2019-2023) 15 Early Stage Researchers worked on technology to promote Social health in three domains: fulfilling ones potential and obligations in society, managing one's own life, and participation in social and other meaningful activities.

Both networks adopted three transversal objectives: 1) To determine practical, cognitive and social factors needed to make technology more useable for people with dementia; 2) To evaluate the effectiveness of specific contemporary technology; 3) To trace facilitators and barriers for implementation of technology in dementia care.

**Results:** The main recommendations resulting from all research projects are integrated in a web-based digital Best Practice Guidance on Human Interaction with Technology in Dementia which was recently updated (Dec 2022 and June 2023) and will be presented at the congress. The recommendations are meant for different target groups, i.e. people in different stages of dementia, their (in)formal carers, policy makers, designers and researchers, who can easily find the recommendations relevant to them in the Best Practice Guidance by means of a digital selection tool.

**Conclusions:** The INDUCT/DISTINCT Best Practice Guidance informs on how to improve the development, usage, impact and implementation of technology for people with dementia in various technology areas. This Best Practice Guidance is the result of intensive collaborative partnership of INDUCT and DISTINCT with academic and non-academic partners as well as the involvement of representatives of the different target groups throughout the projects.

**Acknowledgements:** This research was carried out within the Marie Skłodowska-Curie International Training Network (ITN) action, H2020-MSCA-ITN-2015, grant agreement number 676265 (INDUCT) and H2020-MSCA-ITN-2018, grant agreement number 813196 (DISTINCT).

## **P65: Characteristics of refractory late-life depression in the prodromal phase of neurodegenerative diseases.**

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**Objective:** Depression is common in neurodegenerative diseases, and a psychiatric diagnosis of late-life depression (LLD) may be changed to neurodegenerative disease during the follow-up period. The aim of this study was to identify clinical characteristics of LLD that might be prodromal state of neurodegenerative diseases.

**Methods:** We conducted a retrospective chart review to collect data (registered between April 2012 and September 2022) from individuals who received electroconvulsive therapy (ECT) for their severe depressive episodes due to major depressive disorder (MDD) or bipolar disorder, were aged 60 years and older, and were



followed up more than one year. We compared clinical characteristics between individuals whose diagnosis changed from LLD to neurodegenerative disease (ND) and those whose diagnoses didn't change (non-ND). Between-group differences were examined using Mann-Whitney U test for continuous variables as well as  $\chi^2$  tests and Fisher's exact tests for categorical variables.

**Results:** In total, 99 patients (14 patients in ND and 85 patients in non-ND.) were included. All individuals in ND group were diagnosed with MDD. Individuals in ND group showed significantly older onset age, less family history of psychiatric disorders, and tended to show less melancholic features, less ineffective to antidepressants for the current episode. They required ECT because of the need for rapid recovery than non-ND.

**Conclusion:** Among individuals with late-life mood disorders requiring ECT for their severe depressive episodes which require rapid recovery, higher age of onset and no family history of psychiatric disorder may suggest the presence of neurodegenerative diseases.

## **P67: Digital Technologies to Prevent Social Isolation and Loneliness in Dementia: A Systematic Review**

**Authors:** Harleen Rai, David Kernaghan, Linda Schoonmade, Kieren J Egan, Anne Margriet Pot

**Background:** Dementia poses significant and sustained challenges to global society. Diagnosis can lead to increased feelings of loneliness and social isolation. People with dementia living alone are particularly at risk. Considering the growing number of technologies proposed to aid people with dementia address social isolation and loneliness, we reviewed the existing literature.

**Objective:** To collate and summarize current evidence for digital technologies to prevent social isolation and loneliness for people with dementia.

**Methods:** Following the PRISMA guidelines, we systematically searched five databases to identify studies of digital technologies designed to support or prevent social isolation or loneliness for people with dementia. Pre-specified outcomes included social isolation, loneliness, and quality of life. We used deductive thematic analysis to synthesize the major themes emerging from the studies.

**Results:** Ten studies met our inclusion criteria where all studies reported improvements in quality of life and seven reported benefits regarding social inclusion or a reduction in loneliness. Technologies were varied across purpose, delivery format, theoretical models, and levels of personalization. Two studies clearly described the involvement of people with dementia in the study design and five technologies were available outside the research context.

**Conclusion:** There is limited—but increasing—evidence that technologies hold potential to improve quality of life and reduce isolation/loneliness for people with dementia. Results presented are largely based in small-scale research studies. Involvement of people with dementia was limited and few research concepts are reaching implementation. Closer collaboration with people with dementia to provide affordable, inclusive, and person-centered solutions is urgently required.

## **P70: Development and validation study of the suicide screening questionnaire-observer rating (SSQ-OR)**

**Authors:** Chi H(1), Choi YH(1), Yook V(1), Yang K(1), Cho Y(1), Lee DH(2), Lee HJ(2), Lee DH(2), Jeon HJ(1)(3).

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**Background:** Observer rating scales are necessary to evaluate the risk of suicide because individuals at risk for suicide are often unwilling to seek help on their own. Reliability and validity were evaluated for the newly developed Suicide Screening Questionnaire-Observer Rating (SSQ-OR).

**Methods:** Preliminary items were assessed by 251 experts online and 25 questions were selected. 328 individuals at high-risk and 661 controls from 12 Crisis Response Centers and 5 university counseling centers were recruited to complete SSQ-OR, Beck Scale for Suicide Ideation (BSSI) and Patient Health Questionnaire-9 (PHQ-9). In a 6 months follow-up, we reached out to 176 participants to ask whether they had experienced a suicidal thought, plan, or attempt since the baseline assessment. Cronbach's  $\alpha$ , Mann-Whitney U test, Spearman's correlation, factor analyses, Receiver operating characteristic (ROC) analysis and logistic regression analysis were used to verify the SSQ-OR.

**Results:** Structural validity was supported by a two-factor solution using exploratory and confirmatory factor analyses. Excellent model fit indices for the two-factor structure using exploratory factor analysis were confirmed (RMSEA = 0.033, TLI = 0.980, CFI = 0.983). The SSQ-OR demonstrated strong internal consistency. The concurrent validity based on the correlations with other self-reported indicators of suicidal potential-BSSI and PHQ-9-revealed substantial relationships. The high-risk group was effectively characterized by a cut-off point of 4, with a sensitivity of 0.73 and a specificity of 0.79. The SSQ-OR scores were significant predictors of suicidal thoughts and behaviors within 6 months.

**Conclusions:** The SSQ-OR exhibits sound psychometric properties, and could be used as a complement to a self-report or clinical-administered scale to screen suicide risk comprehensively.

## **P73: Clinical Psychology of Ageing: The Italian Manifesto**

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**Objective:** By 2030, 1 in 6 people in the world will be aged 60 years or over (World Health Organization, 2022). This Manifesto is the result of the work undertaken by the Task Force of the Italian Association of Psychology working in the field of Clinical Psychology of Ageing. There is a general belief that older people do not benefit from psychological interventions, due to the prejudice that they may be less psychologically flexible or unable to change and/or improve their functioning. However, current evidence suggests that psychological interventions, including both more and less structured ones, are equally effective for older and working-age adults. Therefore, the aim of this Manifesto was to highlight the specific role of the Clinical Psychology in enabling older adults to overcome the multiple challenges associated with the ageing process and disease-related issues.

**Methods:** We reviewed existing empirical and conceptual literature on main issues in clinical work with older adults.

**Results:** We identified and thoroughly described areas of major interest, such as theoretical models on how we think, feel and act towards age and ageism; prevention of emotional distress and cognitive decline and promotion of older adults' psychological health in community; multidimensional assessment and evidence-based psychological interventions, also mediated by technology, for healthy older adults and those living with chronic disease such as dementia. Attention to psychological issues related to informal and formal caregiving, as well as the need for education, training and public engagement will be highlighted.

**Conclusion:** With a population living longer worldwide, it is essential to introduce and formalize initiatives to reduce health inequities and improve the lives of older people and their families. This should take place in communities able to foster the abilities of older people, while providing them with access to quality long-term care, if needed.

## **P74: Psychological interventions for young carers: A systematic review**

**Authors:** Ilaria Chirico\*, Valentina degli Esposti, Giovanni Ottoboni, Ylenia Druda, Rita Casapulla, Rabih Chattat

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**Objective:** In the last decades, the issue of caring for a sick parent at young age has received increased attention due to recent changes in society. The term "carer" (also known as caregiver) refers to anyone who carries out, on a regular and unpaid basis, significant caring tasks for a friend or family member who cannot cope alone because of an illness or other condition. Existing evidence suggests that young carers tend to have more mental health problems and more difficulties in behavioral, psychosocial, and academic adjustment than their peers without an ill parent. Since caring can be viewed as a natural extension of family relationships, young people often do not receive support from social policy, health and social services. Therefore, the aim of this review was to

systematically ascertain the literature on psychological interventions for young carers (aged 11-30 years), aimed to promote their mental health and well-being, thus mitigating the psychosocial impact of caring on their development.

**Methods:** A systematic literature search was performed in CINAHL, PsycINFO, PubMed and Scopus; in addition, reference lists from reviewed papers were used to identify additional relevant studies. A rigorous screening process was followed, and a checklist for qualitative and observational studies was used to assess the methodological quality of the studies. Narrative synthesis of the selected articles was carried out.

**Results:** Only 9 studies were included. Interventions had a different nature and mixed evidence on their efficacy emerged. Moreover, several methodological concerns limited study replicability.

**Conclusions:** Given the clinical relevance of this topic, it is important that these interventions and the new ones will undergo rigorous evaluation. Effective interventions for young carers may also lead to considerable savings in healthcare and societal costs.

## **P76: Agreement between nursing-home caregivers' observations of residents' depression, wellbeing, and quality of life**

**Authors:** Inge Knippenberg | Ruslan Leontjevas | Ine Declercq | Jacques van Lankveld | Patricia de Vriendt | Debby Gerritsen

**Objective.** In nursing home residents, outcomes are often assessed using proxies, especially in residents with severe cognitive problems. Although caregivers are commonly involved as proxies, studies assessing their agreement for proxy measures are scarce. Therefore, secondary analysis was performed on a dataset with proxy-reported scores of several scales in Dutch and Flemish nursing home residents with and without dementia.

**Methods.** To assess the agreement between the observations of 81 pairs of caregivers, we calculated Cohen's Kappa, Weighted Kappa, and Prevalence- and Bias-Adjusted Kappa (PABAK and PABAK- OS for ordinal data) coefficients for the items on the Nijmegen observer-rated depression scale for detection of depression in nursing home residents (NORD), the social wellbeing of nursing-home residents scale (SWON-3), and two subscales (i.e., "social relations" and "having something to do") of the QUALIDEM. In addition, coefficients were calculated for the item concerning subjective judgment of the residents' depressive symptoms ("no," "yes, mild or light," or "yes, severe") and for the item concerning whether the caregivers believed a depression diagnosis had been established ("yes," "no").

**Results.** In general, PABAK and PABAK-OS coefficients were higher than the Cohen's and Weighted Kappa coefficients, suggesting a considerable amount of prevalence or bias. For the total sample, most items were above .40, indicating acceptable agreement. The results showed higher levels of agreement for proxy scores of residents with lower levels of dementia, compared to residents with more severe dementia.

**Conclusion.** The general finding of different levels of agreement between coefficients with and without correction for prevalence and bias, suggest the importance of exploring both values to enable adequate interpretation of the reliability of these items. The result of limited levels of agreement between caregivers concerning residents with more severe dementia underscores challenges for measurements in this population. We believe that practitioners

and researchers should be aware of these challenges when using and interpreting scores derived from proxies. Moreover, understanding why different raters reach different conclusions regarding the same residents is important for interpreting the meaning of proxy-reported scores.

## **P81: Anticholinergic Burden of Patients Assessed by UK Memory Clinics: An Audit**

**Authors:** James Hotham, Muhammad Asghar, Aparna Prasanna

**Objective:** It is estimated that there are 55 million people living with dementias globally. With so few effective treatments available for dementias, it is vital that services optimise the management of risk factors for patients to slow their disease progression as much as possible. Commonly prescribed medications with anticholinergic effects can cause iatrogenic cognitive impairment and lead to faster decline in people living with dementia. United Kingdom (UK) national guidelines recommend minimising their use when assessing people with suspected dementia or during medication reviews of people with dementia. We proposed to audit how many people were being referred to memory assessment services in two UK locations with a significant anticholinergic burden, which medications were responsible, and whether this impacted on diagnosis.

**Methods:** We developed an audit tool based on national guidelines to gather data on the age, gender, medications, diagnosis and cognitive impairment of the first 50 patients assessed in the Memory Assessment Services in Wolverhampton and Walsall in 2022. We used the anticholinergic effect on cognition scale (AEC) to measure patients' anticholinergic burdens and identify the most frequently prescribed medications.

**Results:** We collected data from 30 patients from Wolverhampton and 20 patients from Walsall. Across the two locations, only 10% presented with a significant anticholinergic burden, with 24% having some anticholinergic burden that was not considered significant.

Every patient with a significant anticholinergic burden was later diagnosed with dementia.

Most of the anticholinergic medications that were prescribed are generally prescribed for psychiatric or neurological indications and the most frequently prescribed drug was amitriptyline.

**Conclusion:** The prescription of anticholinergic medications was not as prevalent as predicted in our sample. It may be that anticholinergic medication are less prescribed for physical illnesses as alternatives that do not cross the blood-brain barrier are available. Psychogeriatricians are well placed to review the anticholinergic medications that are commonly prescribed during the assessment of suspected dementia, due to their familiarity with these medications. In response to our findings, we plan to update our memory clinic assessment tools to highlight the need for clinicians to review patients' anticholinergic burden during assessment.

## **P87: A Case of Very-Late-Onset Obsessive Compulsive Disorder (OCD) comprising Religious and Somatic Obsessions... is the latter a distinct and overlooked phenotypic subtype of OCD?**

**Authors:** Joana Regala, João Reis

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**Background:** Very-late-onset obsessive-compulsive disorder (VLO-OCD) is rather rare. Although VLO-OCD should prompt a thorough workup, most cases do not evidence an underlying medical illness nor structural brain abnormality. A subset manifests somatic obsessions, bringing about diagnostic challenges.

**Objective:** Critical literature review based on a case study.

**Case presentation:** A 73-year-old male patient, was hospitalized for intrusive, repeated, distressing mental images and thoughts about hell, describing difficulty to disengage from these obsessions, alongside secondary mystical and ruin delusion-like ideas, modulated by the pathoplastic effect of core religious beliefs, and inflated sense of responsibility. He had previously experienced those intrusive mental images, yet not in a recurrent nor uncontrollable manner.

Preceding the OCD, he presented mild depressive symptoms triggered by financial hardships. After the emergence of OCD, depressive disorder aggravated, with psychomotor retardation, hopelessness, insomnia, anorexia. Obsessive hyperawareness of autonomic processes, distressing body-focused preoccupations raised by interoceptive stimuli, became noticeable, with overestimation of threatening consequences, day-long swallowing rituals/compulsions, avoidance of nutritional intake, general unease, and even panic. Yale-Brown Obsessive Compulsive Scale (*Y-BOCS*) scored 25. Ancillary tests were unremarkable. Transglutaminase antibodies were negative, ruling out gluten-sensitive enteropathy, hence tryptophan-serotonin metabolism impairment. Neuroimaging did not evidence structural disruption of cortico-striatal circuitry. Therapeutic regimen comprised sertraline 200 mg/day, augmented with mirtazapine 45 mg/day, aripiprazole 15 mg/day. Additionally, trazodone, buspirone and benzodiazepines were used to manage anxiety and insomnia. At the fourth week of treatment the anxiety burden driven by religious obsessions ameliorated. Meanwhile lamotrigine 100 mg/day and gabapentine 200 mg/day were added with further improvement (60% *Y-BOCS score reduction*, at seventh week).

**Discussion:** This case highlights the clinical relevance of the OC spectrum concept, wherein at the compulsive end are OCD-related disorders which feature high degrees of harm avoidance, intolerance to uncertainty, anticipatory anxiety, engagement in repetitive behaviors. We hypothesize that somatoform variant of OCD constitutes a distinct phenotypic subtype, stemming from a complex interplay of neurobiological substrates, psychosocial, and genetic factors, shared with hypochondriasis. This assumption might be addressed in future studies.

Furthermore, this case illustrates the fact that VLO-OCD might exhibit prodromic periods of subclinical OC symptoms before the manifestation of full-blown OCD.

## **P88: Individuals with Mild Cognitive Impairment (MCI) have poorer social networks than cognitively normal individuals from rural India**

**Authors:** Jonas S. Sundarakumar, Pooja Rai, Albert Stezin, Thomas G. Issac and SANSCOG Study Team Centre for Brain Research, Indian Institute of Science, Bangalore, India

**Introduction:** In recent years, the significance of robust social networking is being increasingly recognized due to its association with better cognitive performance. On the other hand, social isolation is linked to higher risk of developing dementia in mid-life and in older age groups. Only few studies have examined social networking in

individuals with Mild Cognitive Impairment (MCI). The lack of social connectedness could increase the chances of these individuals progressing to dementia.

**Methods:** We cross-sectionally assessed social networking among 122 subjects with MCI and 2403 cognitively healthy subjects, aged 45 years and above, from the Srinivaspura Aging, NeuroSenescence and COGNITION (SANS COG) study cohort in rural southern India. Cohen's Social Network Index (SNI) was used to assess social networking, wherein three dimensions are assessed: network diversity, number of people in social network, and number of embedded networks. The diagnosis of MCI was made using the Clinical Dementia Rating (CDR) instrument. This is an extensively validated 5-point scale, wherein six cognitive and functional domains are assessed: Memory, Orientation, Judgment & Problem Solving, Community Affairs, Home & Hobbies, and Personal Care. The overall CDR score of '0' was interpreted as cognitively normal and CDR score of '0.5' as MCI. The SNI dimension scores were compared between subjects with MCI and cognitively healthy subjects using t-test and a p-value of <0.05 was considered significant.

**Results:** The mean scores of all three SNI domains were significantly lower in MCI compared to cognitively healthy subjects: network diversity ( $5.30 \pm 1.54$  vs.  $5.94 \pm 1.60$ ,  $p < 0.001$ ), number of people in social network ( $18.4 \pm 8.61$  vs.  $20.3 \pm 8.87$ ,  $p = 0.023$ ), and number of embedded networks ( $1.80 \pm 1.26$  vs.  $2.03 \pm 1.14$ ,  $p = 0.038$ ).

**Conclusion:** Aging rural Indians with Mild Cognitive Impairment (MCI) have poorer social networks than their cognitively normal counterparts. Hence, social connectedness should be routinely evaluated in individuals with MCI and prompt social interventions should be instituted to enhance their social functioning. Social isolation may indeed be a contributory risk factor for developing cognitive impairment. However, causal relationships and reverse causality should be evaluated in further longitudinal studies.

## **P90: The indirect role of supportive dyadic coping in the association between self-perceptions of aging and depression**

**Authors:** Jose A. Fernandes-Pires, Andrés Losada-Baltar, María del Sequeros Pedroso-Chaparro, María Márquez-González, Isabel Cabrera, Laura García-García, and Guy Bodenman.

**Objective:** it has been shown that having negative-self perceptions of aging significantly predicts depressive symptomatology. Although the partner relationship may have an impact on the effects of perception of aging on distress, the number of studies assessing the effect of partner on negative self-perception of aging and mental health is limited. The stress of one partner may elicit dyadic coping (DC) responses in the other partner. The stress of one partner may elicit dyadic coping responses in the other partner. Depending on whether the responses are positive (supportive) or negative (hostile) a close relationship can go along with additional stress or resources and benefits. The present study analyzes the relationship between negative self-stereotypes and depressive symptomatology, considering the partner's dyadic coping as a moderator variable in this association.

**Method:** Participants were 365 individuals (59.3% women) 40 years or older ( $M = 60.86$ ,  $SD = 10.66$ ) involved in a marital/partner relationship. Participants completed a questionnaire that included the variables: negative self-perception of aging, positive DC (e.g., "My partner shows empathy and understanding to me"), negative DC (e.g., "When I am stressed, my partner tends to withdraw"), and depressive symptomatology. Two moderation models were tested by linear regression: the first considered positive DC and the second negative DC as a moderator in the relationship between negative self-perception of aging and depressive symptoms.

**Results:** The effect of negative self-perceptions of aging on depressive symptoms was smaller among those who perceived higher levels of positive DC and lower levels of negative DC by their partners than among those perceiving lower positive DC and higher negative DC. The influence of supportive dyadic coping was higher when the levels of negative self-perception of aging were higher. Gender was a determinant factor in the moderation.

**Conclusions:** Positive DC mitigates the negative effects of negative self-perception of aging on wellbeing (by the mechanism of moderation), while negative DC amplifies this association and goes along with lower well-being in persons who report negative self-perceptions of aging. Training couples in supportive dyadic coping may be a resource to buffer the negative effect of negative self-perceptions of aging on well-being.

## **P94: Co-design of a theory-based implementation plan for a digital holistic assessment and decision support framework for people with dementia in care homes**

**Authors:** Juliet Gillam, Catherine Evans, Nathan Davies

**Background:** Despite positive findings around the use of eHealth in dementia care, evidence for its efficacy is insufficient to ensure its adoption into routine care. Early involvement of end-users in the design of an implementation plan is a key strategy for promoting translation of findings into practice.

**Objective:** This study aimed to identify the requirements for use of an eHealth intervention to support assessment and decision making for use with people with dementia in care homes, and co-design strategies for its implementation.

**Methods:** A qualitative co-design method was applied through a series of workshops. Participants included family carers of people with dementia, and health and social care practitioners with direct experience of working with people with dementia. The workshops focused on identifying requirements for use and co-developing implementation strategies in response to factors identified to influence implementation. A deductive thematic analytic approach was taken, guided by the key concepts of the Normalisation Process Theory.

**Results:** Three workshops were conducted from July'21-November'21, attended by 39 participants. Three overarching phases of requirements were identified: 1) incentivising adoption of eHealth; 2) enabling operation of an eHealth intervention; 3) sustaining use of eHealth. Initial adoption requires promotion of the interventions benefits to engage stakeholders, and its alignment with national recommendations for good quality dementia care. Operationalising eHealth involves ensuring its compatibility with current care home processes and technology, provision of sufficient training and support from 'champions'. To sustain its use, ongoing monitoring of the implementation plan and provision of feedback to allow stakeholders to appraise its effects is required.

**Conclusions:** Implementing eHealth across a complex system of care homes is a multifaceted process. Using the key requirements identified in the workshops, we have developed a multi-strategy plan centered around three phases of implementation, to promote uptake of eHealth to support assessment and decision making for people with dementia in care homes. This is strengthened through collaborating with end-users to increase its value, credibility and real-world relevance. The theoretically informed strategies target mechanisms previously demonstrated to shape the implementation process and outcomes, ready for testing in care homes.



## **P103: Middle Cerebral Artery Stenosis is Associated with Severity of Depression in Elderly Patients: Magnetic Resonance Angiography (MRA) Findings**

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The material is original research, has not been previously published, and has not been submitted for publication elsewhere while under consideration. The data has not been previously presented orally or by poster at scientific meetings.

**Objective:** Vascular abnormalities have been frequently reported in elderly adults as a potential risk factor of late-life depression. However, it is still unclear whether stenosis of cerebral arteries may increase risk of depression in the elderly.

**Methods:** Study participants were 365 patients 65 years or older with depressive disorder who had undergone brain MRI and angiography (MRA) which were assessed by trained radiologists, and the 15-item Geriatric Depression Scale (GDS-15) and the Mini Mental State Examination (MMSE), and blood glucose and lipid profiles.

**Results:** Of the 365 subjects, 108 had at least one location of cerebral artery stenosis (29.59%). Stenosis was associated with age, marital status, infarction, and atherosclerosis. In multivariable linear regression analysis of different locations of stenosis among the whole sample, only bilateral middle cerebral artery (MCA) stenosis was found to have a significant association with higher GDS-15 score ( $p=0.0138$ ), and more than 8 scores in the GDS-15 ( $p=0.0045$ ), but no significant associations with ACA (anterior cerebral artery), PCA (posterior cerebral artery) or ICA (internal carotid artery). In multivariable linear logistic analysis of different locations among patients with at least one cerebral artery stenosis, left MCA was found to be significantly related to higher GDS-15 scores but not with right MCA ( $p=0.0202$ ).

**Conclusion:** MCA stenosis is significantly associated with severity of depression in elderly adults with cerebral artery stenosis, especially in those with left MCA stenosis.

**Key points**

- Patients with cerebral artery stenosis found with brain magnetic resonance angiography (MRA) were associated with higher depression severity.
- Stenosis of both left and right middle cerebral artery (MCA) was associated with greater depression severity, with left MCA stenosis having a greater influence on depression severity than right MCA stenosis.
- Higher depression severity in patients with MCA stenosis suggests that depression in elderly patients is mediated at least in part by vascular pathology of MCA supplied regions and careful investigation and management of cerebral artery stenosis and their risk factors may help reduce the severity of depression in elderly patients who visit psychiatrists.

## **P107: Paranoid Ideation Without Psychosis Is Associated With Depression, Anxiety, and Suicide Attempts in General Population**

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This study aimed to characterize the association between paranoid ideation without psychosis (PIP) and suicide attempts in a general population. A total of 12,532 adults were randomly selected as the study sample through one-person-per-household method. Subjects completed a face-to-face interview. Among 12,532 subjects, 471 (3.76%) met criteria for the PIP group. The PIP group was younger with more divorced/widowed/separated and lower income than the non-PIP group. The PIP group showed more than fivefold higher lifetime suicide attempt (LSA) rates and ninefold multiple attempt rates than the non-PIP group. Among PIP symptoms, "spouse was being unfaithful" showed the strongest association with LSA (adjusted odds ratio [AOR], 4.49; 95% confidence interval, 2.95-6.85). Major depressive disorder (MDD) in combination with PIP was associated with a higher risk of LSA (AOR, 15.39; 95% confidence interval, 9.63-24.59) compared with subjects without MDD or PIP. In conclusion, PIP, especially "doubting spouse," was significantly associated with LSA. PIP in combination with comorbid MDD showed higher risk of LSA than subjects without PIP or MDD.

## **P113: Psychosocial interventions for dementia grief- a systematic review**

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**Author Note:** This systematic review is currently under review at the European Psychologist since 22.05.2022. A revised manuscript was submitted on 18.01.23. We have no conflicts of interest to disclose.

**Objective:** Dementia grief can be described as a caregiver's anticipatory grief experience due to losses occurring before the care recipient's physical death. Among other things, these losses can include loss of memory, intimacy, communication, relationship resolution, and family identity. Psychosocial interventions have been developed to address and reduce these pre-loss grief reactions. The objective of this systematic review was to synthesize the evidence on existing dementia grief interventions for caregivers of persons with dementia (PwD).

**Methods:** Electronic databases Web of Science (SSCI), PsycArticles, Psychology and Behavioral Sciences Collection, PsycINFO, PSYINDEX Literature with PSYINDEX Tests and MEDLINE were searched from September 2016 to September 2021. The systematic review was carried out following PRISMA guidelines and it was registered to the PROSPERO database (CRD42021268998). All adult family or friend carers of older persons with dementia were included. All types and severity stages of dementia were included except studies about young onset dementia and dementia grief. Also, family carers could not be bereaved.

**Results:** The 12 included studies contained multifaceted interventions with heterogeneous formats. Eight studies had a quantitative, two a qualitative and two a mixed method design. Sample size ranged from two to 273 participants. Interventions included elements of psychoeducation, cognitive and emotional therapeutic strategies based on CBT, acceptance-based and mindfulness-based strategies. The interventions showed statistically significant small to moderate effects on dementia grief. In addition to the effects on dementia grief, the interventions also had a positive impact on mental health-related variables such as burden, depression, empowerment, and resilience.

**Conclusion:** There has been an increase in dementia grief interventions suggesting that dementia grief has been acknowledged as a valid and important construct to describe the dementia caregiver experience. It remains unclear whether health care providers know about and implement elements of the grief interventions in every day clinical encounters with dementia caregivers. Thus, future research should determine the practicing health care providers' knowledge about dementia grief and its available interventions. Furthermore, it should be examined whether the intervention effects are transferable to caregivers of patients with other terminal illnesses or degenerative disorders, or whether they must be modified.

## **P114: Experiences of nursing home residents with dementia and chronic pain using an interactive social robot: A qualitative study of multiple stakeholders**

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**Objective:** To explore the benefits and barriers of using an interactive robotic seal (PARO, Figure 1) based on the experiences of nursing home residents living with dementia and chronic pain, their family members, and formal caregivers.

**Methods:** Semi-structured interviews were conducted alongside a feasibility randomized controlled trial at one nursing home in Brisbane, Australia between July 2021 and January 2022 (Trial registration: ACTRN 12621000837820). Residents with dementia and chronic pain interacted with PARO individually for 15 min once or twice daily, five days per week for three consecutive weeks. After which, individual interviews were conducted with residents who were capable of communicating (n=13), family members (n=3), registered nurses (n=4), care assistants (n=11), a physical therapist (n=1), a diversional therapist (n=1) and the facility manager (n=1) who experienced or observed the residents' interactions with PARO. The interviews were audio-recorded, transcribed, and analyzed using thematic analysis.

**Results:** Almost all participants reported that interacting with PARO benefited residents with dementia and their caregivers. These benefits included (1) reducing pain by providing distraction and stimulation; (2) reducing behavioral and psychological symptoms of dementia; (3) promoting positive emotions by recalling memories; and (4) reducing anxiety and care burden for family and formal caregivers. Neutral attitudes toward PARO were reported by three residents with mild cognitive impairment as they reported it did not make any difference. Barriers to using PARO included limited staff training and the implementation of person-centered care due to limited resources.

**Conclusion:** Overall, multiple stakeholders were positive about using PARO to reduce pain and behavioral symptoms of nursing home residents living with dementia and chronic pain. PARO may also reduce the care burden of family and formal caregivers. PARO might be incorporated into daily practice to support nursing home residents living with dementia. Improving staff training and understanding individual preferences of residents may enhance the implementation of PARO in this population.

Figure 1: A resident living with dementia and her family after interacting with PARO  
(Distribution of this photo has been approved by the resident and her family)



## **P118: The Geriatric Psychiatry Fellowship Program in Mexico**

**Authors:** Moncayo-Samperio Luis, Velázquez-López Guillermo, Aguilar-Salas Ismael, Ugalde Hernández Oscar.

This program was established by Dr. Oscar Ugalde in the year 2000 at the National Institute of Psychiatry of Mexico and was supported by the National Autonomous University of Mexico.

Now starting its 23<sup>rd</sup> year, the 12-month program allows 1 to 4 national or foreign psychiatrist each academic year to develop clinical geriatric psychiatry practice knowledge, as well as academic and research skills to attend to the mental health of the aging population. It provides supervised clinical training in different settings: outpatient geriatric psychiatry clinic, cognition clinic, nursing home setting, geriatrics clinic and neurology clinic. The fellowship also provides the opportunity to learn about thanatology, research methodology, philosophy, spirituality, social work, neuropsychology, dementia, geriatrics, as well as legal, financial and legal issues related to the care of older adults.

The over 60 fellowship graduates from Bolivia, Colombia, Ecuador, Peru, and Mexico have established themselves as national and international leaders in the field of old age mental health.

The Geriatric Psychiatry Fellowship in Mexico is accredited by de National Autonomous University of Mexico and The National Institute of Psychiatry of Mexico Ramón de la Fuente Muniz at Mexico City is the primary training facility.

In this presentation, the assistant professor of the program, Dr. Luis Moncayo, will lay out an overview of the content, structure, and goal of The Geriatric Psychiatry Fellowship Program in Mexico.

## **P119: The Valladolid Multicenter Study: The Use of Benzodiazepines in the Elderly and Falls Reported By a Liaison Psychiatry Units**

**Authors:** M<sup>ª</sup> Desamparados D. Perez Lopez, Elena Alonso, Alejandro Compared Sanchez, Eduardo Delgado Parada, Miguel Alonso Sánchez, Leire Narvaiza Grau, Monica Prat Galbany, Andrea Santoro, Maria Iglesias Gonzalez, Cristina Pujol Riera, Eduardo Fuster Nacher

**Objective** The objective of this study is to describe the prevalence of benzodiazepine in a sample of patients ( $\geq 65$  years) attended by liaison psychiatry units (LPU) in Spain and its possible relation to falls.

**Methods:** This is an observational, cross-sectional, multicenter study. We obtained data from a sample of 165 patients ( $\geq 65$  years) admitted to 7 general hospitals in Spain referred from different departments to each liaison psychiatry unit. Data was collected for a month and a half period. Psychiatric evaluations were performed while the patients were on wards.

**Results:** We obtained a sample of 165 patients (78 women, 88 men) with a mean age of 76,03 years old (42.10%  $< 75$  years, 57,83%  $\geq 75$  years). Most of them were married and they lived accompanied (67,27%). Only 5,45% lived in a nursing home. 65,45% of patients had prescribed at least one psychotropic drug before LPU intervention; mainly (50,9%) benzodiazepines (60%women/40%men). 70,9% of these group of patients had more than one psychotropic drug prescribed before LPU. After LPU intervention in 39,39% at least one drug was withdrawn (in 50,81 % of cases benzodiazepines). Falls in the past 6 months were reported in 24.8% of total patients. Patients under benzodiazepine treatment had fallen in 29% of cases. After LPU intervention benzodiazepines were withdrawn in 56,25% % of them.

**Conclusions:** Benzodiazepines are widely used in our sample and frequently is associated with polypharmacy. LPU intervention might be a useful tool to reduce the use of them, specially for those who reported falls.

Longitudinal studies might be carried out to study these factors and their possible relationship with falls, given that Benzodiazepines are consistently associated with a higher risk of falls. It is unclear whether specific subgroups such as short-acting benzodiazepines and selective serotonin reuptake inhibitors are safer in terms of fall risk. Ppropriate prescription of medications such as BZDs is an important public health issue.

## **P121: Efficacy of adjunctive therapy of zonisamide versus increased dose of levodopa for motor symptom in DLB parkinsonism: a randomized, controlled, non-inferiority study, DUEL Study.**

## **P122: Differences of the treatment needs of patients with dementia with Lewy bodies and their caregivers with duration after diagnosis**

**Author:** Manabu Ikeda<sup>1)</sup>, Mamoru Hashimoto<sup>1),2)</sup>, Yuta Manabe<sup>3)</sup>, Hajime Yamakage<sup>4)</sup>, Shunji Toya<sup>5)</sup>

### **Institution**

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**Objective;** We have reported parkinsonism and psychiatric symptoms were the most important treatment needs of patients with dementia with Lewy bodies (DLB) and their caregivers, respectively <sup>1)</sup>. However, the frequency presenting clinical symptoms and the onset time vary among patients. We investigated the impact of the disease duration on clinical symptoms, prescribed medication and treatment needs of patients and their caregivers.

**Methods;** Disease duration was defined as time after diagnosis with DLB. Patient-caregiver pairs were classified into two groups; one with a disease duration <24 months (S-group) and the other with a disease duration ≥24 months (L-group). Comparisons were made between two groups regarding background characteristics and treatment needs of patients and caregivers. Treatment needs were defined as symptom domains most distressing to patients and caregivers.

**Results;** S-group and L-group were consisted of 126 and 137 pairs of patients and their caregivers, respectively. Regarding patients' current symptoms, parkinsonism and autonomic dysfunction were significantly higher in L-group than S-group. MDS-UPDRS Part III total score and the frequency of prescription for memantine and antiparkinsonian were also significantly higher in L-group than in S-group. The treatment needs most frequently selected by patients was cognitive impairment (20.6%) followed by autonomic dysfunction (16.7%) and parkinsonism (11.9%) in S-group, and parkinsonism (24.6%), followed by cognitive impairment and autonomic dysfunction (11.1% each) in L-group, suggesting no significant difference in the tendency of symptom domains to desire treatment between groups (P=0.056). However, residual analysis showed that patients in S-group were more likely to select cognitive impairment than in L-group (P=0.045), and those in L-group were more likely to select parkinsonism than in S-group (P=0.003). The treatment needs most frequently selected by caregivers in S-group was cognitive impairment (29.4%) followed by psychiatric symptoms (20.6%) and parkinsonism (10.3%) in S-group, and psychiatric symptoms (24.6%), followed by parkinsonism (16.7%) and cognitive impairment (14.3%) in L-group, suggesting significant difference in the tendency of patients' symptom domains to desire treatment between groups (P=0.032). Data from the onset will be added at the poster presentation.

**Conclusion;** It was suggested that the treatment needs of patients and their caregivers might change with duration after diagnosis.

**Symptom domains that cause patients the most distress**

| Symptom domain                   | S-group<br>(n = 126) | L-group<br>(n = 137) | Comparative<br>analysis<br>(P-value) | Residual<br>analysis<br>(P-value) |
|----------------------------------|----------------------|----------------------|--------------------------------------|-----------------------------------|
| Cognitive impairment             | 26 (20.6)            | 14 (11.1)            | 0.056                                | 0.045                             |
| Parkinsonism                     | 15 (11.9)            | 31 (24.6)            |                                      | 0.003                             |
| Psychiatric symptoms             | 9 (7.1)              | 10 (7.9)             |                                      | 0.718                             |
| Eating behavior-related problems | 3 (2.4)              | 2 (1.6)              |                                      | 0.691                             |
| Sleep-related disorder           | 8 (6.3)              | 7 (5.6)              |                                      | 0.865                             |
| Autonomic dysfunction            | 21 (16.7)            | 14 (11.1)            |                                      | 0.241                             |
| Sensory disorder                 | 0 (0.0)              | 0 (0.0)              |                                      | N.C.                              |
| Invalid answer                   | 44 (34.9)            | 59 (46.8)            | -                                    | -                                 |

Chi-square test

**Symptom domains that cause caregivers the most distress**

| Symptoms domain                  | S-group<br>(n = 126) | L-group<br>(n = 137) | Comparative<br>analysis<br>(P-value) | Residual<br>analysis<br>(P-value) |
|----------------------------------|----------------------|----------------------|--------------------------------------|-----------------------------------|
| Cognitive impairment             | 37 (29.4)            | 18 (14.3)            | 0.032                                | 0.001                             |
| Parkinsonism                     | 13 (10.3)            | 21 (16.7)            |                                      | 0.157                             |
| Psychiatric symptoms             | 26 (20.6)            | 31 (24.6)            |                                      | 0.516                             |
| Eating behavior-related problems | 3 (2.4)              | 2 (1.6)              |                                      | 0.624                             |
| Sleep-related disorder           | 5 (4.0)              | 9 (7.1)              |                                      | 0.294                             |
| Autonomic dysfunction            | 6 (4.8)              | 12 (9.5)             |                                      | 0.157                             |
| Sensory disorder                 | 0 (0.0)              | 0 (0.0)              |                                      | N.C.                              |
| Invalid answer                   | 36 (28.6)            | 44 (34.9)            | -                                    | -                                 |

Chi-square test

## Reference

1) Hashimoto M, Manabe Y, Yamaguchi T, Toya S, Ikeda M. Treatment needs of dementia with Lewy bodies according to patients, caregivers, and physicians: a cross-sectional, observational, questionnaire-based study in Japan. *Alzheimer's Research & Therapy*. 2022; 14: 188.

## **P124: Side-rails as a measure of physical restraint. Perception of healthcare professionals belonging to Nursing Department. GERBAR study.**

**Authors:** Mar Riera-Pagespetit, Oscar Macho-Perez, Ana Gonzalez-de Luna, Cesar Galvez-Barron

**Objective:** The use of side-rails from the headboard to the foot of both sides of the bed (from now on “the rails”) is the most used tool to prevent falls in our hospital setting. However, its consideration as physical restraint in the different international consensus is not clear.

In the GERBAR study (NCT04861025), we intend to evaluate the perception of the rails as a measure of physical restraint, both by hospitalized users and by the health personnel who care for them. The trial is being performed at the Consorci Sanitari Alt Penedes-Garraf, CSAPG (Barcelona, Spain).

In this report we show partial results of the data obtained from the health personnel belonging to Nursing Department.

**Methods:** An online poll has been carried out through the intranet and corporate emails in the last two months of 2022. All the people who works as health personnel at the CSAPG (1652 people) have been invited to this poll.

**Results:** We obtained a total of 246 responses, of which 27 responses have been removed for not being completed correctly.



152 responses were made by health personnel attached to the Nursing Department: 72 auxiliary nursing personnel (15.38% of the total CSAPG professionals in this professional group) and 80 nurses (14.47%). Proportion of job seniority greater than two years was 74.34% (69.44% auxiliary personnel, 78.75% nurses).

91.67% have been women with a median age of 40.87 years.

46.40% of this sample does not considered the rails as physical restraints (50% auxiliary personnel and 41.25% nurses). When analyzing by job seniority, 48.72% of the professionals with <2 years of seniority does not consider the rails as a physical restraint (44.25% in those with >=2 years).

Professional group and job seniority were not significantly associated with perception of the rails as a physical restraint (chi-square 1.17, p 0.2793 for professional group and chi-square 0.23, p 0.6288 for job seniority).

**Conclusion:** An important proportion of health professional belonging to Nursing Department does not consider the rails as a physical restraint. This perception was not related to the professional group or job seniority.

## **P129: Buiding a telepsychiatry program for older people in rural Portugal**

**Authors:** Maria Mousinho, Vasco Nogueira, Marisa Constantino, Paula Colaço

The geriatric psychiatry team at the Local Health Unit of Baixo Alentejo (ULSBA) serves the largest district of Portugal, the district of Beja, covering 10,4% of Portugal area. Baixo Alentejo is predominantly rural and a relatively poor area, with a high percentage of older adults (28% of its population being over 65 years old), a declining population due to unremitting exodus, an underdeveloped public transportation system and insufficient health care assistance. Among the telemedicine programs developed in the last decades, care in nursing homes for the elderly has figured prominently. Many studies report decrease of costs and inconvenience resulting from patients having to travel to hospitals, and so to optimize, simplify and reduce costs of psychogeriatric care.

We report the planning and implementation of a telepsychiatry program adopted by a geriatric psychiatry team of a local mental health service, starting in 2023. Videoconference consultations were provided for 58 nursing homes, with an average of 10 patients per day. Most patients were initially evaluated at the hospital by a nurse and a psychiatrist, being all subsequent consultations made every three to six months. Most patients were female. The most frequent diagnosis was dementia due to Alzheimer disease. A clinical evaluation standardized sheet was sent prior to the consultation and the interview with the nurse had the purpose of completing those data that the psychiatrist considered necessary after reading the material sent. The presence of staff in the room with the patient not only helped carry out the interview, but it also allowed observation of how the patient interacted in a face-to-face situation.

Healthcare institutions all over the world are increasingly adopting telehealth services given their numerous benefits in enhancing access to care. This practice comes with several challenges, being the fact that a nurse or someone from the staff must be present in the teleconsultation one of the most significant ones, as staff is already overburdened. Innovations to overcome sensory deficits and collaboration with community services should be explored to improve its acceptance among the most vulnerable population. It is fundamental to assess cost-effectiveness and patient/caregivers satisfaction with the service.

## **P132: Efficacy of Vortioxetine in Major Depression in Terminal Cancer. About a Case**

**Authors:** Marlen N. Castillo Lorenzo, Montserrat Picazo Sánchez, Anna Serra Plana, Adriana Anglada Cabezas

**Introduction:** Major depression is one of the most widely recognized psychiatric disorders in cancer patients. In Spain, 16.49% of cancer patients develop a Major Depressive Disorder. It arises as a reaction to a traumatic experience influenced by events and environmental conditions and develops as a consequence, of an adverse event, whether single or recurring.

When depressive symptoms interfere with the proper functioning of cancer patients, antidepressants are the first line of treatment. We refer to Vortioxetine as the antidepressant of choice.

**Medical History:** We present a 68-year-old patient diagnosed with Prostate Neoplasm (Gleason Grade 6 STAGE IV Adenocarcinoma) with Bone and Pulmonary Metastasis, who was referred, to the PADES Service of CSS Bernat Jaume, for poor pain control at the L5-L7 lumbar spine level. (VAS 9/10), immobility and depression after his prognostic information and short-term expectations.

We want to assess the usefulness of Vortioxetine for depression in cancer terminal patients.

The diagnostic criteria for depressive disorder were evaluated according to the DSM-V(6) risk factors for depression in palliative patients. The Visual Analogue Scale for the evaluation of the pain (0 no pain and 10, unbearable pain). Previously used medications for pain control, and depression were assessed. It was decided to start treatment with Vortioxetine and assess the response.

**Treatment:** We started Vortioxetine 5 mg for a week and appetite improved, as well as VAS 5/10. After fifteen days, he was able to walk, and his insomnia and anxiety decreased. He remained stable with the prescribed medication until, due to complications secondary to his oncological pathology, he was admitted to The Palliative Care Unit to begin sedation.

**Conclusions:** In terminal cancer patients with depression, it would be advisable to use Vortioxetine to improve their quality of life in situation of last days.

## **P133: Impairment of Executive Functions in Dialysis Patients. Necessity of Evaluation Cognitive State in Advanced Chronic Kidney Disease**

**Authors:** Marlen N. Castillo Lorenzo, Montserrat Picazo Sánchez

**Introduction:** Cognitive impairment is common and underdiagnosed in patients in hemodialysis (HD) can be moderate and severe. About 38% of patients in Dialysis has serious deficits in executive function and this affects patients of all ages.

**Material and methods:** Based on the case of an 82-year-old patient in a HD program who enters from Nephrology to the Convalescence Unit for miscontrol of pain due to ganglion and liver recidivism after years of cystectomy by bladder neoplasia and having acute confusional syndrome (ACS) subsequently presented after treatment with morphine MST and Tramadol. We performed an integral geriatric evaluation that showed a

deterioration of the executive functions. Through medical literature we analyze this find of atypical pattern and its possible relationship to renal disease.

**Results:** BI 100/100. No known history of cognitive impairment. Despite optimal pain control with fentanyl patch, pregabalin, paracetamol, metamizol and dexamethasone, without new episodes of ACS, we saw high difficulties in comprehension time schedule, spatial location, bad understanding of medical treatment, etc. Neuropsychological study showed MMSE 24/30; SKT substest of immediate memory 1/12, null recognition without understanding the task. Memory Impairly Screen 5/8, Test clock 3/7. In summary there were deficits in executive functions such as complex attention, mental control, fluency and reasoning. Fluctuating memory abilities. Mild multiple cognitive impairment executive domain. Atypical Profile.

**Conclusions:** There is a strong correlation between the decrease in GF and the degree of cognitive impairment. This worsens with the Dialysis due to hemodynamic changes. It is essential to evaluate the cognitive situation in all patients with CKD. Being the most affected cognitive domain, the function executive, it can avoid in these patients the correct assesment of established medications and dietary restrictions that are so important in the control of potassium, phosphorus and liquids that cause greater complications and even more mortality.

## **P136: Human Rights and Quality Standards for Services in Dementia Care**

**Author:** Professor Martin Orrell

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People with dementia can experience violations of fundamental human rights and impeded access to healthcare. This work builds on the World Health Organization's good practice guidance on community mental health services by investigating the range of dementia services around the world and national/international clinical guidelines, and the views of experts regarding the use of the United Nations Convention on the Rights of People with Disabilities (CRPD) principles as quality standards for human rights-based care. Two scoping reviews of database and grey literature resources summarized the range of services, and clinical guidelines using content analysis. A single-round Delphi e-consultation with dementia experts was designed to evaluate each CRPD principle and collect feedback on their views about the applicability of the CRD principles.

Services in 31 countries were clustered in 7 categories: Supports and Services for families, Community centres, Community health and social outreach support, Crisis Services, Community health services, Networks of Services, Palliative/End-of-Life Care Services, and Supported living. National and international guidelines for quality practice were summarized for each service type. The CRPD principles were highly endorsed as quality standards, however as expected, given dominant practices in the field, several experts challenged the applicability of CRPD principles in relation to information disclosure, capacity assessment, stakeholders' involvement in decision making, respecting needs and preferences, holistic approaches in care practice, and protection of human rights against abuse, neglect and discrimination. These findings provide an overview of different services and clinical

recommendations for dementia care and lay the foundation for an international evaluation framework of quality practice. Future work will develop a concordant, human-rights based scheme for the evaluation of dementia services and use this to establish good practice guidance for dementia care using examples from across the globe.

## **P142: Dementia diagnosis: the potential onset of suicidal risk**

**Authors:** M. A. Pãõ-Trigo<sup>1</sup>, J. Sá Couto<sup>1</sup>, B. Luz<sup>1</sup>, M. Mota Oliveira<sup>1</sup>

<sup>1</sup>Centro Hospitalar Universitário do Algarve, Department of Psychiatry and Mental Health - Faro, Faro, Portugal.

**Objective:** Being diagnosed with dementia can be a hectic and critical period. While severe dementia may act as a shield when it comes to suicidal risk, mild and early dementia stages may still preserve cognitive functions to elaborate a suicidal plan. Having insight may lead to feelings of despair and sadness that patients find unbearable to deal with.

The aim of this article is to review the current literature regarding suicidal risk after a dementia diagnosis.

**Methods:** Review of the most recent literature regarding the risk of suicide among patients with a recent dementia diagnosis. The research was carried out through the PubMed and UptoDate databases, using the terms “dementia”, “diagnosis” and “suicidal risk”.

**Results:** Previous research showed inconclusive findings, with some authors suggesting a higher risk of an early suicide attempt in patients recently diagnosed with dementia, and others suggesting otherwise. Nowadays, the literature mainly reports that older adults with recent dementia diagnoses are at increased risk of endeavoring suicide. There is an important requirement to offer appropriate support to patients and their families, at the time, or as soon as possible, when a dementia diagnosis is made, to diminish the risk of suicide attempts in these patients.

**Conclusion:** Patients with recent diagnosis of dementia, or diagnosed at an earlier age, seem to have higher suicidal risk. The period immediately after diagnosis is when individuals need greater support, so these results demand for better assistance for those experiencing such intellectual decline.

## **P143: New therapies for Alzheimer’s dementia and its implications on healthcare system: are we ready?**

**Authors:** M. A. Pãõ-Trigo<sup>1</sup>, J. Sá Couto<sup>1</sup>, B. Luz<sup>1</sup>, M. Mota Oliveira<sup>1</sup>

<sup>1</sup>Centro Hospitalar Universitário do Algarve, Department of Psychiatry and Mental Health - Faro, Faro, Portugal.

**Objective:** The amyloid hypothesis suggests that errors in production, accumulation, or disposal of beta-amyloid are the primary causes of Alzheimer's disease (AD). Since this was hypothesized, there has been significant effort in developing treatments that prevent the build-up of amyloid beta (A $\beta$ ) plaques in the brain. A disease modifying therapy (DMT) changes the clinical progression of AD by interfering in its pathophysiological mechanisms.

The aim of this article is to review the current literature regarding the role of new DMTs for Alzheimer's dementia and assess the preparedness of health care systems to implement these treatment options.

**Methods:** Review of the most recent literature regarding the role of new DMTs for Alzheimer's dementia and the challenges faced by the health care system to implement these treatment options. The research was carried out through the PubMed and UptoDate databases, using the terms "amyloid hypothesis", "Alzheimer", "disease modifying treatments" and "dementia".

**Results:** Research has been focusing on developing monoclonal antibodies as potential DMTs that target A $\beta$ . Aducanumab, a human antibody, or immunotherapy, is the only disease-modifying medication currently approved to treat AD. It targets the A $\beta$  protein and helps to reduce amyloid plaques and is currently the only FDA approved medication to slow the progression of AD. Lecanemab, a humanized IgG1 monoclonal antibody, binds to A $\beta$  soluble protofibrils with high affinity. Even though there is considerable optimism about its potential, lecanemab will probably be more useful to patients on early stages of the disease.

**Conclusion:** DMTs administration obeys to certain needs such as a vacancy in Day Hospital for infusion and regular monitorization and for lumbar puncture. It demands a complex network involving general practitioner, neurologist, psychiatrist, psychologist, and social services. It also involves a genetic study and complementary diagnosis exams such as PET (Positron emission tomography) scans and MRIs (Magnetic resonance imaging), which are expensive. There is an emerging need to develop enhanced and safer treatments.

## **P145: Insights into the impact of relocations within nursing homes on residents: an interview study with stakeholders**

**Presenting author & affiliation:** Miranda C. Schreuder – Department of General Practice & Elderly Care Medicine, University of Groningen, University Medical Center Groningen, the Netherlands

**Co-authors & affiliations:** Elleke G.M. Landeweer (PhD<sup>1</sup>), Marieke Perry (MD-PhD<sup>2</sup>), Sytse U. Zuidema (MD-PhD<sup>1</sup>)

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2. Department of Primary and Community Care, Radboud university medical center, Donders Institute for Brain Cognition and Behaviour, Nijmegen, The Netherlands

**Objectives:** Elderly people who live in nursing homes can be faced with intramural relocations for various reasons, whether individual or per group. Because the impact of these intramural relocations on residents is unknown, our aim is to explore how relocations within nursing homes affect residents from different stakeholder-perspectives.

**Methods:** We performed semi-structured individual interviews and a focus group with various stakeholders of intramural relocations to collect a broad outlook on its practice based on diverse perspectives and lived experiences. The interviews and focus group were audio-recorded, transcribed verbatim and analyzed using responsive and thematic analysis.

**Results:** Seventeen interviews were held and one online focus group with six participants. In the interviews, participants mentioned various reasons for intramural relocations, such as outdated real estate for group

relocations or changing healthcare demand for individual relocations. Participants distinguished various levels of impact on residents on different moments in time (before, during and after the relocation). The impact varied from very positive (e.g. looking forward and excited) to very negative (e.g. stressful, traumatic, hard to understand). Aspects that influenced the impact of relocation were related to 1) the mental resilience of residents, 2) how relocations were organized, 3) the presence and quality of social connections of residents and 4) if benefits of the new (care) environment were experienced. The focus group added insights on the importance of clear and timely communication with residents and recognizability of (personal) items and personnel from the former nursing home to reduce negative experiences of residents relocating within nursing homes.

**Conclusions:** The impact of relocations within nursing homes differs per situation, moment in time and resident. Aspects found that influence the impact provide targets to reduce the negative impact on residents: practices should focus on good preparation, clear communication, preserving social connections of residents where possible and paying attention to the benefits of the new (care) environment for the residents. Further research may focus on the lived experiences and perceived impact of relocations within nursing homes of residents themselves to develop in depth insights into tailored (care) needs of residents during the relocation process.

## **P155: Circadian Rhythms and Alzheimer's Disease**

**Authors:** Pedro M. M. Felgueiras, Luísa Santa Marinha, João Rodrigues, Raquel Ribeiro Silva

**Introduction:** Major neurocognitive disorder (or simply Dementia) is one of the main causes of disability and burden disease to caregivers and the health system, and a frequent cause of mortality worldwide. Alzheimer's disease (AD) is the most common type (60-70%).

AD is a progressive neurodegenerative disorder characterized by amyloid- $\beta$  ( $A\beta$ ) deposition, causing neuronal and synaptic loss with subsequent cognitive dysfunction.

There is cumulating evidence that sleep disturbances are associated with several pathological conditions, and AD is one of these. The prevalence and severity of sleep disorders is significant in AD patients, with sleep disturbances often precede its clinical diagnosis in many years. Some studies focus on possible mechanisms by which (abnormal) sleep participate in AD pathogenesis, and concluded individuals with sleep disturbances are at higher risk of developing dementia.

**Objectives:** To highlight the current evidence on whether sleep disorders could precipitate or accelerate the clinical course of AD.

**Methods:** Non-systematic review about sleep abnormalities and AD pathogenesis.

**Results:** Several authors described a two-way relationship between sleep and amyloid pathology - sleep deprivation would lead to increased production and decreased clearance of  $A\beta$ ; once  $A\beta$  is accumulated it results in more disrupted sleep, with an increase of  $A\beta$  production during wakefulness and a decrease of its clearance during sleep.

Recent data showed that sleep continuity and architecture (decreased total sleep time, slow-wave sleep, and REM sleep) are disturbed in AD patients.

Otherwise, sleep deprivation may be associated with decreased glymphatic system clearance, leading to accumulation of neurotoxic proteins, particularly A $\beta$  (and tau). It's also associated with proinflammatory states due to accumulation of reactive oxygen species, nucleotides and proteins during wakefulness, which leads to immune response that causes neuronal dysfunction and cellular death. Insomnia and sleep deprivation were also associated with activation of complement pathway and immunoglobulins secretion. Many studies suggest chronic sleep disruption changes blood–brain barrier structure and function leading to A $\beta$  accumulation.

**Conclusions:** There is emerging evidence that points sleep disturbances as both a potential marker for AD pathology and risk predictor of developing the disease. Future investigations should evaluate the relationship between specific sleep disorders and AD physiopathology.

## **P163: Closing the gap: Funded psychology in residential aged care in Australia.**

**Author:** Romy Engelbrecht

**Objective:** Historically, older adults in residential aged care facilities (RACF) in Australia had no access to government funded psychology services despite high rates of anxiety and depression. Change Futures is a registered charity that provides funded psychology to more than 220 RACFs in south-east Queensland and northern New South Wales, Australia, and since 2015 has been providing free psychology services to older adults living in aged care, using a predominately provisional psychologist workforce. This presentation will discuss the model of service that is provided, and the findings of a recent outcomes report.

**Method:** Data was collected via clinician entered eHealth records in the 2021/2022 financial year from 01/07/2021 to 30/06/2022. Outcome measures were analysed using six repeated measure t-tests to compare clinical change from first and last assessments.

**Results:** A total of 2865 residents were seen in 17,754 individual sessions and 298 group sessions. Staff education was provided in 94 sessions with 838 participants, who worked in RACFs. The most common presenting issue was difficulties with adjustment (70%), comorbid anxiety and depression (28%), depression (27%), loneliness (18%), and anxiety (17%). Outcomes of the psychology program showed statistically significant improvements on all measures, including the Kessler 5 psychological distress scale, Geriatric anxiety scale, Patient health Questionnaire-9, De Jong Gierveld Loneliness Scale, and Brief Adjustment Scale.

**Conclusion:** The described service model resulted in significant improvements to the psychological wellbeing of older adults, and represents an effective and sustainable training approach for provisional psychologists.

## **P164: Reminiscence therapy to reduce falls and weight loss: The protocol and outcomes of a pilot trial in residential aged care.**

**Authors:** Romy Engelbrecht

**Objective:** Falls is the leading cause of injury, and injury-related cognitive decline and death for older adults. Weight loss and malnutrition contribute to the risk of falls through increased frailty, visual and cognitive impairment, and predicts both the severity and recovery time of falls. Psychological and social factors such as isolation, loneliness, cognitive impairment, anxiety and depression are significantly associated with falls and weight loss for older adults. Reminiscence therapy is a psychological intervention that can improve anxiety, mood disorders, cognition and isolation; however, it is not yet known the impact that reminiscence therapy has on the incidence of falls and weight loss. This abstract will present the existing research on reminiscence therapy for the prevention of falls and weight loss, describe a group reminiscence therapy protocol to target these risk factors, and outline preliminary findings from a small pilot trial group therapy program conducted in February, 2023.

**Results:** Data on pre and post incidence of falls and weight loss collected from eHealth records for: 1) 3 months prior to the group, and 2) the 9-week duration of the group will be discussed. Group participants will complete a pre and post Depression Anxiety Stress Scale (DASS21) and provide feedback on the therapy protocol.

**Conclusion:** This presentation will discuss the suitability of a group reminiscence therapy protocol to reduce psychological and social risk factors associated with falls and weight loss for older adults in residential aged care.

## **P165: Music-assisted reminiscence therapy: The theory behind a new frontier for enhancing the wellbeing outcomes for older adults**

**Author:** Romy Engelbrecht, Sunil Singh Bhar, Joseph Ciorciari

**Objective:** Reminiscence therapy is an evidence-based treatment for late life depressive symptoms, and has been associated with improvements in cognitive function, loneliness, happiness, and wellbeing for older people. While music is often involved in reminiscence therapy, little is known about how music is used or works in this context. Specifically, we do not know what purpose music serves, or how it works to enhance the experience when combined with reminiscence therapy. This presentation will provide an overview of two studies exploring how music enhances reminiscence therapy.

**Method:** A narrative literature review was conducted with a structured search strategy to identify all relevant literature. Furthermore, a single-case repeated measures experimental EEG study with 4 older adults experiencing psychological distress was conducted. Participants were randomly assigned to a single session of either verbal reminiscence therapy or music-assisted reminiscence therapy. EEG recordings of resting states (e.g., eyes closed) were taken before and after the session, together with different epochs recorded during the session (e.g., during the start of reminiscence, the problem solving success, and music played). Analysis involved calculating the standardised LORETA (sLORETA) calculations to map regions and sources of EEG activity during these epochs.



**Results:** The SEED model proposed that music enhances reminiscence through: Summoning autobiographical memories, eliciting physiological responses, evoking emotional reactions and pleasure, and defining and describing self-identity and social connectedness. Findings of the EEG study suggested that for the individual participants, both verbal and music-assisted reminiscence therapy resulted in widespread and lateralised activation. These activations were stronger for music- assisted reminiscence than for verbal reminiscence, particularly in the central and frontal areas. Only participants who received music-assisted reminiscence demonstrated activation in areas associated with emotional regulation and meditation, providing preliminary evidence for the SEED model.

**Conclusion:** The two presented studies contribute to our understanding of the potential mechanisms for change when applying reminiscence and music-assisted reminiscence therapy interventions to improve wellbeing for older people.

### **P172: A preliminary study for potential protective role of anti-oxidative stress markers for cognitive impairment: glutathione and glutathione reductase.**

**Author:** Sang A Park

**Objective:** We aimed to study the relationship between glutathione (GSH), a key molecule of the anti-oxidant defense system in the blood, and glutathione reductase (GR), which reduces oxidized GSSG to GSH and maintains redox balance, with the prevalence of Alzheimer's dementia and cognitive decline.

**Methods:** 20 with normal cognition and 20 with Alzheimer's dementia who completed the 3rd f/u clinical evaluation over 6 years were selected by matching age and gender. Plasma glutathione (GSH) and glutathione reductase (GR) concentrations were independent variables. Clinical diagnosis and neurocognitive test scores were used as dependent variables indicating cognitive status.

**Results:** The higher the GR, the greater the possibility of normal cognition rather than Alzheimer's dementia. Also, the higher the GR, the higher the neurocognitive score. However, this association was not significant in GSH in any way. After 6 years, the conversion rate from normal cognition to cognitive impairment was significantly higher in the lower 50<sup>th</sup> percentile of the GR group than in the upper 50<sup>th</sup> percentile.

**Conclusion:** According to the result of this study, the higher the GR, the lower the prevalence of Alzheimer's dementia and incidence of cognitive impairment, and the higher the cognitive outcome. Therefore, GR can be regarded as a protective biomarker for Alzheimer's dementia and cognitive decline.

### **P179: Clinical characteristics and potential link to Parkinson's disease and dementia with Lewy bodies in patients with major depressive disorder who received maintenance ECT**

**Authors:** Shun Kudo, Takahito Uchida, Hana Nishida, Akihiro Takamiya, Toshiaki Kikuchi, Bun Yamagata, Masaru Mimura, Jinichi Hirano

**Introduction:** Maintaining remission after electroconvulsive therapy (ECT) is of clinical relevance in patients with depression, and maintenance ECT is introduced in patients who fail to maintain remission after ECT. However, the clinical characteristics and the biological background of patients who receive maintenance ECT are barely understood.

**Methods:** At Keio University Hospital, Patients with major depressive disorder according to DSM-IV who received ECT between January 2012 and March 2019 followed by maintenance ECT (mECT group) and those who did not (aECT group) were included. Clinical characteristics including the results of neuroimaging marker for Parkinson's disease and dementia with Lewy bodies were compared between groups.

**Results:** Thirteen and one hundred forty-six patients were included in mECT and aECT groups, respectively. Compared with aECT group, the age of onset and the age of the first ECT was older in mECT group. Besides, mECT group showed significantly higher prevalence of melancholic feature (92.3% vs. 27.4%,  $p < 0.001$ ) and catatonic feature (46.2% vs. 9.6%,  $p = 0.002$ ). The results of neuroimaging marker obtained in 123I-metaiodobenzylguanidine scintigraphy and dopamine transporter scan revealed that 5 of 13 patients and 16 of 146 patients showed Parkinson's disease and dementia with Lewy bodies in mECT and aECT groups, respectively.

**Conclusion:** Patients who underwent acute and maintenance ECT have impaired dopamine function. Investigating the neurobiology of patients who receiving maintenance ECT is an important area for development of appropriate treatment for depression.

## **P183: Online support and training for informal caregivers of people with dementia: usability and feasibility of iSupport for Dementia**

**Authors:** Soraia Teles <sup>1, 2</sup>, Constança Paúl <sup>1, 2</sup>

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<sup>2</sup> Center for Health Technology and Services Research (CINTESIS) at RISE (Health Research Network), R. Dr. Plácido da Costa, 4200-450 Porto, Portugal

**Introduction:** Internet-based interventions have been explored for their potential to minimize the negative outcomes of caring, accounting for their convenient delivery, ubiquity, potential scalability and presumed (cost) effectiveness. A new online training and support programme for dementia caregivers was recently created by the World Health Organization and culturally adapted to European-Portuguese. The programme (iSupport) was developed to prevent or minimize the negative psychological effects of providing informal care to a person with dementia and relies on problem-solving and cognitive behavioural therapy techniques.

**Objective:** To study the usability and feasibility of the European-Portuguese version of iSupport (iSupport-Portugal).

**Methods:** The usability study was aimed at collecting data on user satisfaction and requirements on the programme's contents and interface. A mixed-methods design consisted of focus groups discussion and usability test sessions with informal caregivers (N=17) and health/social support professionals (N=13). The pilot study followed a mixed-methods experimental parallel between-group design with two arms (iSupport, N=21 and e-book, N=21).

**Results:** The usability tests show a success rate superior to 80% in completing tasks within the platform and an excellent perception of the program's usability (M= 89.5 on the System Usability Scale). The feasibility study allowed to explore usage data for iSupport-Portugal (e.g., lessons visited, time on sessions) and explore how the intervention and control arms compare over time (baseline, 3 and 6 months after) on well-being outcomes. For a per-protocol analysis, significant group-by-time interaction effects favouring the intervention were found for anxiety (Wald  $\chi^2=6.17$ ,  $p=.046$ ) and for environmental QoL (Wald  $\chi^2=7.06$ ,  $p=.029$ ). Interviewees with the intervention arm (N=12) revealed positive impacts of iSupport on knowledge and on experiencing positive feelings.

**Conclusion:** The usability and feasibility studies of iSupport-Portugal suggest that this is a promising resource to support informal dementia caregivers. Lessons were learned on the ethical, technological, and research-related challenges for online interventions.

## **P190: Personality traits and the loneliness rate of decline in an eight-year period: comparison between ELSA and HRS.**

**Author:** Tamara Tapia-Munoz<sup>1 2 3</sup>

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**Objective:** to compare the relationship between personality traits and the loneliness rate of change between the UK and the US.

**Methods:** We used data from 7932 older adults 52 years and older from the English Longitudinal Study of Ageing (ELSA) and 7,979 older adults 50 years and older from the Health and Retirement Study (HRS). In ELSA, we considered wave 5 (2010/2011) as our baseline and wave 6 (2012/2013) to wave 9 (2018/2019) for loneliness follow-up. In HRS, we used wave 10 (2010) as baseline and wave 11 (2012) to wave 14 (2018) as follow-up. Loneliness was measured using the three-item R-UCLA, and personality traits were measured using the 25 items from MIDUS 1 and 2 Studies. We used the rate of change to analyse the changes in loneliness over time and multilevel mixed-effects linear regression to analyse the relationship between personality traits and loneliness rate of change. We adjusted the models by social isolation, sociodemographic, economic and health outcomes.

**Results:** ELSA and HRS participants were similar except for their age (67 years in ELSA and 73 in HRS) and ethnicity (98% white in ELSA and 79% white in HRS). Over eight years, we observed a decrease in loneliness in the participants of both cohorts. The overall rate of decline was -3.93 in ELSA and -2.38 in HRS. Among the ELSA participants, in the fully adjusted models, extroversion ( $\beta = 0.012$ , 95% CI: 0.004-0.021) and neuroticism ( $\beta = -0.010$ , 95% CI: -0.018-0.002) were the only personality traits associated with the loneliness rate of decline, while among the HRS participants, extroversion ( $\beta = 0.084$ , 95% CI: 0.070- 0.098), neuroticism ( $\beta = -0.095$ , 95% CI: -0.109-0.082), agreeableness ( $\beta = 0.055$ , 95% CI: 0.039-0.071), conscientiousness ( $\beta = 0.045$ , 95% CI: 0.029-0.061) and openness to experience ( $\beta = 0.031$ , 95% CI: 0.019-0.044) were associated with the loneliness rate of decline in the fully adjusted models.

**Conclusion:** There are important country differences in the relationship between personality traits and loneliness rate of decline. We hypothesised that in the absence of a social protection system and universal health care, the role of psychological factors might become even more relevant to predict loneliness. Cultural factors might also be playing a role.

## **P191: The effect of immersive reminiscence therapy on anxiety and depression in people with dementia: a pilot randomized controlled trial using virtual reality headsets**

**Authors:** Maria Soares <sup>1,\*</sup>, Tiago Coelho <sup>2,\*</sup>, Paula Portugal <sup>3</sup>

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**Objective:** This study aims to analyze the effect of reminiscence therapy using immersive virtual reality technology, in comparison with conventional reminiscence therapy, on anxiety and depressive symptoms of people with dementia.

**Methods:** This pilot study followed a randomized controlled trial design. A convenience sample of 16 people with dementia was randomly divided in experimental and control groups. Due to health-related factors, 2 participants abandoned the study before completing the intervention. Intervention consisted of 8 biweekly individual reminiscence sessions conducted by trained researchers, in which participants in the experimental group viewed 360° videos of locations with personal relevance considering their life narratives, using virtual reality headsets to promote an immersive experience. Intervention in the control group was similar, except the videos were displayed in a computer monitor. The assessment was carried out before and after the intervention, using the Geriatric Depression Scale (15 items) and the Generalized Anxiety Disorder scale (7 items).

**Results:** Intervention and control groups were compared regarding sociodemographic variables and level of dementia progression at baseline. No statistically significant differences were found. Regarding the comparison of anxiety and depressive symptoms pre- and post-intervention, a slight decrease was observed in both groups, although statistical significance was not reached ( $p > 0.05$ ).

**Conclusion:** The results of the present study do not illustrate an added value regarding the use of immersive stimuli with virtual reality technology, in reminiscence therapy programs with people with dementia. Further

research is warranted to better ascertain the cost effectiveness of using these technologies in the non-pharmacological treatment of people with dementia.

## **P192: The Unmet Needs of People with Mild to Moderate Dementia During COVID-19 Pandemic in East Jakarta**

**Author:** Tiur Sihombing

Department of Psychiatry in Duren Sawit Mental Hospital, Jakarta, Indonesia

**Background:** The number of elderly populations continues to increase as the advancement in healthcare grows, which is shown by the increase of life expectancy, the declining mortality rates, and the surge of people with dementia (PWD). This mental health issue is barely identifiable by health workers and the elderly themselves especially during COVID-19 pandemic. Therefore, it is important to evaluate and identify the unmet needs of people with dementia, especially mild to moderate dementia.

**Objective:** To describe the unmet needs of people with mild to moderate dementia during COVID-19 pandemic in 2021 in East Jakarta, Indonesia.

**Methods:** This study is using the CDR (Clinical Dementia Rating Scale) to assess severity level of Dementia, then using the CANE (Camberwell Assessment of Need for the Elderly) instrument to assess the unmet needs of people with mild to moderate dementia.

**Results:** 96 participants were assessed suffer from mild dementia (75%) and moderate dementia (25%). This study procured five substantial unmet needs proportion, which are friendship (26.0%), psychological distress (20.8%), close relationships (19.8%), memory dysfunction (16.7%), and daily activities (10.4%). During interviews in conducting unmet needs assessments, people with mild to moderate dementia and accompanying families expressed their desire for an activity that would be useful to overcome their unmet needs.

**Conclusion:** The COVID-19 pandemic for the people with mild to moderate dementia has an impact on friendships, psychological distress, memory dysfunction and daily activities so they need meaningful activities to overcome them.

## **P199: Cluster analysis dissecting cognitive deficits in older adults with major depressive disorder and the association between neurofilament light chain**

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**Objectives:** Cognitive impairment is a growing problem with increasing burden in ageing global population. Older adults with major depressive disorder (MDD) have higher risk of dementia during ageing. Neurofilament light chain (NfL) has been proven as a potential biomarker related to dementia. The present study aims to assess the cognitive deficits in older adults with MDD and investigate their association with peripheral blood levels of NfL.

**Design:** We enrolled 39 individuals with MDD and 15 individuals with mild neurocognitive disorder or major neurocognitive disorder, Alzheimer's type. Both groups were over age 65 and with restricted Mini-Mental State Examination (MMSE) score. Demographic data, clinical variables, and plasma NfL levels were obtained. We used cluster analysis according to their cognitive profile and estimated the correlation between plasma NfL levels and cognitive impairment in each domain.

**Result:** In the MDD group, participants have higher rate of family psychiatry history and higher rate of current alcohol use habit compared with patients with neurocognitive disorders. In the neurocognitive disorders group, participants showed significantly lower score in total MMSE and higher plasma NfL levels. Part of the MDD patients presented cognitive deficits similar to that of neurocognitive disorders (cluster A). In cluster A, the total MMSE score ( $r=-0.58277$ ,  $p=0.0287$ ) and the comprehension domain ( $r=-0.71717$ ,  $p=0.0039$ ) were negatively correlated to NfL levels after adjusting for age, while the associations had not been observed in the other cluster.

**Conclusion:** We noted the negative correlation between NfL levels and cognitive performance in MDD patients whose cognitive manifestation were more similar to that of degenerative neurocognitive disorders. NfL might be a potential marker to predict patients with MDD to develop cognitive decline especially in domains typically found in Alzheimer's disease. Further longitudinal studies are required to validate our findings for clinical implications.

## **P203: The temporal relationship between dementia and serious traffic accidents: a cohort study of linked national databases.**

**Authors:** Ying-Jyun Shih, Jiun-Yi Wang, Su-Yuan Chan, Yung-Jen Yang

**Objective:** The traffic issues have been attracting global attention due to increased occurrence and higher mortality rate in the older population. Many countries have employed different kinds of regulations on the elder drivers depending either on their age or whether being demented. These policy differences left a research gap to identify the temporal relationship between serious traffic accidents (STA) and dementias, which can inform the most appropriate time for policymaking. In the present study, we linked two national databases and performed analyses to explore this problem.

**Methods:** With the grant and supports from the government, the research team combined the databases of STA registries and the whole population dataset of National Health Insurance Research Database to form a 10-year retrospective cohort for analyses. We performed both retrospective and prospective directions to explore the time length between STAs and the diagnoses of dementia depending on the selection of the STA occurrences and dementia diagnoses as outcomes. In addition to descriptive statistical analyses, we also performed inferential statistics to analyse the variables between different types of STAs. A p-value less than 0.05 was set as statistically significant

**Results:** 437516 persons involved in STAs were enrolled for analyses and the mean age was 61.47 years (SD=8.90) with sex ratio (F/M) of 0.62. We divided the samples into three groups: (1) STAs without dementias (95.17%) (2) dementias after STAs (3.40%), and (3) dementias before STAs (1.43%). The mean age of the 3<sup>rd</sup> group (73.80 years, SD=8.79) was significantly older than the rest two. When comparing these three groups, a preceded dementia diagnosis was a significant risk factor for repeated STAs. (OR: 1.205, 95% CI: 1.100-1.320,  $p<0.001$ ) Finally, an average length of 2.35 years (SD: 1.60) was found for those who was diagnosed of dementias before the first STA while 2.57 years (SD: 1.69) was noted for the diagnosis of dementia after first STA.

**Conclusion:** In our study, dementia was identified as a significant risk factor for STAs. We further asserted that 2.5 years would be an appropriate time length for the authorities to examine the traffic risks of those who were diagnosed of dementias.

## **P204: Heart rate variability in patients with dementia or neurocognitive disorders: A systematic review and meta-analysis**

**Author:** Yingchih Cheng

**Objective:** Heart rate variability (HRV), a quantitative measure of mainly parasympathetic activity, has been applied in evaluating many types of psychiatric and neurological disorders, including dementia (or neurocognitive disorders). However, although dementia patients often showed significantly lower HRV (various indices) than healthy controls, and different types of dementia had distinct HRV features, the results were not identical across studies. We designed a systematic review and meta-analysis for incorporating data from different studies.

**Methods:** We gathered studies comparing HRV in patients with dementia and in healthy controls. HRV was analysed in several ways: parasympathetic function in hierarchical order (main analysis); total variability; comparison of HRV between different subtypes of dementia; specific indices of HRV; HRV reactivity.

**Results:** In initial search, we found 3425 relevant articles; 24 studies with a total of 1107 dementia patients and 1017 control participants finally entered the meta-analysis. The dementia patients had a significantly lower resting HRV for parasympathetic function (Hedges'  $g=-0.3596$ ,  $p=0.0002$ ) and total variability (Hedges'  $g=-0.3059$ ,  $p=0.0002$ ) than the controls. For diagnostic subgroup analysis relative to the controls, HRV was significantly lower in mild cognitive impairment (MCI) patients (Hedges'  $g=-0.3060$ ) and in patients with dementia with Lewy bodies (DLB) (Hedges'  $g=-1.4154$ ,  $p<0.0001$ ). Relative to patients with Alzheimer's disease, HRV in patients with DLB was significantly lower (Hedges'  $g=-1.5465$ ,  $p=0.0381$ ). Meta-regression revealed that gender proportion was significantly associated with effect size.

**Conclusion:** Our results support that dementia (especially DLB and MCI) patients to have lower parasympathetic activity than health people. The influence of gender on the results should be carefully interpreted.

## **P210: The impact of interventions on undergraduate healthcare student empathy towards older adults and people with dementia; a systematic review and meta-analysis.**

**Authors:** Yvonne Feeney, Stephanie Daley, Nicolas Farina, Sube Banerjee

**Background:** Empathy is a core characteristic expected from all healthcare professionals. Higher empathy is associated with reduced burnout, greater job satisfaction, and better patient outcomes. However, there are inequalities in care provided to older adults and people with dementia. Several reports have highlighted that, too often, care lacking in empathy is provided to older populations. The healthcare workforce needs to have the skills and attitudes to provide high-quality care that incorporates empathy. Therefore, appropriate education needs to be provided at undergraduate level to enhance empathy. To understand how empathy can be enhanced towards older adults and people with dementia, a systematic review and meta-analysis were completed.

**Objective:** The objectives of this systematic review and meta-analysis were:

- To identify what educational interventions were used to enhance empathy in healthcare students towards older adults and people with dementia,
- To identify what instruments were used to measure empathy change,
- To determine the efficacy of interventions on empathy.

**Methods:** A systematic literature search was completed in March 2021 using five electronic databases, grey literature, and snowball approaches. Studies were assessed by two independent reviewers using a pre-determined set of criteria. A narrative synthesis was completed, data was grouped and tabulated, and a random-effects meta-analysis was completed on eligible studies.

**Results:** Of 1,937 studies, 25 studies of moderate quality evaluated interventions that targeted empathy towards aging (n=20) and dementia (n=5). Three types of interventions were used: simulation, intergenerational contact, and mixed approaches, and most (84%) reported positive empathy change post-intervention. Empathy was measured most frequently using generic, self-administered instruments. Meta-analysis of studies (n=9) showed a small, but significant effect on empathy change; however, heterogeneity was high.

**Conclusion:** The evidence suggests that interventions can enhance empathy in undergraduate healthcare students towards older adults. However, few studies reviewed empathy towards dementia and the impact of interventions, therefore further research is needed.

## **P1: Dosing and treatment outcomes of rTMS for treatment-resistant depressed older adults in a naturalistic outpatient clinic population.**

**Authors:** Amanda Tan, Adriana Patricia, Rachel Hershenberg, Anthony Chatham, Eugenia Giampetruzzi, Valeriya Tsygankova, Gregory Job, Andrea Crowell, Patricia Riva Posse, William McDonald, Brandon Kitay

**Introduction:** Repetitive transcranial magnetic stimulation (rTMS) is an effective, safe, and well-tolerated option for treatment-resistant depression (TRD). The minimal medical and cognitive side effects are advantages of rTMS for all patients. However, the majority of rTMS studies in older adults are notable for underdosing rTMS relative to the corresponding FDA-protocol, as noted by recent international meta-analyses. This study utilizes the



standardized rTMS FDA protocol and compares the response rates between older adult and non-older adult patients in a TRD clinic in Atlanta, Georgia with depressive symptoms as the primary outcome and anxiety symptoms as the secondary outcome.

**Methods:** This retrospective chart review of patients who received rTMS between March 2017 to June 2022 used descriptive statistics to compare treatment parameters and dropout rates between older adult and non-older adult patients. A 2 x 3 repeated-measures analysis of variance (ANOVA) analyzed changes in self-reported depression and anxiety symptom severity throughout treatment course (baseline, treatment midpoint, and final treatment) between the two groups.

**Results:** Eighty-nine patients were included for analysis: Group 1: >55 years old ( $n=42$ ;  $M=66.48$ ,  $sd=6.16$ ; 71% female), and Group 2: <55 years old ( $n=47$ ;  $M=37.40$ ,  $sd=9.13$ ; 60% female). All patients received at least 3000 pulses per session, with 85.71% of patients completing the FDA protocol in Group 1 and 85.11% of patients completing in Group 2. A >50% improvement in depression scores at the end of treatment were seen in 38.1% of patients in Group 1 and 31.9% of patients in Group 2. Both groups demonstrated significant within-group reductions of depression throughout treatment ( $ps < .001$ ). A smaller subset of patients completed an anxiety questionnaire. Forty percent in Group 1 ( $n=24$ ) and 33.3% in Group 2 ( $n=25$ ) showed a >50% improvement in anxiety scores by end of treatment. Both groups demonstrated significant within-group reductions of anxiety throughout treatment ( $ps < .001$ ). The between groups' difference for change in depression and anxiety scores was not statistically significant.

**Conclusion:** With FDA protocol dosing, older and non-older patients have consistent response and tolerability. While overall response rates were slightly lower than reported standardized clinical trials, our real-world sample highlights the effectiveness of rTMS for patients, including adults over 55, treated in an unselected, naturalistic outpatient sample.

## **P2: A voxel- and source-based morphometry analysis of grey matter volume differences in Very-Late-Onset Schizophrenia-Like Psychosis**

### **P11: Psychosocial longitudinal correlates of mental and physical health of family caregivers of people with dementia**

**Authors:** Andrés Losada-Baltar, Rosa Romero-Moreno, María Márquez-González, Brent Mausbach, Ronald von Känel, Lucía Jiménez-Gonzalo, Cristina Huertas-Domingo, Samara Barrera-Caballero, José Fernandes-Pires, & Laura Garcia-García.

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There is a general consensus that providing care for a relative that has dementia is associated with negative outcomes for caregivers' mental health. There seem to be also associations with negative physical health outcomes, although the literature on this topic is more scarce. Most of the available research consist in studies with a cross-sectional design. Longitudinal studies focused on psychosocial correlates of mental and physical

health of the caregivers are lacking, mostly those analyzing the influence of factors such as behavioral and psychological symptoms of the dementia, caregivers' dysfunctional thoughts, and caregivers' ambivalent and guilt feelings. The aim of this presentation will be to describe the findings from the Madrid Caregivers Longitudinal Study, that consist in a two year follow-up of family caregivers of people with dementia. Several models will be described testing the longitudinal effect of psychosocial variables on caregivers' distress (depression and anxiety) and cardiovascular health (measured through biomarkers of inflammation). The practical implications of the findings will be discussed.

## **P13: Supporting physical health for mental health consumers, in a community setting**

**Author:** Anne Hoolahan, Clinical Nurse Consultant, Older Peoples Mental Health Service Northern Sydney Local Health District NSW, Australia

**Background:** Older people with mental illness are likely to have increased difficulty in accessing health services due to social isolation and functional disability. It is well reported that people with mental illness are also more likely to have chronic and complex medical needs, be frail and be socially isolated. They are two times more likely to have respiratory disease, have cardiovascular disease, have metabolic syndrome, have diabetes, six times more likely to have dental problems and more likely to die earlier than the general population.

**Objective:** The physical health program developed by the Northern Sydney Local Health District (NSLHD) community Older Peoples Mental Health Service (OPMHS) was part of a statewide project, facilitated by the Older People's Mental Health Policy Unit, Mental Health Branch, NSW Ministry of Health, where a variety of strategies were developed and implemented, to support the physical health of older mental health consumers using a biopsychosocial approach.

**Methods:** NSLHD focused on providing OPMHS clinicians with the opportunity and resources to support older people with mental illness with their physical health and wellbeing, in particular Cardiometabolic Health, both screening and supporting interventions to address abnormalities and proactively support healthy lifestyle strategies. In each of the three community services, the program was led by a senior clinician who supported their team clinicians to carry out physical health assessments and planning.

**Results:** The program commenced in July 2020, with the percentage of consumers of OPMHS who had regular metabolic monitoring completed, increasing from less than 10% to over 75%. Proactive person centred consideration and discussion including aspects of the consumers physical health and socialisation opportunities took place between clinicians, consumers and carers whilst their reviewing care in the community setting.

**Conclusion:** The improvements have been sustained through a variety of strategies, in particular, capacity building within the multidisciplinary teams and the provision of the necessary resources 2023 IPA International Congress\_Lisbon, Portugal Anne Hoolahan to carry out physical health monitoring and health promotion activities. Appropriate pathways were developed to escalate medical support recognised and sustain physical and psychological supports post discharge.

**Biography:** Anne Hoolahan is a clinical nurse consultant in the Northern Sydney Local Health District, Older Peoples Mental Health Service. Anne qualified as a registered nurse in Sydney in 1990. Anne has worked in a

variety of inpatient and community roles caring for older people before specialising in older people's mental health. Anne holds a DipTeach (Ed) | MEd (Adult) | GradDipApSc (Nursing) | GradDipHlthSc (Geront) | GradCertMHLth (Older People).

## **P16: Report on a Dementia Prevention Workshop Organized through Multidiscipline Intervention: An Examination of Intervention Approach through the Evaluation of Group Reminiscence Method and Mental Aspect**

**Authors:** Atsuko Tokushige, Kanji Watanabe, Tetsuhiko Sakata, Yasuko Fukuda, Naoto Otaki, Tomoko Ichinose, Keisuke Fukuo

**Objective:** This is a report of a workshop for local residents organized by university researchers in various fields with the aim to develop a dementia prevention method. The five academic fields involved in the project are Health & Sports, Psychology, Food Nutrition, Music, and Nursing.

**Methods:** Dementia Prevention Workshop took place once a week between October 2021 and July 2022 except for some intervals due to surges in Covid-19 infection cases. Dual task exercises were conducted at each session, followed by groupworks by researchers of Psychology, Nutrition, Music, and Nursing Science taking turns. Psychologists facilitated the understanding of assertion, nutritionists held lectures on food life designed for dementia prevention, musicians played instruments, and nurses intervened through the Group Reminiscence Method. The Nursing Science experts conducted evaluations at the beginning and the end of each session using SF-36 and CES-D and checked the participants' mood before and after the reminiscence session with Japanese UWIST mood adjective checklist (JUMACL).

**Results:** 16 participants took the measurement after the workshop, and their average age (SD) was 72.9 (5.5). In the overall evaluation, the participants' motor ability improved ( $p < .05$ ), and they retained cognitive functions. In SF-36, no statistically significant differences were observed before and after the classroom. Compared to the data from 2017, the scores in the social aspect were lower. In CES-D, the scores significantly worsened after the workshop, with some participants' scores exceeding 16 points, which is the depression cutoff point. In JUMACL, the Tense Arousal (TA) related to the arousal state and the Energetic Arousal (EA), which is supposedly related to intellectual activities, both improved after the session.

**Conclusion:** In a single evaluation before and after a group reminiscence session, the state of relaxed concentration with a suggested connection with intellectual activities, but the overall evaluation result throughout the workshop project suggested the need to reinforce the approach to the mental aspect because of some participants observed with decreased scores in the mental aspects with depressive tendency. We will establish an intervention plan by also incorporating the impact of Covid-19-related depression.

## **P19: Effects of a Post-diagnostic Support Programme on self-efficacy among persons with dementia and family members**

**Authors:** Kwok, T. C. Y.,<sup>1</sup> Chui, K. C. M.,<sup>1</sup> Ho, F. K. Y.,<sup>1</sup> Wong, B. P. S.,<sup>1</sup> Chan, H. Y. L.<sup>3</sup>

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**Background:** Persons newly diagnosed with dementia and their family member is imperative often experience uncertainty and inadequate support. This study aims to evaluate a post-diagnostic support programme guided by the 5 Pillars Model proposed by Alzheimer Scotland on the self-efficacy among persons with early dementia and their family members.

**Methods:** A prospective cohort study design was conducted between 2019 and 2022. Subject recruitment was conducted in four non-government organizations. A multi-domain empowerment programme, covering various aspects about dementia knowledge, management skills, peer support, future decision-making and community resources, was developed. The programme was provided to people newly diagnosed of early dementia in small group format over 2 months and to family members individually through an eLearning platform over 9 months. Self efficacy in dementia management of people with dementia and their family members were measured using Chronic Disease Self-efficacy Scale and Caregiver Self-efficacy Scale (CSES), respectively, whereas caregiving burden was measured using Zarit Burden Interview (ZBI). Study outcomes were measured at baseline, immediate and 6-month post-intervention. Paired t-tests were performed to detect within-subject changes over time.

**Results:** A total of 151 persons with early dementia and 294 family caregivers completed assessment at baseline and follow up. Self-efficacy in dementia management reported by persons with dementia at 6-month post-intervention was significantly higher than that reported at baseline ( $p = .021$ ) and immediate post-intervention (i.e. 2-month follow up) ( $p = .006$ ). Family members reported a significantly higher CSES score ( $p < .001$ ) and subscale scores in thoughts ( $p = .001$ ) and disruptive behaviour management ( $p = .001$ ) at 9-month follow up, but significant reduction in caregiving burden ( $p < .001$ ) was only noted among those who perceived higher burden than the local norms at baseline (ZBI score  $\geq 25$ ,  $n = 110$ ).

**Discussion:** This study provides empirical evidence that post-diagnostic support would empower persons with early dementia and their family members on adapting the impacts brought by dementia. Further study on examining the longer term effects on care outcomes and health service utilisation would be valuable.

## **P20: Effects of Transitional Care Program on Reducing Nursing Home Placement in People with Dementia**

**Authors:** Wong, B. P. S.,<sup>1</sup> Chan, H. Y. L.,<sup>2</sup> Mo, M. Y. T.,<sup>3</sup> Ho, F. K. Y.,<sup>1</sup> Cheng, T. S. T.,<sup>1</sup> Kwok, T. C. Y.<sup>1,4</sup>

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**Objective:** People with dementia are more prone to premature nursing home placement after hospitalization due to physical and mental deconditioning which makes care-at-home more difficult. This study aimed to evaluate

the effect of a post hospital discharge transitional care program on reduction of nursing home placement in people with dementia.

**Methods:** A matched case-control study was conducted between 2018 and 2021. A transitional care program using case management approach was developed. Participants enrolled the program by self-enrolment or referral from hospitals or NGOs. Community-dwelling people with dementia discharged from hospitals received a four-week residential care at a dementia care centre with intensive nursing care, physiotherapy and group activities promoting social engagement, followed by eight-week day care rehabilitation activities to improve their mobility and cognitive functioning. They were matched on a 1:5 ratio by age and sex to people with dementia discharged from a convalescent hospital who did not participate in this program for comparison. The study outcome was nursing home admission, measured three months (i.e. post-intervention), six months, and nine months after hospital discharge. Multinomial logistic regression was conducted to investigate factors associated with nursing home placement at each measurement time-point.

**Results:** 361 hospital admission episodes (n=67 intervention, n=294 control) were examined. The regression results showed that participants in the intervention group were significantly less likely to be admitted to nursing home three months (OR = 0.023, 95% CI: 0.003-0.201, p = .001) and six months (OR = 0.094, 95% CI: 0.025-0.353, p = .001) than the controls after hospital discharge, but the intervention effect did not sustain nine months after hospital discharge. Longer hospital length of stay, and hospital admission due to dementia, mental disturbances such as delirium, or mental disorders IPA\_Abstract\_PDP\_20230119\_clean 2 such as schizophrenia significantly predicted nursing home admission three months and six months after hospital discharge.

**Conclusion:** The transitional care program could help reduce nursing home placement in people with dementia after hospital discharge. To sustain the intervention effect, more continual support after the intervention as well as family caregiver training would be required.

## **P22: Moral-relational learning from experiences for person-centred care**

**Authors:** Charlotte Van Den Eijnde, Marleen Dohmen, Barbara Groot, Johanna Huijg, Tineke Abma,

**Objective:** Lately, there is a growing interest around person-centred care in long-term care. Providing care that meets the wishes and needs of residents is essential but also challenging. Studies on implementing person-centred care point to a gap between theory and practice and argue that education is important in reducing this gap. What is not yet clear is how this education should be organized. The theory of care ethics states that a moral-relational attitude is necessary in order to achieve this. This attitude is not achieved by only focusing on formal knowledge but can be found in the care staff's implicit and experiential knowledge. Therefore, we examined how care staff can learn about person-centred care in a moral-relational way using their own experiences.

**Method:** In 2020-2022, we conducted an action research in two care home locations. Care staff started by collecting their experiences on the ward. Afterwards, they reflected on these experiences in order to learn more about good and person-centred care. This study reports on the evaluation of the study (after year one and two) in interviews (n=17) in which care staff shared perspectives on working with experiences. The transcripts of the interviews have been thematically analysed.

**Results:** Care staff stated that working with experiences increased awareness, giving them feelings of more control and pleasure in their work. Sharing experiences also created more context, providing care staff with guidelines for doing the right thing for the resident. This richer context was created due to the freedom they had to share their subjective experience, which worked empowering. Care staff also felt that it is necessary to reflect

on experiences. Using their own experiences spoke directly to the imagination, through which they felt recognized and acknowledged.

**Conclusion:** Working with experiences in the daily care routine contributes to moral-relational learning and providing person-centred care to residents. This requires a different view of learning, in which primarily the experiential and tacit knowledge of care staff, and a communitive space for moral-relational learning.

## **P23: Suicide Prediction in late-life depression by Machine learning and Complexity analysis in resting-state functional MRI data**

**Author:** Chemin Lin

**Objective:** Late-life suicide is the most serious consequences of late-life depression (LLD). Nevertheless, suicidal behavior is complex and hard to predict. With the help of MRI scans and machine learning algorithm, we aim to examine the neural signatures of suicidality in patients of LLD.

**Methods:** We recruited 83 patients of LLD with a mean age of 68.8 years, where 48 were suicidal (26 with suicidal ideation and 22 with past suicide attempts). Cross-sample entropy (CSE) analysis was employed to analyze the resting-state function MRI data. Three-dimensional CSE volume in 90 region-of-interest of the brain in each participant was input into convolutional neural networks (CNN) to test the classification accuracy of suicidality.

**Results:** After six-fold cross-validation, we found several regions in the default mode, fronto-parietal, and cingulo-opercular resting-state networks to have a mean accuracy above 75% to predict suicidality. Moreover, the models with right amygdala and left caudate provided the most reliable accuracy in all cross-validation folds, signifying their unique roles in late-life suicide.

**Conclusion:** Our results provide potential targets for intervention or biomarkers in late-life suicide. More research must be conducted to consolidate our results with scalable implementation in clinical setting.

**Key words:** Suicide; Suicide attempt; Machine learning; Convolutional neural network; Cross-sample entropy; resting-state fMRI; older adult;

## **P27: Pilot study of telephone peer support for inclusion of people living with cognitive decline in urban areas**

**Authors:** Chiaki Ura, Ai Iizuka, Mari Yamashita, Koki Ito, Tsuyoshi Okamura

**Objective:** During the spread of infectious diseases, social isolation increases among the elderly with cognitive impairment. The telephone may be a traditional but realistic and reliable tool to prevent social isolation. We report here a pilot study to examine the effects of regular telephone communication on elderly people with cognitive decline living in urban areas.

**Methods:** Seventeen elderly people (including four males) who attended a session for recruiting participants for a class using the board game "Go" in Tokyo were paired and talked on the phone once a week about Go issues and other interests during the 3-month class period, starting January 2022. At the end of the class in April 2022, a self-administered questionnaire (5 items, 4-point scale) and semi-structured interview were conducted. The Ethics Committee of the Tokyo Metropolitan Institute of Gerontology approved the study, and the participants' written consent was obtained.

**Results:** The participants' mean age was  $80.1 \pm 5.5$  years, and the mean score of the Montreal Cognitive Assessment, which screens for mild cognitive impairment, was  $21.3 \pm 3.1$ , with 16 subjects (94.1%) scoring below the cut-off value of 25. The percentages of "agree" or "somewhat agree" responses indicated that the telephone interaction was "enjoyable" (94.1%), "had a positive effect" (88.2%), and they "would like to talk on the phone sometimes in the future" (76.5%). In the interviews, the positive responses were "(Because I was looking forward to the phone call so eagerly) I couldn't wait for the phone call," "I enjoyed playing Go," "It was easy to talk about Go because it was a common topic," "We talked about things other than Go," and "I want to go out with my pair partner," while others were "I was careful about what talk about" and "It was difficult to maintain psychological distance from my pair partner."

**Conclusion:** The results suggest that telephone communication may be effective for preventing social isolation among the elderly with cognitive impairment. We believe that promoting telephone interaction during normal times between residents in the community with common interests will build supportive relationships and lead to a Dementia-friendly society.

## **P28: Early adverse events and loneliness among older people with depression**

**Author:** Chih-Chiang Chiu, M.D., Ph.D, Department of Psychiatry, Taipei City Hospital, Songde Branch, Taipei, Taiwan

**Object:** Loneliness is experienced by many older people and associated with depressive symptoms. Childhood adverse events have been found to be a predictor of loneliness in young adults. We would like to investigate whether childhood traumatic events are associated with loneliness in older people with depression. We also explored what kinds of traumatic events are more related to loneliness and whether family support will modify the association of interest.

**Methods:** Older adults ( $\geq 60$  years) with history of major depressive disorder were enrolled from outpatient clinics. Participants cannot be diagnosed as dementia. They received a series of questionnaires, including cumulative illness rating scales, Hamilton depressive and anxiety rating scales (HDRS and HARS), Geriatric depression scale(GDS), Childhood Trauma Questionnaire(CTQ), Chinese version of the family adaptation, partnership, growth, affection and resolve(APGAR), and Mini-mental status examination.

**Results:** Fifty-four participants were enrolled. The average age was 68.8 years and female predominance (83.7%) with mean educational year of 10.4. Univariate analysis was performed first using LS score as dependent variable, and only those variables with p value less than 0.2 were put into multiple linear regression. In the multiple regression model, age, gender, education, GDS, HDAS were entered as covariates and CTQ was treated as independent variable. The results showed that CTQ score was positively associated with LS ( $\beta=0.565$ ,  $p<0.001$ ). The family support, presented as APGAR score, was not modified the results. In the explore analysis, physical neglect, emotional abuse, emotional neglect also showed positively associated with loneliness in the participants; however, physical abuse and sexual abuse did not have the same findings.

**Conclusion:** Childhood adverse events may be positively associated with loneliness in older people with depressive disorder after adjusting for confounders. We should pay more attention on the childhood traumatic events in these patients. In addition, physical neglect, emotional abuse, emotional neglect rather than physical abuse and sexual abuse seemed to have more impact on the loneliness in these participants. However, some limitations, such as small sample size, recall bias of childhood events, difficulty of recall physical and sexual abuse, and other latent confounders, should be considered before making a final conclusion.

### **P31: Prescribing patterns for older age bipolar disorder patients discharged from two public mental hospitals in Taiwan, 2006-2019**

**Authors:** Ching-Hua Lin, Fu-Chiang Wang, Hung-Chi Wu, Li-Shiu Chou

**Objective:** Older age bipolar disorder (OABD) is commonly defined as bipolar disorder in individuals aged 60 or more. General principles of pharmacotherapy in guidelines for treating OABD are greatly like those for younger adults. We aimed to investigate prescription changes among OABD patients discharged from two public mental hospitals in Taiwan from 2006 to 2019.

**Methods:** OABD patients discharged from the two study hospitals, from 1 January 2006 to 31 December 2019 (n = 1072), entered the analysis. Prescribed drugs at discharge, including mood stabilizers (i.e., lithium, valproate, carbamazepine, and lamotrigine), antipsychotics (i.e., second- and first-generation antipsychotics; SGAs & FGAs), and antidepressants, were investigated. Complex polypharmacy was defined as the use of 3 or more agents among the prescribed drugs. Temporal trends of each prescribing pattern were analyzed using the Cochran-Armitage Trend test.

**Results:** The most commonly prescribed drugs were SGAs (72.0%), followed by valproate (48.4%) and antidepressants (21.7%). The prescription rates of SGAs, antidepressants, antidepressants without mood stabilizers, and complex polypharmacy

significantly increased over time, whereas the prescription rates of mood stabilizers, lithium, FGAs, and antidepressants plus mood stabilizers significantly decreased. **Conclusion:** Prescribing patterns changed remarkably for OABD patients over a 14- year period. The decreased use of lithium and increased use of antidepressants did not reflect bipolar treatment guidelines. Future research should examine whether such prescribing patterns are associated with adverse clinical outcomes.

**Keywords:** older age bipolar disorder, lithium, second-generation antipsychotics, antidepressants, complex polypharmacy

### **P35: Relationship between Psychological Capital, Well-Being & Mental Health of Middle- aged & Older University Staff**

**Authors:** Cindy Jones<sup>1,2</sup>, Brittany Schlimmer<sup>3</sup>, Richard Hicks<sup>4</sup> & Dominique Jones<sup>5</sup>

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**Objective:** People are staying in the workforce longer with the employment rates of older adults rising considerably over the years. Particularly, the higher education sector is known to have an aging workforce where a large proportion of staff is older than 55 years. Psychological capital, which refers to an individual's positive psychological state of development, includes four core dimensions: self-efficacy, hope, optimism and resilience. Understanding of the impact of psychological capital on wellbeing and mental health of working middle-aged to older adults is limited. This paper will present the survey outcomes on psychological capital, wellbeing and mental health of middle-aged and older university staff.

**Methods:** Data were collected using established Psychological Capital Questionnaire (PCQ), Psychological Well-Being Scale (PWBS) and Positive Mental Health (PMH) tool.

**Results:** The mean age of 29 survey respondents was 55.37 years (SD=4.26) with the majority being female (27; 90%) and, on average, worked at the university for 8.35 years (SD=5.92). Total mean scores for PsyCap, PWBS and PMH were 111.77 (SD=16.15); 231.37 (SD=36.15); and 31.43 (SD=4.58) respectively. PsyCap was moderately correlated with PMH ( $r=.546$ ) and PWBS ( $r=.481$ ) as well as PWBS subscales on positive relationships ( $r=.483$ ), self-acceptance ( $r=.450$ ) and environmental mastery ( $r=.558$ ).

**Conclusion:** While limited by the small sample size, this study provides preliminary evidence that psychological capital can potentially positively influence well-being and mental health and that program focusing on improving psychological capital can be considered to improve well-being and mental health of middle-aged and older staff working in the higher education sector.

### **P36: Intimacy and Sexuality Expression Preference (ISEP) Tool: Usage experience and creation of a practical user guide**

**Authors:** Cindy Jones<sup>1,2</sup>, Wendy Moyle<sup>2,3</sup> & Kimberly Van Haitsma<sup>4</sup>

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#### **Abstract**

Ageing and dementia affect many aspects of life, including intimate relationships, sex and sexual expression. Older people, including those living with dementia, can have sexual relationships and form new ones. Their sexual and physical health, quality of life, and psychological well-being can be improved by respecting their intimacy and sexuality expression preferences. However, due to ageism and stigma, healthcare professionals often ignore the sexual feelings and needs of those with dementia living in long-term care. Discussions with stakeholders and literature show limited attention paid to understanding the sexual preferences of people living with dementia in health and social care. In 2020, the *Intimacy and Sexuality Expression Preference (ISEP)* tool was developed for use in long-term care to gather information on intimate and sexual expression preferences of older people, including those living with dementia, to assist in care provision. The ISEP tool was trialled in a Queensland, Australia, nursing home with 14 older residents. This presentation will share insight into the use of the ISEP tool and how it informs the development of 'ISEP: A Practical User Guide'. This guide provides information on how to (a) use the ISEP tool for assessment; (b) interpret and integrate findings into care (i.e., identify a potential course of action); and (c) evaluate outcomes. Illustrative examples will be included. It will inform how preferences for the expression of sexuality can be practically addressed to improve care practices and care outcomes (i.e., satisfaction and quality of life) for people with dementia.

## **P41: Valladolid Multicenter Study: Factors related to time to referral and length of hospital stay in old psychiatry patients in seven general hospitals in Spain**

**Authors:** Cristina Pujol Riera, Anna Barnés Andreu, Eduardo Fuster Nacher, M<sup>a</sup> Desamparados Perez Lopez, Miguel Alonso Sánchez, Eduardo Delgado Parada, Leira Narvaiza Grau, Monica Prat Galbany, Andrea Santora, Maria Iglesias Gonzalez

**Objective:** Older patients ( $\geq 65$ yo) admitted to general hospitals have increased in the past years. This resulted in an increase in hospitalization periods, health costs, and morbi-mortality rates in this group of patients. Previous evidence points that the reduced time to referral (TTR) to Consultation-Liaison Psychiatry Units (CLP) leads to a reduced length of stay (LOS) in GH improving long-term prognosis of medical conditions. This study aims to explore whether a prior disability in older patients leads to delay the search for psychiatric help. And to explore whether early referral to CLP is associated with reduced LOS in general hospitals.

**Methodology:** This is an observational, cross-sectional, multicentre study. We obtained a complete data set from a sample of 152 patients ( $\geq 65$  years old) admitted to 7 general hospitals in Spain referred to CLP unit for 1,5 months.

**Results:** Mean age of the sample was 76.3 ( $\pm 6.4$ ). TTR was 14.5 ( $\pm 18.0$ ) days. LOS was 26.7 ( $\pm 22.4$ ) days, and length of stay after consultation was 12.3 ( $\pm 10.3$ ) days. Barthel Index before admission was 87.3 ( $\pm 18.0$ ) and Lawton&Brody Index before admission was 5.3 (2.7). We found a significant positive association of Barthel Index ( $r=0.17$ ,  $p=0.042$ ) and Lawton&Brody Index ( $r=0.20$ ,  $p=0.014$ ) before admission with TTR, which indicates that patients with a worse clinical status were attended earlier. Similarly, antecedents of both falling episodes ( $r=-0.2$ ,  $p=0.013$ ) and walking difficulties ( $r=-0.24$ ,  $p=0.003$ ) were associated with shorter TTR. TTR in Medical Departments was 11.7 ( $\pm 15.0$ ) days and in Surgical Departments was 24.0 ( $\pm 22.8$ ) days ( $t=-3.5$ ,  $p=0.001$ ). TTR showed a highly significant positive correlation with LOS ( $r=0.89$ ,  $p<0.0001$ ) and a more discrete positive correlation with length of stay after consultation ( $r=0.20$ ,  $p=0.016$ ).

**Conclusion:** We confirm that a shorter TTR to CLP was related to a shorter LOS. Also, patients in medical wards had shorter TTR. In contrast to our hypothesis, we found that a higher disability prior to hospitalization led to earlier referral to CLP, meaning that these patients were assessed and treated earlier leading to better long-term prognosis and lower health costs.

## **P44: Case series: older people with domestic squalor due to hoarding disorder and dementia**

**Authors:** Daiki Taomoto<sup>1</sup>, Takashi Suehiro<sup>1</sup>, Yuto Satake<sup>1</sup>, Fuyuki Koizumi<sup>1</sup>, Shunsuke Sato<sup>1</sup>, Hideki Kanemoto<sup>1</sup>, Tamiki Wada<sup>1</sup>, Kenji Yoshiyama<sup>1</sup>, Manabu Ikeda<sup>1</sup>

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**Introduction:** Patients with hoarding disorder (HD) show difficulty discarding items due to the perceived need to save the items and to distress about discarding them, which causes domestic squalor (DS), especially in young people. In older people, dementia also causes DS. In this case series, we report five cases of older people with DS and compare DS due to HD with DS due to dementia.

**Case presentation:** Case 1 was an 82-year-old female who showed hoarding symptoms in her 60s. She was diagnosed with late-onset HD. Case 2 was a 73-year-old female who showed hoarding symptoms in her 10s. She was diagnosed with early-onset HD. Cases 1 and 2 showed difficulty discarding. Case 1 went to the dump site to collect items that had been discarded by her family. Case 2 strongly refused to throw away items that were considered unnecessary by her family. However, cases 1 and 2 could continue to live at home with nonpharmacological treatment, such as limiting shopping items and getting items from friends and discarding items with their family step by step. Case 3 was a 56-year-old male who showed hoarding symptoms in his 50s. Case 4 was a 72-year-old female who showed hoarding symptoms in her 60s. Cases 3 and 4 were diagnosed with behavioral variant frontotemporal dementia. Case 5 was a 67-year-old female who showed hoarding symptoms in her 60s. She was diagnosed with dementia with Lewy bodies. Case 3-5 did not feel distressed that their family discard their items in their absence. However, despite adjustments to their living environment, they could not continue to live at home and were admitted to a nursing home.

**Conclusion:** In this case series, although cases with DS due to HD showed difficulty discarding items, they could continue to live at home. However, in cases with DS due to dementia, although their house was easily cleaned, they could not continue to live at home due to impairment of their daily activities. Therefore, it is important not to miss HD in older people, and DS due to dementia may be a sign they have difficulty living at home.

## **P48: Underreporting of suicide in old age: accident or self-harm? Angela's scase**

**Author:** Diego De Leo, MD, PhD, DSc, Griffith University, Australia, Primorska University, Slovenia, President, Italian Psychogeriatric Association

**Abstract:** Deaths from suicide often incur a misclassification. Suicide is in fact subject to stigma and shame; in some countries it is even criminalized. Furthermore, there are situations in which the intentionality of the suicidal behavior is really equivocal or there was a desire to disguise the death by suicide, for example for insurance reasons. In many cases, it can be difficult to ascertain if death was due to a deliberate act (such as not taking life-saving medication or overdosing on them; an accident or a voluntary fall, etc.). Suicide deaths involving older adults are particularly prone to under-reporting. The advanced age of the deceased may imply less investigative interest than a death in childhood or from medical complications. In addition, there are cases in which it is really difficult to classify the type of death. The following story may underline such a difficulty.

Angela was 81 years old. A childless widow, sufficiently independent, was a guest in a nursing home for about a year; she was there - she said - mainly to fight her loneliness. However, in the nursing home she felt even lonelier than at home.

Her house was sold shortly before entering her residence. She felt very frightened by the pandemic, which she followed for long hours on television: she had begun to say aloud that she didn't want to be intubated, and that there was no more oxygen for anyone anyway. Everybody would have died soon. She was given sedatives to calm

her down, but in one occasion a nurse saw her holding the pills in her mouth and then spitting them down the toilet. Her roommate got sick and was taken away. Angela kept asking about her, receiving no answer. She was noticed having difficulties falling asleep and although she showed no signs of infection or disease, she was heard saying that her days were over. One day, she told the nurse that she had finally figured out what to do. A few days later, she was found dead during lunchtime, apparently suffocating on a piece of turkey.

## **P49: The effect of old age on the experience of those who received an unexpected and violent death notification: A qualitative study**

**Authors:** Diego De Leo<sup>1,2,3</sup> and Josephine Zammarrelli<sup>3</sup>

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**Background:** How an individual is informed of the traumatic loss of a loved one can influence the grieving process and quality of life for survivors. Objective: this qualitative survey aimed to explore how age influences the experience and feelings of those who have received communication of this type of death from a professional figure.

**Method:** 30 people recruited through the use of social networks and word of mouth participated in the study. The participants were divided into three groups according to the age variable (1 group: 10 participants up to 35 years old; 2 group: 10 participants aged between 45 and 55 years; 3 group: 10 participants aged 60 and over) who have received notification of the death of a loved one from police officers or health care professionals. The data was collected through an ad hoc questionnaire, completed online. The thematic analysis technique used Atlas.ti software 8.

**Results:** the following four key themes were identified: (a) how the communication took place; (b) reactions; (c) support; and (d) coping strategies.

**Conclusions:** it is possible that advanced age confers greater resilience and coping strategies through life experiences to mitigate the stressful impact of communicating an unexpected and violent death.

## **P50: Looking for the best: Video vs written informed consent in coronary angiography procedures**

**Authors:** Ines Testoni<sup>1</sup>, Francesca Lampis<sup>1</sup>, Erika Iacona<sup>1</sup>, Roberto Valle<sup>2</sup>, Gabriele Boscolo<sup>2</sup>, Diego De Leo<sup>3,4</sup>

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<sup>4</sup> Dept Psychology, Primorska University, Slovenia

**Background:** Informed consent practices in healthcare are a fundamental element of patient-centred care; however, the traditional written description of the medical procedure for obtaining informed consent seems to have several limitations. Aim: This research aimed to evaluate the effects of an alternative method of obtaining

informed consent, based on a short informative video for patients waiting to undergo a coronary angiography procedure in Italy.

**Methods:** The study involved 40 participants, 28 males and 12 females (mean age: 68.55, SD = 13.03), equally divided into two groups, one that received video informed consent and the other the traditional written one. Each group was asked to fill out two questionnaires, one created ad hoc by the authors to measure the level of understanding of the information provided and the perception of usefulness of informed consent, and the other the DASS-21 scale, able to assess anxiety, depression and stress levels.

**Results:** Comparing the results of the two groups showed that informed consent via video enabled participants to better understand the information provided, as well as feel more confident in their subjective understanding of it, while perceiving informed consent via video as more useful than the traditional one. Video informed consent did not lead to higher levels of anxiety, depression, or stress among participants.

**Conclusion:** it can be hypothesized that video formats could represent a more useful and understandable alternative to traditional informed consent in the coronary angiography procedure sector.

## **P55: Reaching Caregivers living with a loved one with Dementia/Alzheimer's Disease**

**Author:** Elaine Jurkowski

**Objectives:** Caregiving can be a daunting and isolating experience, especially when supporting a loved one with Dementia. The objective of this intervention was to provide a series of educational sessions available to caregivers to help educate them on strategies to enhance their well-being and interactions with a loved one living with dementia.

**Methods:** The Caregiver Literacy Series is a compilation of 18 webinar sessions with therapeutic workbooks designed to help caregivers understand the nature of specific dementia-related issues, and designed to help the caregiver build some personal strategy to help better manage their caregiving role. Based upon a Framework that uses the Perceived Self-Efficacy Theory, each webinar provides educational materials, and resources and is designed to help build an action plan for the caregiver. Topics include "What is Caregiving?", "Caregiving and Compassion Fatigue and Self-Care" and topics address coping and communication strategies. The webinar sessions were administered monthly and semi-monthly to consumers through a local Alzheimer's Association network in the rural Midwest of the United States.

**Results:** Feedback from consumers who have used the materials suggest that the materials have provided some measure of information and helpful educational materials. The workbooks have also been an effective tool to help guide and empower the caregiver.

**Conclusion:** The Caregiver Literacy Series provides some effective and needed materials to help equip caregivers living with a loved one that has Dementia or Alzheimer's disease with some measure of health literacy and empowers them to feel some sense of empowerment and comfort in the process.

## **P58: Interventions to Reduce Ageism. Systematic Review**

**Authors:** Elena De La Fuente Ruiz, Rosa Molina Ruiz, Lucía Fuente Hernández, Patricia Gracia-Garcia

**Objective:** The purpose of this article is to review all the interventions that researchers have used to reduce ageist attitudes in the population.

**Methods:** We performed a literature search using PubMed database including the following MeSH terms: ("Ageism"[Mesh] OR "ageism"[tiab] OR "Age discrimination"[tiab]) AND (intervention\* [tiab] OR therapy \* [tiab] OR training\* [tiab] OR prevention\* [tiab]). 257 studies were found and only 18 were selected based on their language (only Spanish and English ones were included) and according our inclusion criteria.

**Result:** To date, most widely strategies used in previous studies included: Intergenerational contact, education or both. Other techniques such as performing arts (theater and cinema), museums exhibitions and the simulation of activities for the elderly have been also studied with successful results. Likewise, two of the articles mentioned mindfulness and cognitive behavioral therapy as a preventive ageism strategy have not been demonstrated yet.

**Conclusion:** Different interventions have been tried to reduce ageist attitudes. The greatest benefits have been seen with the combination of intergenerational contact and population education. Ageism is an important problem that concerns today's society; further studies focused on strategies to reduce ageist attitudes in the general population are needed.

## **P62: Agitation in Alzheimer's Disease (AAD): A Decision Tree for Healthcare Providers**

**Authors:** **George T. Grossberg, MD**, Samuel W. Fordyce Professor/Director, Geriatric Psychiatry at Saint Louis University

**Angela Sanford, MD, CMD**, Associate Professor of IM-Geriatrics at Saint Louis University

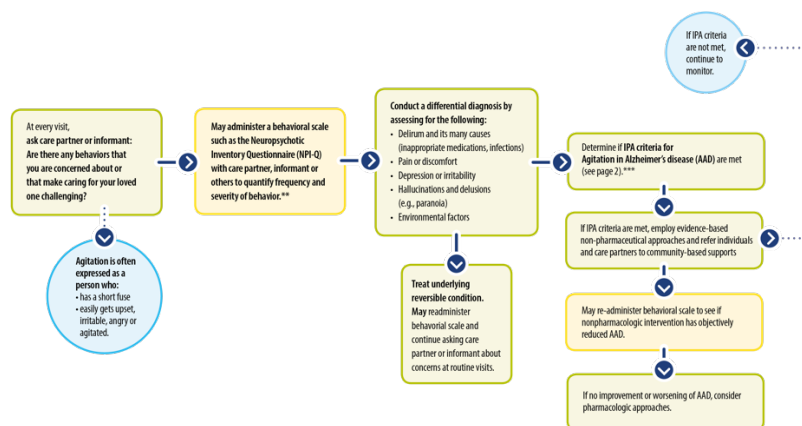
**Susan Scanland, MSN, CRNP, GNP-BC**, CEO & Founder Dementia Connection®

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*Developed by THE GERONTOLOGIC SOCIETY OF AMERICA*

*Supported by an unrestricted educational grant from Avanir*

- The prevalence of agitation in Alzheimer's Disease (AAD) approaches 80%. Patients with AAD have more severe behavioral, depressive, and frontal lobe symptoms and are at increased risk for hospitalization and nursing home placement.
- Early agitation is a robust predictor of accelerated progression and mortality and is distressing and dangerous for patients and care partners.
- This presentation was recently developed by the Gerontologic Society of America (GSA) which convened an expert AD Working Group to develop a "Decision Tree" for healthcare providers relative to the assessment of AAD and the employment of Non-Pharmacologic and Pharmacologic treatment options



## P69: The effect of social prescribing on improving cognitive performance among community-dwelling older adults: A pilot study

**Authors:** Huali Wang<sup>1</sup>, Zhiqiang Fu<sup>2</sup>, Wei Qi<sup>2</sup>, Yongsheng Lin<sup>2</sup>, Xin Yu<sup>1</sup>

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**Objective:** The study aimed to examine the effect of social prescribing on improving cognitive performance among community-dwelling older adults, and to explore the potential association between social support and the change of cognitive performance.

**Method:** One hundred and eighteen older adults from Changtang community participated in the study and were followed up for three months. Cognitive function was assessed with Hong Kong Brief Cognitive test (HKBC) at baseline and 3-month follow-up. Pre- and post-social prescribing difference in cognitive performance was examined with paired t-test. Multivariate regression analysis was used to explore the potential factors of social support associated with the change of cognitive function.

**Results:** Compared with baseline measurement (25.4±4.1), the total score of HKBC improved significantly after three-month social prescribing (26.5±3.6;  $t=-3.300$ ,  $P=0.001$ ). Multivariate regression analysis showed that baseline level of social support utilization was associated with the change of cognitive performance. The lower the utilization of social support at baseline, the more the change of cognitive performance due to social prescribing ( $\beta=-0.25$ , 95%CI = -0.88 ~ -0.05).

**Conclusion:** Social prescribing may have a beneficial effect on cognitive function for community older adults. The utilization of social support may be one of the factors associated with its effect on cognitive performance.

## P78: Complicated grief in the shadow of the COVID-19 pandemic among adults and the elderly

**Authors:** Irit Bluvstein and Silvia Koton, Herczeg Institute on Aging, Tel Aviv University

**Objective:** The COVID-19 pandemic has been a mass bereavement event disrupting social functioning of individuals in the general population, restricted and changed end-of-life, mourning and grief processes. In these circumstances grief may become pathologic and complicated grief (CG) may rise. The vulnerability of elders to CG in times of loss and bereavement in the COVID-19 context has been hardly studied. The current study aimed to examine grief processes, complicated grief and their relationship with protective and vulnerability factors among adults and elders (45 years old and above) who experienced loss at the time of the COVID-19 pandemic. **Methods:** A total of 113 adults aged 45 and above were included in the analytic convenience sample. Quantitative data was collected by self-reported questionnaires of CG, resilience, well-being, state anxiety and negative engagement with hostile world scenarios (HWS). Additionally, qualitative data on grief experiences was collected in semi-structured interviews of 9 participants.

**Results:** Factor analysis results supported prior identified factors of CG among the aged. Multivariate analysis and stepwise regression identified factors associated with CG: female gender, state anxiety and negative engagement with HWS were identified as vulnerability factors whereas resilience emerged as a protective factor. Thematic analysis identified two main themes among participants: (1) COVID-19 as an emotional accelerator and (2) Support from social resources in COVID-19 times.

**Conclusion:** Findings add to our understanding of complicated grief among adults and elders in epidemic times. A unique and novel finding is the relationship found between negative engagement with HWS and complicated grief. This highlights the importance of examining how individuals facing adversities in general and loss in particular, perceive their ability to cope with life hardships. Furthermore, further research for establishing diagnostic criteria of CG for the aged is recommended.

## **P83: Perceptions of Elder Good Care in Nursing Homes: Nursing Aides Versus Other Nursing Home Professionals**

**Authors:** López, J., Pérez-Rojo, G. & Noriega, C. Psychology Department, Health Faculty. Universidad San Pablo-CEU, CEU Universities

**Background:** There is great concern about the care of the older adults in institutions, especially in recent years. One of the reasons is the cases of elder abuse, not only highlighted by academic and scientific sources, but also by the media. Humanization, respect, empowerment and non-infantilization are key elements to promote good treatment in nursing homes (López et al., 2021).

**Research Objective:** The aim of this study was to evaluate the care in nursing homes using the Professional good care scale in nursing homes (Pérez-Rojo et al., 2021).

**Method:** The sample for this study consisted of 269 employees working in different older adults nursing homes in Spain (182 nursing aides and 87 other nursing home professionals: nurses, occupational therapists, psychologists, physiotherapists, social workers, sociocultural animators, speech therapists). The employees' evaluations of themselves (their own performance) and their own evaluation of their coworkers in the nursing home (the overall good care in the nursing home) in these two groups of professionals (nursing aides and nursing home staff that care residents) were assessed and compared. T-test were used for data analyses.

**Preliminary results on the ongoing study:** The results showed no significant differences between the two groups of professionals when they considered their own performance.



However, statistically significant differences were found when they considered the overall performance in their residency in humanization ( $p < .001$ ), non-infantilization ( $p < .001$ ) and in the overall score of the good care scale ( $p < .001$ ). Good care in nursing homes was significantly perceived as less frequent among nursing aides.

**Conclusion:** It is important for the evaluation of good care of older adults by the staff to assess both their perception of themselves and their assessment of their coworkers. Good care is the result of a complex construct in which a wide range of factors converge. Therefore, it is essential to contemplate the most accurate assessment of it. To evaluate and promote good care, it seems appropriate to assess the overall performance of all the employees of the nursing home and not only the assessment that each one makes of the treatment he/she gives to the older adults with whom he/she works.

## **P92: Risk Assessment in People living with Dementia: A Systematic Review**

**Author:** Prof Juanita Hoe, University of West London

**Objective:** Effective risk identification and assessment is important to help inform personalised care decisions, positive risk management, policy making and clinical practice in dementia. This mixed-method systematic review identified key components of risk assessment for people with dementia living within the community and care homes, examined attitudes towards risk identification and risk assessment, and appraised existing risk assessment tools.

**Methods:** Systematic searches of eight databases on two platforms (EBSCO, OVID) and grey literature databases (Open Grey, Base) were conducted. Studies were systematically screened for inclusion based on predetermined eligibility criteria and quality assessed using the Mixed Methods Appraisal Tool. Findings were tabulated and synthesised using thematic synthesis.

**Results:** Twenty studies consisting of qualitative and mixed-method designs were included in the review. Five overarching themes emerged from the synthesis: **Conceptualisation of risk** - individual perceptions of risk, including how different individuals define, construct, and identify risk situations. **Components of risk** -key elements included in risk and safety assessments. **Contributors to risk** -factors that impact the risk level and how risk assessments are conducted. **Perspectives on risk assessment** -how individuals assess risk and approaches to risk management. **Risk reduction** -strategies to mitigate risk following an assessment.

Our review found differences in how risk is conceptualised between people with dementia, their family carers, and healthcare professionals, with views being shaped by media perceptions, personal experiences, sociocultural influences, dementia knowledge and severity. We found that mobilisation both inside and outside of the home is the most frequently identified risk factor. Our findings show people with dementia and carers are generally risk-tolerant, while healthcare professionals adopt risk-averse approaches that reflect organisational requirements and ensure safety. We found factors that disrupt daily routines, living and caring arrangements, medication management, and unclear care pathways contribute towards adverse risk events. Few studies considered people with dementia's insight into the risk being assessed.

**Conclusion:** Accurate risk assessment and effective communication strategies are needed to enable risk-tolerant practices and ensure these approaches can be evaluated effectively. We did not find any instrument which to date had been shown to be widely acceptable and useful in practice.

## **P95: Caregiver Perspectives on the Meaningful Change in Agitation Behaviors Measured by the Cohen-Mansfield Agitation Inventory**

**Authors:** Jyoti Aggarwal, Dorothee Oberdhan, Andrew Palsgrove, Teya Lovell, Adele Levine, Theresa Frangiosa, Virginia Biggar, Meryl Comer

**Objective:** Agitation is a common neuropsychiatric symptom in patients with Alzheimer's dementia, resulting in significant burden to patients and caregivers. This study was conducted to better understand caregiver perspectives on the frequency and severity of agitation behaviors, captured by the Cohen-Mansfield Agitation Inventory, and to assess what constitutes a meaningful change in these behaviors.

**Methods:** This was a qualitative, non-interventional, descriptive study conducted in the United States. Semi-structured 1:1 interviews were completed with non-professional caregivers of patients with Alzheimer's disease (AD) (i.e., family caregivers providing unpaid, informal care) who met the following inclusion criteria:  $\geq 21$  years old; caring for an individual with clinically confirmed AD; noticed agitation behaviors including emotional distress, excessive movements, verbal aggression, physical aggression; spent  $\geq 4$  days a week for  $\geq 2$  hours with the person with AD; and willing to participate in the virtual interview in English. Interview transcripts were analyzed thematically through detailed line-by-line inductive and deductive coding approaches using the ATLAS.ti software.

**Results:** Thirty caregivers participated. Participants' mean age was 64 ( $\pm 13$ ) years. Most participants were Caucasian/white (77%), non-Hispanic or Latinx (97%), and female (70%). Approximately half were providing care to their spouse (53%), and the remainder for a parent or parent-in-law. Several key themes on what constitutes 'meaningful change' emerged. All caregivers tied a meaningful change in agitation behaviors to a change in behavior frequency (becoming less frequent or stopping entirely). Beyond frequency, themes describing meaningful change included: change in behavior intensity; apparent intent to disturb or cause harm to self or others; potential to cause serious harm; amount of harm caused; more "normal" behavior; shorter episode duration; and less worry, frustration, or isolation. Additionally, a shift from verbally aggressive behavior to physically aggressive behavior was considered an escalation in agitation severity and meaningful worsening. Thus, unique to physical aggression, a meaningful change was described as a de-escalation to verbal aggression.

**Conclusion:** Caregivers report several themes on what constitutes meaningful improvement or worsening of agitation behaviors in individuals with AD. A change in the frequency of agitation behaviors was consistently reported by caregivers as important, with decreased frequency perceived as a meaningful improvement.

## **P96: Efficacy of Brexpiprazole for the Treatment of Agitation in Alzheimer's Dementia: Post Hoc Line Item Analysis of the Cohen-Mansfield Agitation Inventory**

**Authors:** Jyoti Aggarwal, Daniel Lee, Mary Slomkowski, Nanco Hefting, Dalei Chen, Klaus Larsen, Denise Chang, Eva Kohegyi, Mary Hobart, Maia Miguez, Pedro Such

**Objective:** Agitation is a common neuropsychiatric symptom in Alzheimer's dementia. The Cohen-Mansfield Agitation Inventory (CMAI) assesses the frequency of 29 agitation behaviors in elderly persons. The frequency of each behavior is rated from 1–7 (1=never, 2=less than once a week, 3=once or twice a week, 4=several times a week, 5=once or twice a day, 6=several times a day, 7=several times an hour), typically reported as a single total score. This post hoc analysis explored the efficacy of brexpiprazole on the frequency of individual agitation behaviors.

**Methods:** Post hoc analyses were conducted for two 12-week, randomized, double-blind, placebo-controlled, parallel-arm, fixed-dose trials of brexpiprazole in patients with agitation in Alzheimer's dementia (NCT01862640,

NCT03548584). Data are reported using descriptive statistics for brexpiprazole (2 or 3 mg/day) and placebo, for patients who completed 12 weeks of treatment.

**Results:** In the first fixed-dose trial (brexpiprazole 2 mg/day, n=120; placebo, n=118), baseline behavior frequency was similar between groups (range 1.12 to 4.92). At baseline, the most frequently observed behavior was “general restlessness” (brexpiprazole, 4.92; placebo, 4.82; approximately “once or twice a day”), and the least frequently observed behaviors were “biting” (brexpiprazole, 1.12) and “making physical sexual advances” (placebo, 1.14). At Week 12, the average reduction in mean frequency was -0.73 (brexpiprazole) and -0.60 (placebo), with a greater numerical reduction for 21/29 behaviors with brexpiprazole versus placebo. In the second fixed-dose trial (brexpiprazole 2 or 3 mg/day, n=192; placebo, n=103), baseline behavior frequency was similar between groups (range 1.12 to 5.22), and higher than in the first trial due to study inclusion criteria. At baseline, the most frequently observed behavior was “general restlessness” (brexpiprazole, 5.22; placebo, 5.09; approximately “once or twice a day”), and the least frequently observed behaviors were “making physical sexual advances” (brexpiprazole, 1.13) and “intentional falling” (placebo, 1.12). At Week 12, the average reduction in mean frequency was -0.78 (brexpiprazole) and -0.54 (placebo), with a greater numerical reduction for 26/29 behaviors with brexpiprazole versus placebo.

**Conclusion:** In this post hoc analysis, brexpiprazole was associated with numerically greater reduction in the frequency of most individual agitation behaviors versus placebo.

## **P98: Effects of A Brief Intensive Home-based Discharge Support Program on Older Patients’ Recovery and Family Carers’ Psychological Wellbeing**

**PRESENTING AUTHOR:** Chan, Kar-choi<sup>1</sup>

**CO-AUTHOR:** Chang, Ching-wen.<sup>2</sup>

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**Background:** Seamless transition to the community and a shorter Length of Stay (LOS) at hospitals are considered priorities in many health care systems. In Hong Kong, Hospital Admission Risk Reduction Program for the Elderly (HARRPE)<sup>1</sup> - a risk prediction tool has been used by hospitals to facilitate discharge of older patients and minimize the need for hospital or emergency re-admission. Older patients score > 0.2 and present greater social-care needs than medical issues will be followed up by a community NGO, in service partnership with the hospital, through an 8-week, home-based, Intensive Discharge Support Program (IDSP)<sup>2</sup>. Apart from evaluating the success in admission risk reduction, this study was also to assess the program’s effects on patients’ health status and well-being for both discharged patients and family carers, and to understand the underlying supportive mechanism of IDSP.

**Methods:** A mixed-method approached was used, as establishing control groups was not feasible due to both ethical and practical concerns. Structured interviews integrating standardized instruments were employed to evaluate changes in outcome variables pre-and-post IDSP intervention for both the discharged patients and their carers. To complement the quantitative data, two focus groups involving 9 carers were organized to explore the essential and critical service elements of the discharge program, including their effects on promoting patients’ wellbeing or alleviating caregiver burden.

**Results:** 48 patient-carer dyads were recruited from the discharge program, with 35 pairs (73%) successfully completed both pre-and-post IDSP interviews. 68.6% of the discharged elders had no hospital readmission during the 8-week in IDSP. While there were statistically significant improvement in ADL, IADL ( $p < 0.001$ ), the environment domain of WHOQOL ( $p < 0.05$ ), and 3 other domains measured by the Health Status Questionnaire (HSQ-12), namely social functioning, role limitation due to mental health and level of fatigue ( $p < 0.05$ ) among the patient group, there was only one outcome variable – the environment domain of WHOQOL showed significant improvement ( $p \leq 0.01$ ) among carers. Focus group discussions also highlighted the importance of using a family-based approach in providing discharge support.

**Conclusion:** This Discharge support program which emphasizes hospital-community collaboration seems beneficial to older patients' timely recovery and smooth transition back to community.

*References:*

*Health informatics journal*

*Hong Kong Med J*

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## **P100: Education level is associated with neuropsychiatric symptoms in patients with amnesic-mild cognitive impairment**

**Authors:** Keisuke Inamura, Yosuke Tsuneizumi, Masahiro Shigeta, Department of Psychiatry, The Jikei University School of Medicine, Tokyo, Japan

**Objective:** We aimed to examine differences in the severity of neuropsychiatric symptoms (NPS) subsyndromes according to education level among patients with amnesic-mild cognitive impairment (a-MCI) and to identify patient demographics related to NPS subsyndromes.

**Methods:** Overall, 140 patients with a-MCI were included. We divided the patients into three groups according to their educational level (primary education, middle education, and high education) and compared their demographics. To explore the severity of NPS subsyndromes according to educational level, we used the Neuropsychiatric Inventory-Questionnaire (NPI-Q) after adjustments for the Mini-Mental State Examination (MMSE) score. Finally, NPS subsyndromes that were identified as being related to educational level were further explored using a general linear model (GLM).

**Results:** Significant differences in several demographics were observed among the three groups. Among the NPS subsyndromes, the scores for aggressiveness were significantly higher in the primary and high education groups than in the middle education group, while the apathy/eating problem scores were significantly higher in the primary education group than in the other groups. The GLM analyses showed that aggressiveness was related to marital status and the Zarit Caregiver Burden Interview (ZBI-J) score, while apathy/eating problems was related to the instrumental activities of daily living (IADL) percentage, the ZBI-J score, and the education level in years.

**Conclusion:** Among NPS subsyndromes, aggressiveness and apathy/eating problems differed according to education level in patients with a-MCI. A GLM analysis suggested that not only education level, but also various other factors should be considered when determining the need for NPS interventions.

## **P111: Responses of deferment of appointments during Circuit Breaker (CB) amongst psychogeriatric elderly patients**

**Author:** Lay Ling Tan

**Introduction:** The coronavirus disease 2019 (COVID-19) outbreak was declared a public health emergency by the World Health Organization (WHO) on 30 January 2020. COVID-19 circuit breaker (CB) was implemented in our country from April 2020 to June 2020 to curb the outbreak. Healthcare Institutions were tasked to reduce 'non-essential' outpatient appointments. This research aimed to capture the responses of elderly patients and caregivers to the deferment of appointments. It also attempted to identify psychiatric symptoms which might be exacerbated during the pandemic.

**Methods:** This retrospective review captured patients' mental state and caregivers' responses and preferences for subsequent reviews; reasons for their decisions; as well as mental state findings post CB.

**Results:** Records of 323 patients with a mean age of  $79.24 \pm 8.02$  were analyzed. 50% were diagnosed with dementia (18% severe, 38% moderate, 44% mild); 23% depression; 11% anxiety and 16% psychosis. 64% documented stable mental state before CB. There was no statistical difference in the diagnoses and stability of mental state or decisions to defer. 77% agreed to defer whereas 7% preferred to retain appointments. Those who brought forward appointments (1%) reported insomnia with increased mood and anxiety symptoms. Post-CB mental state showed 57% of patients remained stable; 15% had increased mood symptoms and 11% reported worsening cognition.

**Discussions:** Patients with stable mental state before CB were more agreeable to defer appointments regardless of psychiatric diagnoses. Amongst those with dementia, caregivers reported distress with patients' inability to comprehend need for safe-distancing measures and closure of day care programs. Some caregivers were concerned about increased food intake, lack of physical and social activity. 11% showed increase forgetfulness and 15% suffered increase in mood and anxiety symptoms post-CB.

**Conclusions:** Despite the cohort's advanced age, 57% remained stable during CB. The anticipation of challenges in abiding by the safe-distancing measures with supporting documents of patients with mental illness allowed us to improve our psychoeducation efforts of our community. Cognition, mood and anxiety symptoms were exacerbated as a result of the safe distancing and movement restrictions during the pandemic.

## **P112: Valladolid Multicenter Study: Diagnostic agreement between physicians and liaison psychiatry units in an elderly population in 7 hospitals in Spain**

**Authors:** Leire Narvaiza, Monica Prat Galbany, Ferran Vilalta, Andrea Santoro, Maria Iglesias Gonzalez, Cristina Pujol Riera, Eduardo Fuster Nacher, M<sup>a</sup> Desamparados Perez Lopez, Eduardo Delgado Parada, Miguel Alonso Sánchez

**Objective:** The objective of this study is to describe the diagnostic agreement between physicians and liaison psychiatry units (LPU) in 7 general hospitals of Spain for elderly patients and to analyze possible factors related to it.

**Methods:** This is an observational, cross-sectional, multicenter study. We obtained data from a sample of 165 patients ( $\geq 65$  years) admitted to 7 general hospitals in Spain referred from different departments to each liaison psychiatry unit. Data was collected for a month and a half period. Psychiatric evaluations were performed while the patients were on wards.

**Results:** We obtained a sample of 165 patients (78 women, 88 men) with a mean age of 76,03 years old (42.10%  $< 75$  years, 57,83%  $\geq 75$  years). Most of them were married and they lived accompanied (67,27%). Only 5,45% lived in a nursing home.

In 55.15% the main reason to referral was anxiety/depression symptoms. 42,42% had no psychiatry medical background. After LPU visit a new diagnosis was done in 56.96%. Main diagnoses were adjustments disorders (26,66%), delirium (20,6%) and no psychiatric pathology (14,54%)

Cohen's kappa statistics were used to estimate the agreement between the diagnoses made by LPU and the diagnoses considered by the referring doctors. We obtained a moderate global agreement (kappa= 0,4971) between observers (0,424 for  $< 75$  years, 0,557 for  $\geq 65$  years) Moderate agreement was found for alcohol or substance abuse (kappa= 0,41) and low agreement was found for affective disorders (kappa= 0,3278) and delirium/ psychological and behavioral symptoms in dementia (Kappa= 0,2341).

We analyzed factors which might affect de agreement between physicians and LPU such is group of age, functional impairment, comorbidity by Charlson index and previous diagnosis of dementia.

**Conclusions:** Further longitudinal studies might help in the future to analyze the factors related to agreement between doctors and might help to establish educational programs

## **P120: Peer groups that support the mental health of older adults**

**Authors:** Maarit Ajalin, Maritta Haavisto

The City of Helsinki provides peer support groups for older adults with substance abuse or mental health issues:

- For older adults with substance abuse issues (14 meetings)
- For elderly relatives, friends and family members of people with substance abuse issues (12 meetings)
- For older adults with depression symptoms (12 meetings)
- For older adults who have lost a loved one (8 meetings)

Peer support groups meet once a week at senior centres and are led by social instructors. The maximum group size is limited to ten people. Group instructors have manuals to guide their work, and attendees follow group-specific assignment books. The first three groups listed above stem from cognitive methods, and the group for those who have lost a loved one stems from a meaning-centred approach.

Before the group's first get-together, instructors meet all potential group members in person to ensure that joining the activity is a suitable and beneficial option for them. Although the groups have different discussion topics and assignments, all are primarily based on openness and peer support. Two months after the group's last get-together, members will meet up again, and the instructors will assess whether someone needs extra support and refer them onward.

Overall, feedback on the peer support groups has been positive. Attendees feel participating has brought change to their lives, and many reported reduced alcohol consumption and improved mood. In their feedback, attendees gave thanks to interesting discussion themes, an open and trusting atmosphere and the importance of being able to communicate with peers of the same age.

Peer support groups are a cost-effective and functional way to support the mental health of older adults, especially in the early detection and prevention of more severe problems.

## **P127 Characteristics and outcomes of geriatric patients with depression who received pharmacogenomic testing for antidepressant medication selection**

**Authors:** Simon Kung, MD, Yuliang Hu, MD, Sirinapa Aphisitphinyo, MD, Maria I. Lapid, MD  
Mayo Clinic, Rochester, Minnesota, USA

**Objective:** Pharmacogenomic testing for antidepressant medication selection is widely available, and patients with treatment-resistant depression regularly inquire about it. Psychiatrists and primary care providers have little guidance on when to obtain pharmacogenomic testing. We reviewed the characteristics and outcomes of a sample of geriatric patients who received this testing.

**Methods:** Retrospective review of patients ages 65 and older with ICD-10 diagnoses of depressive disorders (F32.0-F33.9), followed at Mayo Clinic Rochester, who received pharmacogenomic testing between 1/1/2018 and 12/31/2022 to guide antidepressant medication selection. Patients were included if there were Patient Health Questionnaire 9-item (PHQ-9) depression rating scores up to 3 months before and 3 months after pharmacogenomic testing. Demographic information, cytochrome P-450 CYP2D6 and CYP2C19 phenotypes, PHQ-9 scores, ordering provider (psychiatrist or primary care provider), and resulting medication changes were collected. Paired t-tests compared differences between before and after PHQ-9, with statistical significance  $p < 0.05$ .

**Results:** Approximately 1% of patients with a depressive disorder received pharmacogenomic testing. After limiting to patients with PHQ-9 before and after testing, 287 patients met inclusion criteria. 66% were female, mean age 72.3 yrs ( $\pm$ SD 5.7, range 65.0-90.7), and 95% were Caucasian. CYP2D6 phenotypes were 9% poor, 48% intermediate, 39% extensive (normal), 3% rapid metabolizer. CYP2C19 phenotypes were 3% poor, 25% intermediate, 39% extensive, 33% rapid metabolizer. Mean PHQ-9 before testing was 10.8 ( $\pm$ SD 6.4), and after testing was 9.8 ( $\pm$ SD 6.5) ( $p = 0.0041$ ). Data collection regarding ordering provider and medication changes were still pending.

**Conclusion:** The clinical utilization of pharmacogenomic testing appeared to be low. CYP2D6 and CYP2C19 phenotypes were as expected (except for more 2C19 rapid metabolizers), suggesting treatment resistance was less likely related to these genetic factors. There was a statistically significant decrease of 1 point in the mean PHQ-9, which would not be clinically significant. However, many other factors still need to be explored, such as details about medications and gene-medication interactions, ordering provider's knowledge about pharmacogenomic testing, whether medication changes were made, aging factors influencing pharmacokinetics, medical and psychosocial burdens, and other concurrent treatments. Further research will hopefully allow more practical guidance on whether and when to obtain pharmacogenomic testing.

## **P137: Cost Considerations of Untreated Agitation: Direct, Indirect, and Intangible**

**Authors:** Mary Michael, Kattie Krewer

**OBJECTIVE:** In the past decade, researchers and advocates have taken important steps toward understanding the full costs of Alzheimer’s disease and related dementias. However, our current approach to framing these costs does not fully consider the behavioral symptoms of dementia, notably agitation. Agitation in Alzheimer’s disease contributes to negative social and financial outcomes for people with the condition, their care partners, and health systems. When left untreated, the negative impact of these outcomes is exacerbated, yet the full scale of this impact is unknown. “Cost Considerations of Untreated Agitation” seeks to propose a framework to help in evaluating the variables that impact these costs.

**METHODS:** We created a model that investigates each stage of Alzheimer’s disease with agitation. This model assesses direct, indirect, and intangible costs of the disease. Direct costs include professional caregiving, non-pharmacological intervention, nursing home costs, healthcare professional consultations, and hospitalizations. Indirect costs included loss of income and value of unpaid caregiving. Intangible costs include the mental health impact of agitation on individuals living with Alzheimer’s and their care partners. Additionally, we used quality-adjusted life years to measure disease burden and health outcomes. Finally, we leveraged qualitative research to overlay the experience of care partners and individuals with lived experience to bring their voice to this work.

**RESULTS:** Results are a tentative framework and describe what additional research and input is necessary in order to create a version with which one can assess the comprehensive costs of untreated agitation in Alzheimer’s. This framework will include perspectives and feedback from individuals with lived experience, care partners, and key opinion leaders in Alzheimer’s research from across the world.

**CONCLUSION:** Agitation has severe consequences on individuals, families, and health systems. Oftentimes one of the first symptoms of Alzheimer’s or dementia, agitation can increase the caregiving responsibilities, trigger placement into nursing homes, and cause severe emotional and physical toll on care partners. We cannot understand the full costs of dementia or AD until we account for untreated agitation vis-à-vis a multi-symptom assessment, therefore an accepted framework is necessary in order to fully consider the costs of untreated agitation.

## **P138: Articulating Agitation: Towards Culturally Competent Care**

**Authors:** Mary Michael, Kattie Krewer

**Objective:** In 2014, IPA advanced the field of Alzheimer’s care by offering a definition of *agitation*. Yet, as the definition rightly notes, agitation “can bear very different meanings to different people.” This becomes more complex as we consider how different cultural and socioeconomic communities talk about agitation – both within their communities and outside them.

“Articulating Agitation: Towards Culturally Competent Care” seeks to better understand how people living with dementia (PLWD) and care partners talk about agitation from a multi-cultural perspective. This project focuses on discussions of agitation within Black, LGBTQ+, and white American populations.

**Methods:** This project prioritizes the first-hand testimony of people with lived experience, both PLWD and care partners. We conducted a series of interviews with members from Black, LGBTQ+, and white communities in 2021 and 2022 to gain authentic testimony. Interviews were led by members of the respective communities, with our research team on “listen only” mode.



**Results:** There are notable differences in how each community talks about agitation – including identifying early symptoms; conversations with families, communities, and HCPs; and determining pathways for care and treatment. From our conversations with members of the Black community we heard statements like, “what goes on in the house stays in the house, we don’t discuss [dementia] with other people” and “our people don’t trust a lot of stuff being put out there by doctors and scientists”. From the LGBTQ+ community we heard statements like “I definitely felt that we weren’t taken as seriously or heard because we were two women”. All underscore the sweeping implications of history, stigma, bias, and culture on how diverse communities experience and respond to agitation and care.

**Conclusion:** Culturally competent care for agitation among PLWD and care partners requires HCPs and other supporters to balance two things at once: the standard diagnostic definition of agitation, but also the cultural humility and openness to listen and seek to understand how PLWD and care partners express their experiences and observations with agitation.

## **P140: Midlife diet and risk of dementia/mild cognitive impairment**

**Author:** Masaru Mimura

The Japan Public Health Center-based prospective (JPHC) Study is a large population-based cohort. Midlife dietary intake was assessed on two occasions: in the years 1995 and 2000 (aged 45-64 in 1995). In 2014-2015, approximately 1300 participants from Saku district in Nagano prefecture completed a mental health screening including later life depression and cognitive decline (i.e., mild cognitive impairment (MCI) and dementia). We used logistic regression analyses to calculate odds ratios (ORs) for MCI and dementia. Based on this survey, we found the following characteristics of midlife diet, which may be useful information to prevent cognitive decline/dementia.

1. High-density lipoprotein cholesterol (HDL-C) and later cognitive decline (Svensson et al. Transl Psychiatry, 2019): Midlife high-density lipoprotein cholesterol (HDL-C) is a measure which could help identify individuals at reduced risk of developing age-related cognitive decline. Compared to the lowest HDL-C quartile, the highest HDL-C quartile was significantly inversely associated with MCI. High HDL-C (quartiles 2-4) was inversely associated with dementia compared to low HDL-C (quartile 1).
2. Dietary fish and n-3 polyunsaturated fatty acid (PUFA) and later cognitive decline (Nozaki et al. J Alzheimers Dis, 2021): Higher intake of fish, eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) and docosapentaenoic acid (DPA) in midlife significantly reduced risks of dementia.
3. Intake of soy and the isoflavone and later cognitive decline (Svensson et al. J Alzheimers Dis, 2021): Compared to the lowest dietary quartile of energy-adjusted isoflavone genistein intake, the highest quartile was significantly associated with late-life cognitive impairment.
4. Cancer/diabetes and later cognitive decline (Sadahiro et al. Psychiatry Clin Neurosci, 2019): Comorbid cancer and diabetes from midlife may increase the risk of MCI or dementia in later life. In addition to the increased dementia risk associated with diabetes on the basis of insulin resistance, cancer and cancer therapies may also interfere with cognitive function via insulin resistance.

## **P149: Chronic fatigue syndrome and its response to the use of a multimodal antidepressant**

**Authors:** Nora Burca, Miguel Ángel Monferrer, Jordi Valls, Alejandro Tenorio. Geriatric Unit. Corporació de Salut del Maresme i la Selva. Calella-Blanes. Catalonia.

**Objective:** We present a case that shows a very favourable response of the antidepressant vortioxetine in the functional and cognitive recovery in a patient with Chronic Fatigue Syndrome and its role as a pain modulator.

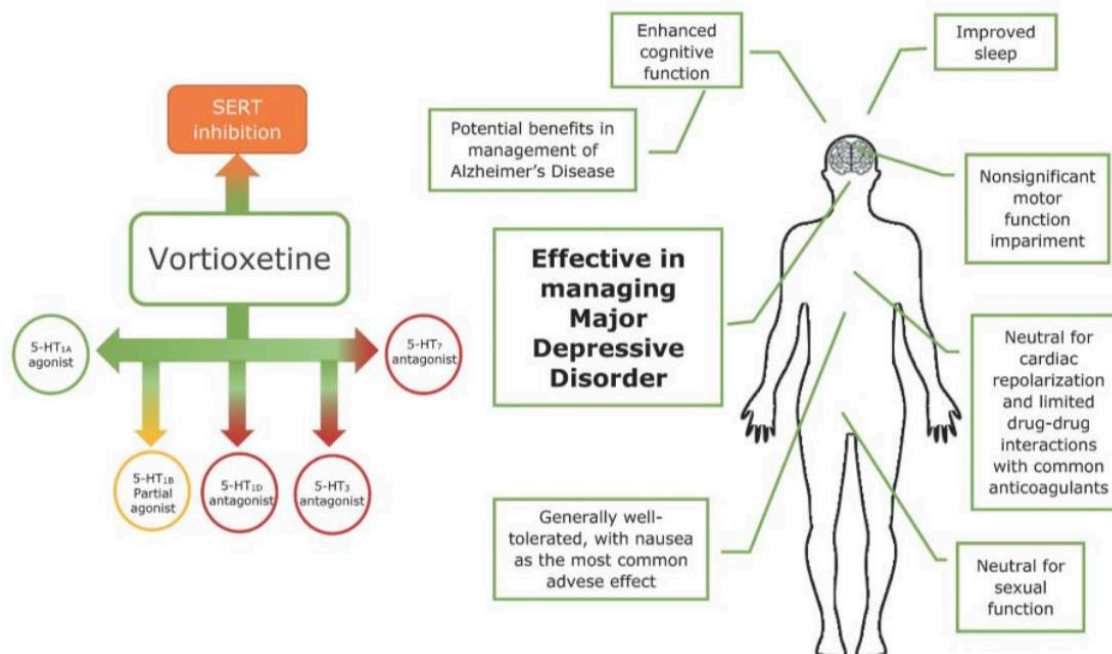
**Methods:** This is an observational study using a clinical case.

An 80-year-old female patient admitted to the Postacute care unit for recovering her functional baseline following surgical intervention for a hip fracture. On admission, the main symptom was residual pain at the level of the operated lower limb, as well as allodynia and a tingling sensation, which did not subside with conventional analgesia. During admission she also presented, insomnia, daytime hypersomnolence, bradypsychia, and emotional instability in the form of easy crying. It is worth mentioning that prior to admission the patient presented with multiple nonspecific somatic complaints, such as fatigue, headache, myalgia, and arthralgia, adding over time, great difficulty in planning and performing household tasks. The functional progress of the patient during admission was very slow, mainly due to the combination of lack of engagement, together with episodes of irritability, restlessness and suffering from fear of falling syndrome. Given the suspicion of previously undiagnosed Chronic Fatigue Syndrome, exacerbated by the decline in her functional baseline after surgery, treatment was started with vortioxetine in addition to non-pharmacological measures and psychotherapy, obtaining excellent results in approximately 4 weeks.

**Results:** Great effectiveness of vortioxetine in the treatment of Chronic Fatigue Syndrome and in the control of concomitant pain (despite that indication is not included in the molecule's data sheet). The patient followed a very favourable evolution achieving, on discharge, an ad integrum recovery of her functional state.

**Conclusion:** As presented in this case, treatment with multimodal antidepressant treatment (vortioxetine) could have positive impact for patients with Chronic Fatigue Syndrome, achieving improvements in the affective-cognitive aspect and controlling the pain related to this syndrome, avoiding polypharmacy.

### Effects of multimodal activity of vortioxetine



## **P151: A Chronic Grief Management-Intervention-Video: A Profile of the Sample**

**Authors:** Olimpia Paun, Arlene Miller, Sarah Ailey, Ben Inventor, Masako Mayahara, Jessica Bishop-Royse, Hugh Vondracek

**Objectives** of this presentation are to:

- Describe the Chronic Grief Management Intervention-Video (CGMI-V) – an ongoing stage I clinical trial
- Describe the profile of the study sample using baseline data

**Study purpose:** to pilot-test the CGMI-V for establishing effect sizes in caregiver outcomes including chronic grief, symptoms of depression and anxiety, positive states of mind, satisfaction with care in the facility and conflict with staff.

**Methods:** Participants were randomized to either a control condition or to CGMI-V, a manualized intervention delivered on-line over eight consecutive weeks to family caregivers of persons diagnosed with dementia who were placed in long-term care. Caregivers were measured with standardized demographic and situational surveys (baseline only) and with the following instruments at weeks 8 and 24:

- Knowledge of Alzheimer's (FKAT)
- Marwit-Meuser Caregiver Grief Inventory (MM-CGI)
- CES-D 20
- Family Perception of Caregiver Role
- Family Perception of Caregiving Tool
- State Trait Anxiety Instrument
- Positive States of Mind

Recruitment was conducted via direct contacts with facilities, radio and online advertising.

**Results :** For the purposes of this presentation, we are reporting only baseline demographic and situational characteristics of the entire sample. Enrollment closed in November, 2022. The study remains open for follow-up only. The final sample size is 99 participants (Intervention=50; Control=49) recruited from across 14 states in the USA.

**Participant Characteristics:** There were no significant differences in demographics between participants in both conditions. The sample was predominantly Caucasian and female with over two thirds being highly educated, adult children. The average caregiver age was 62.06 ( $SD=10.20$ ) for those in the CGMI-V condition and 58.18 ( $SD=11.27$ ) respectively, for those in the control condition. Similarly, there were no significant differences in care recipient demographics. The sample was predominantly Caucasian and female. Over one third of care recipients across both conditions were diagnosed with dementia within the past four years of interviewing. Further analyses are pending.

**Conclusions:** Sample characteristics illuminate similarities across dementia caregivers who placed family members with dementia in long-term facilities across 14 states in the USA. These findings may inform future grief interventions.

## **P154: Mild Behavioral Impairment (MBI) in a sample of general population aged > 55: associations with degree of cognitive impairment.**

**Authors:** Gracia-García P, López-Antón R, de la Cámara C, Santabárbara J, Lobo E, Lobo A.

**Objective:** The present study aims to determine the prevalence estimates of MBI and specific MBI domains in a large sample of the general population, by degree of cognitive impairment (CI).

**Method:** A representative community sample of individuals aged 55+ (n=4803) (ZARADEMP Study) was studied. MBI, and specific MBI domains, were assessed according to ISTAART-AA MBI criteria, using the Geriatric Mental State (GMS). In accordance with these criteria, clinically significant anxiety, depression, and dementia were excluded. For the standardized degree of CI Pernecky et al.'s criteria were applied: normal (MMSE 30), questionable (MMSE 26-29), mild CI (MMSE 21-25), moderate-severe CI (MMSE <21).

**Results:** The prevalence of MBI, and specifically the domain Decrease Motivation (DM), increased progressively and significantly by degree of CI, the differences being significant between all cognitive groups. After control by age and education, DM was 2- and 4.5-times more frequent in subjects with mild CI (10.6%) and moderate-severe CI (18.3%), respectively, than in cognitive normal (5.8%). Affective Dysregulation (AD) was 1.7-times more frequent in mild CI (26.4%) (vs 20.4% in normal). Impulsive Dyscontrol (ID) was 2- and 7.9-times more frequent in mild CI (8%) and moderate-severe CI (23.5%) than in cognitive normal (4.7%). And Abnormal Perception and Thoughts (APT) was 6-times more frequent in moderate-severe CI (10%) (vs 1.4% in cognitive normal).

**Conclusion:** Our results confirm an increase of MBI prevalence across the spectrum of CI. However, each specific domain of MBI shows a different pattern of association with CI. Our results support the relevance of studying MBI domains independently.

## **P157: Stigma of anxiety and depression: a comparison between older and younger adults**

**Authors:** Philippe Landreville, Ariane Lortie, Helen-Marie Vasiliadis, Pierre-Hugues Carmichael, Samuel Chrétien, Louis-Philippe Germain, Laurie-Anne Guimond

**Objective:** Anxiety and depressive disorders are among the most frequently diagnosed mental health problems in older adults. Despite the availability of effective treatments, underutilization of mental health care services is problematic and more pronounced in the older population compared to young adults. Stigma of mental illness may be one explanation for this underutilization as it may impede help-seeking and participation in treatment. The objective of this study was to compare older and young adults on different types of stigma related to depression and anxiety while adjusting for potentially confounding variables.

**Methods:** Young adults aged 18 to 36 years (n = 96) and older adults aged 60 years and over (n = 103) completed questionnaires measuring self-stigma, personal stigma, and perceived stigma related to anxiety and depression.

**Results:** We found that older adults have higher levels of personal stigma but lower levels of perceived stigma and self-stigma than young adults.

**Conclusion:** The results provide some support for the idea that older adults have greater stigma for mental illness and suggest the importance of age-differentiated interventions for reducing the stigma of mental illness.

## **P158: Efficacy of a self-help cognitive-behavioral therapy (GSH-CBT) guided by lay providers for generalized anxiety disorder (GAD) in older adults: preliminary results**

**Authors:** Sébastien Grenier, Philippe Landreville, Patrick Gosselin, Pierre-Hugues Carmichael.

**Background:** Only a small proportion of older adults with generalized anxiety disorder (GAD) seek professional help. One reason is the lack of access to mental health professionals licensed to provide psychotherapy. One way to improve access to psychotherapy is through guided self-help (GSH). GSH based on the principles of cognitive-behavior therapy (GSH-CBT) can be guided by trained lay providers (LPs). The purpose of this poster is to report preliminary results from a multisite randomized controlled trial testing the efficacy of a GSH-CBT guided by LPs for GAD in older adults.

**Methods:** The sample included 150 participants ( $\geq 60$  years old) with a diagnosis of threshold or subthreshold GAD randomly assigned to: 1) GSH-CBT guided by LPs ( $n = 75$ ) or 2) waiting list ( $n = 75$ ). The GSH-CBT lasted 15 weeks. Participants used a manual presenting weekly reading and at-home exercises. They also received weekly support calls (30 minutes maximum) by LPs (undergraduate psychology students) supervised by psychologists. Repeated-measures regression models were used to compare changes in the groups before and after 15 weeks on three outcomes: severity of GAD symptoms (Generalized Anxiety Disorder 7-item; GAD-7), tendency to worry (Penn State Worry Questionnaire; PSWQ), and level of anxiety (Geriatric Anxiety Inventory; GAI).

**Results:** At the first assessment, both groups were similar in terms of age, sex, level of education, marital status, occupation, and did not differ significantly on outcomes. The GSH-CBT group decreased significantly on all three outcomes (GAD-7: -4.8, 95% CI [-5.7, -3.8], PSWQ: -11.7; 95% CI [-13.6, -9.9], GAI: -5.3 95% CI [-6.5, -4.1]) while the waiting list group remained stable over 15 weeks (GAD-7: -0.3, 95% CI [-1.2, 0.6], PSWQ: 0.7; 95% CI [-1.2, 2.5], GAI: -0.7 95% CI [-1.9, -0.5]).

**Conclusions:** GSH-CBT guided by LPs appears to be an effective intervention for reducing severity of GAD symptoms, tendency to worry, and level of anxiety in older people with GAD. Further analyses will be conducted to test whether the intervention differs in efficacy between participants with a threshold vs. subthreshold GAD. The maintenance of long-term gains (6 and 12 months after the intervention) will also be tested.

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## **P159: Low Cognitive Reserve as a Risk Factor for Delirium in Elderly: A Case-Control Study**

**Authors:** Profitasari Kusumaningrum, Martina W.S. Nasrun<sup>1</sup> Department of Psychiatry, Faculty of Medicine, Universitas Indonesia-RSUPN dr. Cipto Mangunkusumo, Jakarta, Indonesia

**Objective:** Cognitive Reserve (CR) developed from observation that several individuals show fewer cognitive impairment compared to others with the same brain injuries or neuropathology. Cognitive reserve is a potentially modifiable characteristic. Most of studies on cognitive reserve were conducted on chronic progressive diseases such as dementia. This study aims to define the role of cognitive reserve in geriatric delirium cases.

**Methods:** This case-control study was conducted in the acute geriatric inpatient of Cipto Mangunkusumo Hospital, Jakarta, Indonesia on June to September 2019 that consisted of 33 subjects with delirium and 33 controls. The measurement of cognitive reserve was done using the Indonesian adaptation of Cognitive Reserve Index questionnaire (CRIq) with 3 subscales, i.e. Education, Work Activity and Leisure Time.

**Results:** We found that the CRIq scores of delirium patients were lower compared to the non-delirium controls both on total and each subscores, with a statistically significant mean difference ( $p < 0,01$ ). Patients with low-medium cognitive reserve also more likely to develop delirium compared to those with medium-high cognitive reserve (OR 9; 95% CI 2.86 to 28.22).

**Conclusion:** Low cognitive reserve may serve as a risk factor for delirium in the elderly. The measure of CRI in the geriatric inpatients unit can be used to determine those at risk of developing delirium. Further research are warranted to elaborate potentially modifiable variables of cognitive reserve to minimize the risk of delirium.

**Keywords:** cognitive reserve, delirium, elderly.

## **P161: Heterogeneity and Clinical Uncertainty of BPSD Therapeutics**

**Authors:** Lon S. Schneider, Rebecca Howard

**Objective:** BPSD is typically treated as a singular entity. Yet it is heterogeneous and challenges simple phenotyping by behavioral inventory. Some investigators recognize BPSD more as 'obstreperous,' disruptive behavior, or unwanted behavior. Others conceptualize it as a neuropsychiatric entity with an underlying pathobiology, or as the expression of an unmet need. Treatments for BPSD have been challenging since before the first clinical trials with chlorpromazine.

**Methods:** We systematically reviewed interventional studies to understand the successes, limitations, and knowledge gaps in terms of methodology that might misinform practice. Questions addressed included: What do these studies look like? How is BPRS operationalized, and does it vary between studies? What interventions have been tested? How are we measuring eligibility and outcomes? Are there methodological factors that influence the outcomes and validity of these trials? Are the trials methods fit for purpose and how can we better test interventions?

**Results:** From a search yielding 6497 candidate studies, we included 474 of which 413 were randomized, 340 parallel group, 197 double-blinded, 51 unblinded. About 30% were in nursing homes only and 20% outpatient only. Most NH studies were drug studies; most outpatient studies were non-pharmacological. Over time, study durations consolidated to 6–12-week treatment periods and samples grew exceptionally large, involving 400 to 1200 participants.

Of studies that specified a target, 171 were for 'agitation.' 50 investigated sleep disturbance, 25 apathy, 25 depression, 21 psychosis. 150 described only 'BPSD' or 'neuropsychiatric symptoms.' Two-thirds of the agitation

studies were single drug interventions; most used a scale score cut-off to define agitation. Important characteristics, secular trends in design, and quality of the BPSD studies will be detailed.

**Conclusions:** The important trends in methods for interventions and assessment of BPSD are not necessarily toward quality. Eligibility criteria have become designed for convenience, are misspecified relying on the same scales used for outcomes, although randomization is the rule, allocation concealment and treatment blinding is poor. There is marked autoregression of outcomes. Studies have become larger and designed to detect small effects even when clinical meaning is uncertain. BPSD studies need reconsideration and a few simple fixes to better discover effective treatments. Only a little care is needed to improve the quality and reliability of studies. This includes study management that is independent of patient selection and outcomes and from most procedures, and truly blinded assessments.

## **P168: Resilience and cortical thickness in the medial orbitofrontal cortex in Japanese older cancer survivors: A population-based cross-sectional study**

## **P173: Structural Changes in the Hippocampal Subfields in Early-Onset Mild Cognitive Impairment**

**Author:** Seok Woo Moon

**Objective:** The aim of this study was to examine the structural change in the hippocampal subfields in early-onset (EO) mild cognitive impairment (MCI) patients associated with the APOE  $\epsilon$ 4 carrier state.

**Methods:** This study had 50 subjects aged 55-63 years, all of whom were diagnosed with amnesic MCI at baseline via the Korean version of the Consortium to Establish a Registry for Alzheimer's Disease Assessment Packet (CERAD-K). The EO-MCI patients were divided into the MCI continued (MCIcont) and Alzheimer's disease (AD) converted (ADconv) groups 2 years later. The volumes of hippocampal subfields were measured for all the subjects. The calculations were based on the change of the volumes between the 2-year-interval brain Magnetic resonance image (MRI) scans between MCIcont and ADconv groups according to the Apolipoprotein  $\epsilon$ 4 (APOE  $\epsilon$ 4) carrier state.

**Results:** There was a significant correlation between APOE  $\epsilon$ 4 allele and structural changes in several hippocampal subfields. The volume reduction in cornus ammonis 1 (CA1) field and subiculum, especially in the APOE  $\epsilon$ 4 carriers. The significance was more prominent in ADconv group.

**Conclusion:** These results suggest that the possession of APOE  $\epsilon$ 4 allele may lead to significantly greater predilection for the structural changes in hippocampal subfields, showing significant changes, especially in the ADconv patients compared with MCIcont patients.

**KEY WORDS:** Early-onset · Mild cognitive impairment · Hippocampus · APOE  $\epsilon$ 4 · Atrophy.

## **P175: Cohort differences in depressive burden in old age: role of psychosocial, behavioral, and functional factors**

**Authors:** Franziska Steffens (Stockholm University, Department of Public Health), Serhiy Dekhtyar (Aging Research Center, Karolinska Institute, Stockholm Sweden), and Federico Triolo (Aging Research Center, Karolinska Institute, Stockholm Sweden)

**Objective:** Rapid societal changes occurred during the course of the 20th century. Previous literature has found an increase in depression over time for younger and middle-aged populations. Among older adults, the prevalence of major depression has been found to be stable over time, while for the milder forms, the findings are limited by the largely non-representative nature of analyzed samples. Given the dramatic secular changes in several factors linked to old-age depression, a careful examination of depressive symptom burden and prevalence of depression in representative cohorts of similarly-aged older adults separated in time is required.

**Methods:** We will analyze data on 2,041 older adults from the Swedish National Study on Aging and Care in Kungsholmen. Separate individuals, aged 60 and 81 years were assessed with a Comprehensive Psychopathological Rating Scale (CPRS) during detailed clinical examinations, separated in time by 15 years (2001 vs. 2016). Information on 21 depressive symptoms, is subsequently combined into diagnoses of *major* depression (presence of at least one core symptom [low mood and/or loss of interest], and at least five out of the nine symptoms); *minor* depression (presence of at least one core symptom, and two to four symptoms in total), and *subsyndromal* depression (presence of at least two symptoms in the absence of any other depression diagnoses). Psychosocial (loneliness, bereavement), behavioral (alcohol consumption, smoking), and functional factors (impairments in activities of daily living) are used as potential explanatory factors for any observed cohort differences in symptom burden or prevalence of depression.

**Results:** For the 60-year old age-group, comparison of symptom burden and diagnostic status will be done across 739 participants assessed in 2001 and 677 people assessed in 2013. For the 81-year old age-group, comparisons will involve 236 people assessed in 2001, 194 people assessed in 2010, and 195 people assessed in 2016.

**Conclusion:** Preliminary results are expected by March, once data entry and cleaning are completed. We hypothesize that the burden of depressive symptoms and the prevalence of depression will be lower in later born cohorts and that explanatory factors may account for some of the cohort effect.

## **P177: Motoric cognitive risk syndrome is associated with MRI-derived brain age: the Arakawa Geriatric Cohort Study**

**Authors:** Shogyoku Bun<sup>1</sup>, Daichi Sone<sup>2</sup>, Ryo Shikimoto<sup>1</sup>, Hisashi Kida<sup>1</sup>, Shinichiro Nakajima<sup>1</sup>, Yoshihiro Noda<sup>1</sup>, Hidehito Niimura<sup>1</sup>, Masaru Mimura<sup>1</sup>

<sup>1</sup> Department of Neuropsychiatry, Keio University School of Medicine, Tokyo, Japan <sup>2</sup> Department of Psychiatry, Jikei University School of Medicine, Tokyo, Japan.

**Objective:** Motoric cognitive risk (MCR) syndrome is characterized by slow gait speed and subjective cognitive decline, which could predict future dementia. Previous research reported the associations between MCR and gray matter volume reduction in total and specific cortical regions and increased white matter hyperintensities in the brain. However, knowledge is scarce on the relationship between MCR and neuroimaging-derived brain age. The present study explored the association between MCR and brain-predicted age differences.



**Methods:** The present study is a cross-sectional study that involved 1,099 community-dwelling older adults in the Arakawa Ward, Tokyo, Japan, who were between 65 to 84 years old in 2016. In defining MCR, subjective cognitive decline was deemed positive for those who answered "Yes" to the question, "Do you feel that you have more problems with memory than most?" in the Geriatric Depression Scale. Slower gait speed was defined as walking slower than the -1 standard deviation of the age- and sex-stratified gait speed. Brain age was predicted on the 1,021 participants with brain magnetic resonance imaging without severe artifacts or lesions. We used the support vector regression algorithm using MATLAB's "fitsvm" function, applying ten-fold cross-validation to the results of primary component analysis of the spatially normalized gray-matter images. We calculated the brain-predicted age difference (Brain-PAD) by subtracting the chronological age from the predicted brain age. After excluding the participants with dementia (N=23), the difference in the mean Brain-PAD between MCR+ and MCR- was compared with the Student's t-test. The association between MCR and Brain PAD was examined with multiple regression analyses, adjusting for clinical-demographical data.

**Results:** The median ages were 72 for both MCR+ (N=96) and MCR- (N=902). The mean Brain-PAD was 3.29 for MCR+ and -0.19 for MCR- ( $p < .001$ , Hedges'  $g = -0.504$ ). Multiple regression analysis showed a significant association between Brain-PAD and MCR (standardized  $\beta = 0.159$ ,  $p < .001$ ) after adjusting for covariates.

**Conclusion:** The present findings suggest that MCR reflects accelerated brain aging, which may increase the risk of neurodegeneration. Future studies should examine the longitudinal trajectories of brain age and incident dementia in participants with MCR.

## **P182: Effects of Physical Environment on Quality of Life of Residents in Dementia Facilities in Canada & South Korea: A Longitudinal Observational Study**

**Author:** Sook Young Lee, Lillian Hung, Habib Chaudhury

Approximately 44% of new residents of care facilities in Korea were diagnosed with dementia (Song, Park & Kim, 2013), and in Canada, about one-third of older adults younger than 80 who have been diagnosed with dementia live in long-term care facilities (Canadian Institute for Health Information, 2018). Due to the rapid increase of these figures in the future, continuing to provide assistance services and appropriate environment for residents with dementia could be challenging for both countries.

This longitudinal observational study aims to examine whether residents with dementia in long-term care facilities with variability in physical environment attributions in Vancouver (N=11), Canada and Seoul (N=9), South Korea had a distinction in their quality of life (QoL). Physical environmental assessment was conducted using the Therapeutic Environment

Screening Survey for Nursing Homes (TESS-NH) (Sloane et al., 2002). QoL was assessed three times over one year using Dementia Care Mapping tool (DCM) (University of Bradford, 2010). The results of the study demonstrated that the residents with dementia living in an institutional large-scale setting showed statistically more withdrawn behavior and spent more time to be negative mood or affect compared to the ones in a small-scale setting. This study also found that the number of potential positive behaviors of residents in a small-scale setting was three times higher than that of residents in an institutional large-scale setting. When looking at the distinction between two countries in the behavior category with a large average time difference, the residents with dementia in Korea had shorter meal/dessert times compared to those in Canada. The study supports that the small-scale homelike environment is intensely associated with a therapeutic environment for older adults with dementia.

## **P184: Creativity 225during COVID-19: Evaluating an online TimeSlips storytelling program for people living with dementia during quarantine in Cloumbia**

**Authors:** Stephen Fay, Maritza García-Toro, Liliana Hicapié Henao, Ángela Andrade Villegas, Francisco Lopera

**Objectives:** Since its first implementation in 1998, significant evidence has been presented of the positive impact of the TimeSlips creative expression method for people with dementia in long-term care (LTC) settings. Our research with people with dementia in Colombia extends this evidence in important new directions: it is the longest TimeSlips study to date (at 32 consecutive weeks); it is the first to evaluate the feasibility of the online delivery of the method (in response to the strict COVID-19 quarantine in Colombia); it is the first study to investigate the impact of the TimeSlips method on the personhood, quality of life and psychological well-being of Spanish-speaking participants in non-LTC settings in the Global South.

**Methods:** Trained facilitators provided weekly, one-hour TimeSlips group storytelling sessions via Zoom over 32 consecutive weeks to eight participants with dementia. Semi-structured interviews of participants and care partners were conducted within one week of the final intervention. Thematic analysis evaluated the resultant qualitative data.

**Results:** Our online implementation of the TimeSlips creative expression method reinforced key facets of participants' personhood (self-expression and self-perception, which led in turn to increased care partner appreciation), had a positive impact on key domains of quality of life (mood, energy levels and cognitive function) and stimulated a key aspect of psychological well-being (the formation and maintenance of social ties).

**Conclusions:** Our study demonstrated that the online delivery of the TimeSlips method to participants who remain in their own homes is both feasible and effective. With more than 2.5 million people with dementia in Latin America (most of whom remain at home post-diagnosis) and a predicted 180% increase in prevalence to 2050 (compared with a 70% increase in Europe), our pioneering study offers important precedents for future, related research, in which a direct comparison between the benefits of online versus face-to-face delivery of the method would be important next step.

## **P186: Longitudinal changes in the cerebrospinal-fluid volumes in patients with Alzheimer's disease**

**Authors:** Takashi Suehiro<sup>1)</sup>, Hideki Kanemoto<sup>1)</sup>, Mamoru Hashimoto<sup>2)</sup>, Fuyuki Koizumi<sup>1)</sup>, Shigeki Katakami<sup>1)</sup>, Kayo Takeda<sup>1)</sup>, Daiki Taomoto<sup>1)</sup>, Yuto Satake<sup>1)</sup>, Shunsuke Sato<sup>1)</sup>, Tamiki Wada<sup>1)</sup>, Kenji Yoshiyama<sup>1)</sup>, Kazunari Ishii<sup>3)</sup>, Manabu Ikeda<sup>1)</sup>

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**Objective:** Although the previous studies indicated that impaired cerebrospinal fluid (CSF) dynamics might contribute to the pathophysiology of Alzheimer's disease (AD), the longitudinal changes of CSF volumes in AD has

been still unclear. In this study, using the methodology of quantitative assessment of CSF volumes in idiopathic normal pressure hydrocephalus (iNPH), we assessed longitudinal changes in CSF volumes in AD patients.

**Methods:** The subjects were the patients with mild cognitive impairment and dementia due to AD who visited Osaka University Hospital from November 2009 to October 2018. We excluded the patients with gait disturbances and MRI findings such as Disproportionately enlarged subarachnoid-space hydrocephalus (DESH), which was the suggestive finding of iNPH. For each subject, MRI was performed in the first visit and 1 year later. We quantitatively measured CSF volumes in DESH-related regions, such as ventricle systems (VS), Sylvian fissures (SF), and sulci at high convexity and the midline (SHM), using an automatic brain volumetric software program (AVSIS) (Ishii et al. 2006, 2013). The ratio of each regional volume to the intracranial volume was calculated and we compared these parameters between two visits.

**Results:** We enrolled 98 patients with AD (mean (SD) age = 76.0 (5.7)). Wilcoxon signed rank test revealed that, while the ratios of CSF volumes in VS and SF significantly increased during the one-year observation (VS: 4.01 (1.05) % vs 4.14 (1.09) %,  $p < 0.001$ ; SF: 1.40 (0.21) % vs 1.42 (0.22) %,  $p = 0.007$ ), those in SHM significantly decreased (4.30 (0.70) % vs 4.23 (0.69) %,  $p < 0.001$ ). The change ratio of relative volumes in VS was correlated with those in SF and SHM ( $r = 0.451$ ,  $p < 0.001$ ;  $r = -0.350$ ,  $p < 0.001$ ).

**Conclusion:** In patients with AD, the CSF volumes in VS and SF increased while CSF volumes in SHM decreased. This trend of the longitudinal change was similar to the change in the patients with iNPH. The finding of this study indicates that, in the patients with AD, CSF dynamics may be impaired like the patients with iNPH.

**Keywords:** cerebrospinal fluid (CSF), Disproportionately enlarged subarachnoid-space hydrocephalus (DESH), Alzheimer's disease

## **P188: Engagement and refusals of care: a naturalistic observation study of personal care interactions between caregivers and people with advanced dementia**

**Authors:** Backhouse, T., Jeon, Y-H., Killett, A., Mioshi, E

**Objective:** Personal care interactions can provide important opportunities for caregivers to engage with a person living with advanced dementia but may also prove to be a difficult experience; why this so is not completely understood. We aimed to examine the person's engagement and refusals of care in personal care interactions and identify both successful and difficult interpersonal dynamics to enable learning from each setting to inform educational resources.

**Methods:** One-off video-recorded observations of personal care interactions between caregivers (care-home staff or family carers) and people with advanced dementia in the UK (total observation time 03:01:52). Observations were analysed using the Menoh Park Engagement Scale (MPES) (Camp et al., 2015) and the Resistance-to-Care scale (RTC-DAT) (Mahoney, 2015) to score 5-minute video sections, and inductively with qualitative content analysis.

**Results:** Active engagement of people with dementia was observed in 66% of observations. Refusals of care were present in 32% of observation time. Generally, caregivers emanated a nurturing attentiveness and people with dementia were focused and engaged throughout care activities. Rare difficult interactional components were characterised by the person with dementia appearing to show uneasiness and caregivers being flustered and

uncertain. However, caregivers from both family and care-home settings were predominantly attuned to the person and skilled in effortlessly supporting them through the care activity.

**Conclusions:** Findings provide real-world empirical evidence which reenergises the concept of person-centredness in dementia care. Personal care activities typically created opportunities of engagement, rather than sites of conflict, for people with advanced dementia. The findings provide much needed insight into ways to improve care experiences for people with advanced dementia. Appropriate training/guidance for care-home staff and family carers could support more engaged and pleasurable care experiences for people with dementia.

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## **P193: Participation of faith-based organizations in the secular health- and welfare- care system for the older people in Japan: evidence and challenges**

**Authors:** Tsuyoshi Okamura, Chiaki Ura, Ryosho Shoji, Akinori Takase, Yukan Ogawa

**Objective:** Due to longevity, universal health coverage, declining population, and a stable society, it is estimated that the number of people with dementia will reach 10 million by the mid-21st century, accounting for 10% of the total population in Japan. To move toward a dementia-friendly community, it is essential to develop innovative and effective dementia care. However, human and economic resources are limited. Therefore, we focused on traditional Buddhist denominations that have organizations, educational systems, human resources, networks, and care venues. The fundamental question of this study is: Japanese Buddhism has created basis for mindfulness-based cognitive therapy, but is it also innovative in the care of older people?

**Methods:** We looked for papers that 1) were written in a medical rather than a religious context, 2) were written in English, and 3) dealt with the care of the older people in Japan.

**Results:** 1) Institutional care workers' need for Buddhist priests for helping anxiety of older residents was reported. 2) Effectiveness of community cafés for the family caregivers of people with dementia in the Buddhist temples were reported. 3) Potentials of monthly visit to bereaved families, Buddhist priests' tradition, as the outreach of grief care was suggested. 4) Care workers' own ideas about death after working in the landscape of dying and death was reported by the interview which used Buddhist priests as the interviewers.

**Conclusion:** Participation of Buddhist priests as 1) spiritual cares for the residents in the institutions, 2) carers for the family carers in the community, 3) carers of the bereaved families in the outreach activity, and 4) carers for the care workers, were reported. However, robust evidence was not enough. From the standpoint of Japanese clinicians, there are too few papers compared to the actual contributions. More studies should be done which might also work as external monitoring. Traditional Buddhism in Japan has a closed membership system which is based on the family gravesite system and is generally not enthusiastic about propagation, which would also be compatible with a secular care system.

## **P195: The evolution of a community mental health team in Singapore: Community Psychogeriatric Programme**

**Author:** Dr Vanessa Wai Ling Mok

Mental health issues in the elderly were often overlooked in the past, with mental illness often being underdiagnosed, undiagnosed or misdiagnosed. As such, mental healthcare in the elderly was often insufficient, leading to significant adverse outcomes in individuals and caregivers, as well as an added burden to the healthcare system.

The Community Psychogeriatric Programme (CPGP) was set up in Changi General Hospital in 2007 to serve the Eastern Region in Singapore. CPGP comprises of a multidisciplinary team of psychiatrists, psychologists, nurses, medical social workers, occupational therapists, a physiotherapist and administrative executives. The programme objective is to provide community mental health services for early detection and treatment of psychogeriatric disorders and to allow aging-in-place within the community. This is achieved through collaborating with social and healthcare agencies, as well as caregivers, to meet the needs of the elderly to maintain them in the community for as long as possible.

Over the past 16 years, the proportion of Singapore's population aged 65 and above have grown, mental health literacy in Singapore has improved, and community mental healthcare providers have increased. CPGP's community partnerships multiplied, including social eldercare agencies such as dementia daycare centres, general medical practitioners in Primary Care Clinics and Community Hospitals, and residential facilities such a sheltered homes and nursing homes. The CPGP team pivoted to focus more heavily on networking with community partners, training and upskilling them with knowledge of geriatric mental healthcare and empowering them to provide care and support in the community setting. The goal was to right-site care, promoting early detection and intervention in the community. Home based consultations or nursing home consultations, including telepsychiatry, were reserved for elderly patients who really could not access specialist psychogeriatric outpatient services in the hospital.

Looking back on the work CPGP has done, this is a reflection of our journey, reviewing the strategies we have employed to improve community psychogeriatric care, our achievements thus far, and the challenges we have been faced with as the healthcare landscape evolved in Singapore.

## **P198: Correlation between depressive symptom severity and functional status in patients with mild cognitive impairment**

**Author:** Wangyoun Won

**Objectives:** Although depression is a common co-morbid disorder in patients with mild cognitive impairment (MCI), not all patients with MCI exhibit depressive symptoms. This study aimed to investigate the effect of depression on cognitive and functional decline in MCI.

**Methods:** 281 patients with MCI (MCI) defined by 0.5 score on Clinical Dementia Rating were included in the study. Patients were divided into three groups based on their Geriatric Depression Scale (GDS) scores: MCI without depression (GDS<10, n=50), MCI with mild depression (GDS10~19, n=120), and MCI with severe depression (GDS>20, n=111). Cognitive function tests (cognitive domains in CERAD-K including letter fluency, trail

making test-A and B, and verbal learning test) and Blessed Dementia Scale-Activities of Daily Living (BDS-ADL) were measured. Group differences were analyzed using an analysis of variance (ANOVA). Correlation between GDS scores and BDS-ADL were analyzed.

**Results:** An ANOVA test showed that activities of daily living differed significantly across groups ( $F(2, 276) = 13.53$ ,  $p < 0.001$ ). Post-hoc analysis showed MCI with severe depression had a significantly higher mean BDS-ADL score compared with both MCI without depression and MCI with mild depression (both,  $p < 0.001$ ). Correlation analysis showed significant positive correlation between GDS and BDS-ADL ( $r = 0.366$ ,  $p < 0.001$ ). However, mean scores of cognitive function tests were not different among three groups.

**Conclusions:** The present study suggests that co-morbid depressive symptoms may have negative impact on functional status in patients with MCI. This may further suggest the importance of evaluation and treatment of depressive symptoms in patients with MCI.

## **P202: Post-COVID syndrome presented with psychomotor change and suicidal ideations: a geriatric case report**

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**Background:** COVID-19 is notorious for its neuropsychiatric sequelae. Some patients present with anosmia and cognitive and attention deficits, also known as “brain-fog”. In COVID-19 survivors, psychiatric manifestations such as depression, fatigue, anxiety, and neurocognitive impairments, also known as the “post-acute COVID-19 syndrome” or “long COVID”, were reported in 35% of the patients after the infection. New-onset anxiety, depression, psychosis, seizures, and even suicidal behaviors are also reported. Inflammation was proposed to be the pathophysiology.

**Case Report:** The 68 year-old married female who lived with her husband did not have psychiatric history before this year. She had covid-19 infection 3 months prior to her psychiatric hospitalization. Although she had recovered, she started to have depressed mood, disrupted sleep and anhedonia since then. She became easily anxious and could hardly feed her cats as usual. She was not able to make decisions. She no longer did house chores that she had been doing. Poor appetite led to a loss of body weight from 46 to 40kgs. She had blunted emotional response, and could not cry after her cat died. She went to clinic for help, BZD and antidepressants were given, but the condition persisted. One week prior to hospitalization, her speech became weak, murmuring and could not finish a long sentence. The physiological change can be observed using wearable device. After 3 weeks of treatment, her heart rate, activity and sleep improved. The progress was also recorded via wearable devices and clinical scales.

**Discussion;** In our patient, the depression was associated with circadian rhythm disruption, suicidal ideations and psychomotor slowing. This may reveal some special features of post-COVID depression. In previous studies, antidepressants have proved to be effective in treating post-COVID-19 depression. Sigma receptors are one of the possible mechanisms. Besides, agomelatine, with its melatonergic activity of regulating circadian rhythm, is

proposed to have the potential to inhibit the virus from entering CNS. The activity pattern and circadian rhythm change will be discussed.

## **P206: Older adults' perceptions of social distance toward older adults with depression, suicidal ideas, and suicide attempts**

**Authors:** Yun-Fang Tsai, RN, PhD, Professor, School of Nursing, College of Medicine, Chang Gung University, Taiwan; Shwu-Hua Lee, MD, Physician, Department of Psychiatry, Chang Gung Memorial Hospital at Linkou, Tao-Yuan, Taiwan

**Objective:** Social distance can be used to measure degrees of prejudice in people towards other members of a diverse social group. The objective of this study was to explore older adults' perceptions of social distances toward older adults with depression, suicidal ideas, and suicide attempts.

**Methods:** A cross-sectional survey was conducted. Older adults were recruited by convenience from outpatient clinics of three hospitals in Taiwan.

**Results:** A total of 327 older adults participated in this study. The mean scores of social distances toward older adults with depression, suicidal ideas, and suicide attempts were 20.8 (SD=4.2), 20.8 (SD=4.2), and 26.8 (SD=5.1), respectively. Participants had significantly higher scores on social distance toward older adults with suicide attempters than with depression ( $p<0.01$ ) and suicidal ideas ( $p<0.01$ ). Having them care for my family member was rated as the most disliked situation across three target groups. Participants' social distances toward older adults with depression and suicidal ideas were influenced by their religious beliefs ( $p=0.02$ ). Their social distance toward suicide attempters was influenced by their education level ( $p<0.01$ ). Illiterates and college graduates tended to have significantly higher scores on social distance toward suicide attempters than junior high graduates did.

**Conclusion:** To the best of our knowledge, it was the first study to explore older adults' perceptions of social distances toward older adults with depression, suicidal ideas, and suicide attempts. The results of this study can be used for further intervention of older adults to decrease prejudice against older adults with mental illness.

## **P3: The care of older people with depression in Nigeria: experience in primary care settings**

**Authors:** Akin Ojagbemi<sup>1,2</sup>, Stephanie Daley<sup>2</sup>, Olufisayo Elugbadebo<sup>1</sup>, Yvonne Feeney<sup>2</sup>, and Oye Gureje<sup>1</sup>

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**Background:** There is a large treatment gap for mental health conditions in sub-Saharan Africa where most of affected persons who receive any care do so from non-physician primary health care workers (PHCW). We

examined the experience of PHCW who provide care for older people with depression in Nigerian primary health care (PHC) settings.

**Methods:** Using in-depth key informant interviews, we explored the views of 15 PHCWs, 11 of whom were community health workers (CHWs) and 4 were community health extension workers (CHEWs), selected from 10 rural and urban PHCs in South-Western Nigeria. Two additional focus group discussions, each comprising eight participants drawn from across different cadres of PHCW (N=16), were also conducted. Thematic analysis was carried out using a three-staged constant comparison technique to refine and categorise the data.

**Results:** Four overall themes were identified around PHCWs' experience of caring for older people with depression who presented to PHCs: depression presentation, treatment options, community outreach, and value of mobile technology. Participants identified depression in older people as being characterized by a range of behavioural, cognitive, sleep and bodily symptoms, which were often triggered by economic challenges and poor social support. Common treatment options used by PHCW included general advice and counselling, as well as vitamins and occasional sedatives. Although community outreach and follow-ups are parts of their expected work schedule, PHCW rarely implement these due to non-availability of transport facilities. Mobile technology was identified as a possible way of overcoming this constraint to providing community based mental healthcare for older people.

**Conclusion:** Our findings suggest that mobile technology could be a viable way to expand the quality of service provided to older persons with depression by including community outreach and follow-up.

## **P4: Help-Seeking Factors Among Older Adults on the National Psychosocial Support Helpline on COVID-19 in India**

**Author:** Allen Daniel Christopher

The pandemic has halted the traditional way of life as we used to know it. Due to the highly contagious nature of the virus, physical distancing had become the primary norm for reducing the spread, inevitably leading to social isolation. The older adult population is vulnerable to environmental changes, making them very prone to stress during disasters. Comorbidities, lack of social support, loneliness and uncertainty can be common precipitating factors. The National Institute of Mental Health & Neurosciences, with the Ministry of Health & Family Welfare, commenced a helpline to provide psychosocial support and mental health services in thirteen languages to distressed persons across the Indian subcontinent. The study aims to explore the help-seeking factors due to which older adult callers have sought help from the helpline during the COVID-19 pandemic by analysing the call recordings and, as a secondary objective, to develop a checklist to assess the psychosocial issues of older adults to be used by telephone-based psychosocial care providers. The researcher would use a "Naturalised" conceptual framework of transcription, which would necessitate a literal interpretation of the call recordings. Recordings of the calls made will be transcribed. "Thematic analysis" shall be conducted to find psychosocial issues older adult callers face. Categories would be identified, refined, and specified for coding. A series of key-informant interviews would be conducted online with a group of mental health professionals (defined as per the Mental Health Care Act, 2017) associated with or working in geriatric mental health. The findings from the study would help look into the evolution of psychosocial needs of the older adult population during a pandemic and would also reflect the different aspects of telephone-based psychosocial support and mental health services and their need during disasters. The study's outcome would reveal the needs of this at-risk populace and explore the issues and concerns unique to the COVID-19 pandemic. The findings would also be a substructure for future studies that would probe into research areas analogous to pandemics and other biological disasters, telephone-based psychosocial support, and the older adult populace.



## **P5: Anesthesia Nurses' Self-Perceived Roles and Competences and Their Recognition of Anesthesia Specialist Nurses' Roles and Competencies**

**Authors:** An-Chi Chang, Anesthesia Nurse, Chang Gung Memorial Hospital at Linkou, Tao- Yuan, Taiwan; Yun-Fang Tsai, RN, PhD, Professor, School of Nursing, College of Medicine, Chang Gung University, Taiwan

**Objective:** Older adults are vulnerable to postoperative delirium after surgery and anesthesia, which may affect their cognitive function and increase depressive symptoms. Anesthesia nurses are dominant in the number of anesthesia medical teams. This study aimed to examine the differences between anesthesia nurses' self-perceived roles and competencies and their recognition of the roles and competencies of anesthesia specialty nurses.

**Methods:** A cross-sectional study was conducted. A structured questionnaire based on a guideline of the International Council of Nurses was designed.

**Results:** The participated anesthesia nurses' (N=200) scale scores and mean scores for each question on the self-perceived role and competency scales were lower than the scores on their recognition of the roles and competencies of anesthesia specialty nurse scales. Regarding the self-perceived roles, the scholar domain received the lowest score (Mean= 2.99, SD= 1.00), while the self-perceived competencies, the management domain received the lowest score (Mean = 3.81, SD = 0.67). Similarly, the scholar domain received the lowest score (mean = 3.34, SD = 1.068) in recognition of the roles of an anesthetic specialist nurse, while the management domain received the lowest score (mean = 4.18, SD = 0.58) in the recognition of the competencies of an anesthesia specialist nurse. Anesthesia nurses' self-perceived roles were affected by their nursing ladder and the hospital level at which anesthesia nurses work. Their self-perceived competencies were affected by their nursing ladder and salary. In addition, their recognition of the roles as anesthesia specialist nurses was affected by the hospital level at which anesthesia nurses work. The nursing ladder affected their recognition of the competencies of an anesthesia specialist nurse.

**Conclusion:** This study has demonstrated that anesthesia nurses must improve their self-perceptions of their roles and competencies to satisfy the expectations of their roles and competencies as anesthesia specialty nurses. The findings of this study could be used to develop future anesthesia nurse education and training programs to provide better care to elderly patients.

## **P6: Brain alterations in patients with late-life major depressive disorder and amnesic type mild cognitive impairment during oddball performance: a longitudinal study**

### **P7: Institutionalization and Psychotropics**

**Authors:** Ana Sofia Pozo Vico, Debora Moral Cuesta, Maria Belen Gonzalez Glaria, Francesca Soler Parets, Beatriz Echarte Archanco, Karmele Garaioa Aranburu, Angela Zulema Hernandez Amador, Marina Sanchez Latorre, Chenhui Chen, Rodrigo Molero De Avila Garcia, Marta Lorente Escudero,

**Introduction:** Psychobehavioral symptoms are one of the main causes of institutionalization. After the first months of institutionalization, it could be a good opportunity to consider deprescribing psychotropics, at the same time person-centered non-pharmacological measures should be implemented. Also, if dementia stage is moderate or advanced, acetylcholinesterase-233oloph-inhibitor (AChEI) should be deprescribed.

**Objectives:** To evaluate the difference between the number of psychotropic drugs in institutionalized patients and those who are at home.

**Materials and Methods:** We selected all the patients admitted in the Acute Geriatric Unit of "Hospital Universitario de Navarra" during May and June of two consecutive years (2021 and 2022).

We collected demographic, administrative, functional and pathological variables, as well as delirium predisposing factors, drugs on admission and discharge and Drug-Burden-Index (DBI). A descriptive study was carried out and our hypothesis was analyzed.

**Results:** 658 patients were recruited with a medium age of 87.8, 55.6% were females, 44.5% had dementia and 22% were Institutionalized. The mean hospital stay was 5.8 days and 11.7% died. Functionally, the mean Barthel was 56.5 and Lawton 1.49. Regarding comorbidities: arterial hypertension (81%), Osteoarthritis (55%), heart failure (51%), dislipemia (47%), chronic kidney disease (42%), auricular fibrillation (39%), osteoporosis (33%) and diabetes (31%). Regarding geriatric syndromes: polypharmacy (87,5%), sleep disturbances (48%), hearing loss (43%), chronic pain (41,5%), visual loss and constipation (38%) and depression (33%). The main delirium predisposing factors were: age more than 80 (93.5%), 233olopharmacy, neurological disease (47%), altered senses, chronic pain and depression.

Comparing psychotropic use between institutionalized and non institutionalized: psychotropics (78%vs69%), night psychotropics (72%vs63%), neuroleptics (37%vs18,5%), AchEI (13%vs6,5%), antiepileptics (21%14%). All of them  $p < 0.05$ . However, there were no statistically significant differences in the use of benzodiazepines, antidepressant or antiparkinsonian.

**Conclusion:** Nowadays, institutionalized patients have more psychotropic drugs than non-institutionalized ones, especially neuroleptics. Moreover, they are more frequent in patients with severe dementia.

Maybe, the explanation is DEPRESCRIPTION AVOIDANCE due to an acute fear of a behavioral decompensation.

We recommend educating in non-pharmacological measures and insisting on an adequacy of pharmacological prescriptions periodically.

## **P8: Risk of Delirium According to Demintia and the Use of Psychotropics**

**Authors:** Ana Sofia Pozo Vico, Debora Moral Cuesta, Maria Belen Gonzalez Glaria, Francesca Soler Parets, Beatriz Echarte Archanco, Karmele Garaioa Aranburu, Angela Zulema Hernandez Amador, Marina Sanchez Latorre, Chenhui Chen, Rodrigo Molero De Avila Garcia, Marta Lorente Escudero

**Introduction:** Psychotropics are often used among dementia in order to reduce behavior problems. In patients with dementia, hospital admission is a stressful event, for hospitalization cause as well as for environment change. Consequently, delirium risk is high and this is proportional to dementia stage. In addition, it's known psychotropics promote delirium.

**Objectives:** To evaluate if the patients admitted to an acute geriatric unit develop more delirium depending on dementia diagnosis and dementia stage and depending on the use of psychotropics. To analyze if dementia and psychotropics are two independent risk factors for the development of delirium.

**Material and Methods:** We selected all the patients admitted in the Acute Geriatric Unit of HUN during May and June of two consecutive years (2021 and 2022).

We collected demographic, administrative, functional and pathological variables, as well as the onset of delirium: delirium signs on admission (DSA) and delirium diagnosis on discharge (DDD) and psychotropics use.

A descriptive study was carried out to analyze the relationship between dementia and its stage (GDS), psychotropics use and delirium.

**Results:** 658 patients were recruited with a medium age of 87.8, 55.6% were females, 44.5% had dementia. The mean hospital stay was 5.8 days and 11.7% died. Functionally, the mean Barthel was 56.5 and Lawton 1.49. Regarding comorbidities, the most frequent ones were arterial hypertension(81%), Osteoarthritis(55%) and heart failure(51%). The main delirium predisposing factors were: age more than 80(93.5%), polypharmacy(87.5%), and neurological disease(47%).

Comparing:

-Dementia and non-dementia-patients: DSA(55.7%vs23.7;p0,000), DDD (43.7%vs17.5%;p0.000) -GDS 4-5 and GDS 6-7: DSA(52.7%vs57.2;p0.435), DDD (50.4%vs37.9%;p0.031). -Psychotropics-users and non-psychotropics-users: DSA(42.3%vs27.4%), DDD(31.6%vs22,5%). Night psychotropics DSA(41.8%vs31%), DDD(31.7%vs24%); neuroleptics DSA(53.1%vs33.6), DDD(45.2%vs24.3%); anticholinesterase DSA(51%vs36.9%), DDD(45.1%vs27.7%). All of them p<0.05.

**Conclusions:** Dementia and psychotropics are predisposing factors for delirium. Its effect is additive. Neuroleptics have the clearest relationship with delirium.

We observed, as dementia was more severe, the risk of delirium was greater but the use of neuroleptics decreased. This could be due to the presence of more hypoactive phases in final stages.

## **P12: Living Lab as academic practice partnership to improve care for people with dementia**

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**Objective:** Bridging the gap between clinical practice and research in health care is a challenging task. Living Labs are academic practice partnerships to stress the ambition to start up a longstanding collaboration, which have been developed and implemented in the Netherlands (Verbeek et al., 2020). The “PraWiDem” (“Living Lab Dementia”) project aims to adapt the Maastricht Living Lab approach to long-term dementia care in different regions in Germany.

**Methods:** A mixed methods approach was used to guide the adaptation of the Maastricht Living Lab. A focus group study investigated perspectives of people with dementia, informal carers and professionals on expectations and experiences concerning collaboration and networking between research and practice. A scoping review mapped international experiences in knowledge transfer practices and collaboration approaches in nursing care. Experts from the Maastricht Living Lab supported the research team in adapting the approach to the German national context. Parts of the German “Living Lab Dementia” concept were discussed with members of a recently formed research participation group of people with dementia (“experts by experience”).

**Results:** In total, 10 focus groups and 5 individual interviews were conducted. Key themes include researchers’ and professionals’ skills, participation of people with dementia and informal carers, and multi-professional requirements. The scoping review identified 17 different approaches of knowledge translation and collaboration. Few approaches address the common development and implementation of knowledge and networking. Dutch experts recommend the early development of long-lasting strategies for collaboration. Experts by experience wish to participate, but traditional research methods may need to be adapted to allow their participation.

**Conclusion:** The “Living Lab Dementia” is currently under investigation in collaboration with institutional and community care services in three regions in Germany.

Verbeek, H., Zwakhalen, S. M. G., Schols, J. M. G. A., Kempen, G. I. J. M., & Hamers, J. P. H. (2020). The living lab in ageing and long-term care: a sustainable model for translational research improving quality of life, quality of care and quality of work. *The journal of nutrition, health & aging*, 24(1), 43- 47.

## **P15: Esketamine in the elderly-is it efficient and safe?**

**Background:** elderly patients are significantly impacted by MDD and are less responsive to treatment. ECT is used more often in older patients but has its drawbacks. There is a need for novel antidepressants.

Esketamine, is a FDA approved novel treatment to treatment resistant depression (TRD). Studies of esketamine nasal spray administered with a newly initiated oral antidepressant in TRD aged patients 18-64 years demonstrated rapid onset versus a newly initiated oral antidepressant plus placebo, with maintenance of the treatment effects following long term intermittent dosing. Side effects are dose related, psychotomimetic dissociative, elevation in HR+BP, cognitive impairment, hepatotoxicity and inflammation of bladder endothelium.

**Objective:** to review the current data regarding esketamine treatment in elderly TRD patients.

**Results:** beside several case reports only 2 RCTs checked efficiency and safety in elderly patients.

A pilot RCT of titrated subcutaneous ketamine in older patients with TRD was conducted in 2017. 16 participants > 60 years with TRD who relapsed after remission or did not remit in the RCT were then administered an open label phase. Up to 5 doses of ketamine (0.1 to 0.5 mg/kg) were administered with midazolam as an active control, randomly inserted. 12 ketamine treatments were given in separate sessions at least 1 week apart. Remitters in

each phase were followed up for 6 months with MADRS scale. Results provided evidence for the efficacy and safety of ketamine in treating elderly depressed. There was a significant improvement in all ketamine dosages apart from 0.1 mg/kg. 7 participants reached remission. 5/7 had relapse than entered open trial and remitted again.

Ochs-Ross, et al 2020 study, 138 patients with TRD > 65 years received flexibly dosed esketamine nasal spray and new antidepressant or new antidepressant with placebo. The groups did not achieve statistical significance in MADRS score change from baseline to day 28. Patients with earlier onset of depression and younger patients (65-74) showed greater response to treatment.

**Conclusion:** Esketamine is safe in elderly TRD patients. There is not enough evidence to conclude if it is efficient. It seems that patients younger than 75 and with earlier onset of depression might benefit from esketamine.

## **P17: What happens if your colleague was the first person who notice that you have early-onset dementia?**

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**Objective:** A national prevalence study of early-onset dementia in Japan has provided data on their challenges and support needs, as documented by the individual and their family members. This study examined differences between 1) cases that the onset of early-onset dementia was detected by work colleagues, and 2) other cases.

**Methods:** After identifying medical or long-term care service offices used by people with early-onset dementia in 12 regions in Japan, a questionnaire was distributed to the individuals and their family members. The items surveyed were age at the time of the survey, gender, employment at the onset, age when the initial symptoms were detected, the person who detected the initial symptoms, and consideration received at the workplace. In this report, only those who were working at the onset were included in the analysis. Next, they were divided into two groups according to whether the person who detected the initial symptoms was a colleague or not, and a chi-square test was used to compare the two groups. This study was conducted with the approval of the Ethics Committee of the Tokyo Metropolitan Institute of Gerontology and Geriatric Medicine.

**Results:** Of the 1035 questionnaires collected, 559 were working at the time of onset of initial symptoms, and 149 (26.7%) of these cases were initially detected by a colleague. Comparison between groups revealed that the cases detected by colleagues 1) were recommended to see an occupational physician ( $P < 0.001$ ), 2) were referred to a specialist ( $P < 0.001$ ), 3) received consideration such as reassignment in the workplace ( $P < 0.001$ ), 4) received consideration regarding transportation ( $P = 0.023$ ), 5) had someone to talk to in the workplace ( $P < 0.001$ ), and 6) were significantly unlikely to receive no consideration at all ( $P = 0.010$ ).

**Conclusion:** Early-onset dementia was noticed by a colleague due to an increase mistake in the workplace but may have received reasonable accommodations that could have been considered by each workplace. The results of this study may help to promote dementia-friendly workplace strategies.

## **P26: Self-reported health-related quality of life for people with dementia in long-term care facilities in Taiwan: a nationwide survey**

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**Background:** Quality of life is an essential outcome parameter in geriatric research; however, research to date offers mixed evidence about the factors associated with health-related quality of life (HRQOL) among people with dementia (PWDs). We aimed to identify factors relating to HRQOL among PWDs living in long-term care (LTC) facilities.

**Methods:** A total of 299 from 1,607 registered long-term care facilities were randomly selected in every administrative region of Taiwan. A cross-sectional two-phase survey, which included the demographic data, comorbidities, EuroQol-5 dimensions-5 levels (EQ-5D-5L), mini-mental state examination (MMSE) score, clinical dementia rating scores (CDR), behavioral and psychological symptoms of dementia, and activities of daily living (ADL) of PWDs, was then conducted from 2019 to 2020.

**Results:** A total of 1,313 PWDs who self-completed EQ-5D-5L were enrolled in this analysis with a mean age of  $76.43 \pm 12.7$  years. The mean utility and visual analogue scale (VAS) scores of EQ-5D-5L were 0.10 (standard deviation, SD = 0.48) and 66.57 (SD = 20.67), respectively. Multivariate linear regression analysis showed that higher scores in ADL, instrumental ADL, and lower CDR sum scores were associated with higher EQ-5D-5L utility scores. Higher ADL scores and higher MMSE scores were associated with higher scores in an EQ-5D-5L-VAS. More depressive symptoms were related to both lower utility score and lower EQ-5D-5L-VAS score.

**Conclusion:** Findings highlight the importance to recognize and to treat depression to maintain HRQOL of PWDs in LTC facilities. Longitudinal studies are needed to better understand the long-term changes in HRQOL of PWDs.

### **P30: Neuro-therapeutic play with Asian older adults: a qualitative analysis.**

**Authors:** Ching Yi Kuo, Shu-Chuan Chen, Yung-Gi Wu

Neuro-therapeutic intervention joins play for older adults with and without cognitive decline in Asia. During the Covid-19 outbreak, older adults report an increased isolation and increased risk for cognitive decline and medical complications than younger populations. It is therefore reasonable to implement creative nonpharmacological interventions to satisfy older adults psycho-social needs while maintaining their cognitive functioning without being burdened with healthcare costs. In this interventional study, a group of 60 older adults aged 60 years old and older participated in sand tray activity for six weeks. Participants were interviewed for their experiences with six sand tray activities under social distance restrictions in Taiwan. Thematic analysis techniques are applied to examine the interviewing data to identify comment themes across participants. The qualitative results show that social connection is the need of older adults during the pandemic, that neuro-therapeutic play satisfies older adults' emotional needs, and that sand tray activity offers an opportunity for older adults to exercise their brain. Implications are discussed.

### **P37: A systematic review on inequalities in accessing and using social care in dementia – from pre- and pandemic times to moving beyond**

**Authors:** Clarissa Giebel<sup>1,2,\*</sup>, Kerry Hanna<sup>3</sup>, James Watson<sup>4</sup>, Thomas Faulkner<sup>1,2,5</sup>, Lena O'Connell<sup>1</sup>, Sandra Smith<sup>2</sup>, Warren Donnellan<sup>6</sup>

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**Objectives:** To evaluate and synthesise the evidence base on barriers and facilitators to accessing and using community-based social care in dementia.

**Design:** Mixed-methods systematic review

**Setting:** Community-based social care

**Participants:** People living with dementia and unpaid carers

**Measurements:** Seven databases were searched in March 2022, including English and German evidence published from 2005 focusing on inequalities in community-based social care for dementia across the globe. Titles

and abstracts were screened by two reviewers, with all full texts screened by two reviewers also. Study quality was assessed using QualSyst.

**Results:** From 3,904 screened records, 39 papers were included. The majority of studies were qualitative, with 23 countries represented. Barriers and facilitators could be categorised into the following five categories/themes: Situational, psychological, interpersonal, structural, and cultural. Barriers were notably more prominent than facilitators, and were multi-faceted, with many factors hindering or facilitating access to social care linked together.

**Conclusions:** People with dementia and carers experience significant barriers in accessing care in the community, and a varied approach on multiple levels is required to address systemic and individual-level barriers to enable more equitable access to care for all.

### **P38: A qualitative study on the impacts of stressful life events on the mental health of older adults in Colombia**

**Authors:** Clarissa Giebel<sup>1,2,\*</sup>, Gabriel Saldarriaga-Ruiz<sup>3</sup>, Mark Gabbay<sup>1,2</sup>, Erika Maria Montoya<sup>3</sup>, Maria Isabel Zuluaga-Callejas<sup>3</sup>

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**Background:** Many older adults in Colombia have lived through violent and stressful life events, particularly in areas of poverty where the problem of mental ill-health is commonly stigmatised in lower- and middle-income countries. The aim of this qualitative study was to understand the impact of stressful life events on the mental health and wellbeing of older Colombians living in areas of relative poverty.

**Methods:** Older adults (aged 60+) living in the Turbo region in Colombia were interviewed face-to-face between August and December 2021. Participants were recruited via snowball sampling based on criteria of ethnicity, gender, age, and place of residence. Transcripts were coded in Spanish and English by at least two research team members, using inductive thematic analysis.

**Results:** Twenty-six older adults participated in the study. Four overarching themes were generated: Living in violent and dangerous communities; Disturbing gender violence and gender roles; Lack of mental health awareness; Coping mechanisms. Older adults experienced a long narrative of stressful life events, from their youth into old age. Younger generations appeared to disrespect older members of Society, and participants witnessed a constant availability of around them – both interpersonal and within their neighbourhoods. Without any mental health support or awareness, older adults coped by merely accepting the extreme situations or seeking solace in their faith.

**Conclusions:** The health system and Government need to build up trust in its institutions and generate an awareness of mental health, as older Colombians will not approach psychological support otherwise.



Intergenerational community-based interventions embedded within neighbourhoods may provide a first avenue of mental health support.

### **P39: Predictors of loneliness in Chilean informal caregivers of people with dementia during the COVID-19 pandemic**

**Authors:** Miranda-Castillo, C\*; Valenzuela, M; Slachevsky, A; Thumala, D; Olavarría, L; Pinto, A; Lema, J; Gajardo, B.

**Objective:** The aim of this study was to determine the predictors of loneliness in informal caregivers of people with dementia in Chile during the Covid-19 pandemic.

**Methods:** 195 Chilean informal caregivers responded to an online or telephone survey. They were asked about sociodemographic aspects, clinical and caregiving changes experienced by them and the person with dementia during the pandemic, perceived psychosocial support and loneliness.

**Results:** Less years of formal education, lower income, low level of support with care tasks, living with the person with dementia, low social support, high levels of burden and depressive and anxious symptomatology were significantly related to higher loneliness. In contrast, carrying out physical and mental activity was significantly associated with lower feelings of loneliness. Almost half of the variability of loneliness was explained by higher depressive and anxious symptomatology ( $\beta = 0.53$ ), low psychosocial support ( $\beta = -0.29$ ) and living with the person with dementia ( $\beta = 0.16$ ) (adjusted  $R^2 = 0.48$ ).

**Conclusion:** The risk of developing loneliness in informal caregivers of people with dementia is high. Special emphasis should be placed on developing interventions that improve the mental health of this group, as well as increasing their contact with formal and informal support networks. Thus, they would be able to cope with care tasks in a better way, reducing the likelihood of experiencing feelings of loneliness.

### **P40: Character strengths as protective factors for the psychological well-being of grandparents**

**Authors:** Leyre Galarraga Cristina Noriega Javier López Gema Pérez-Rojo

**Objective:** The aim of this study was to comprehend the role of character strengths as protective factors of grandparents' psychological well-being. Following the Lazarus and Folkman's stress model, our analyses incorporated three groups of variables (sociodemographic data, stress, and protective factors).

**Method:** A sample of 536 grandparents participated in the study, which an average age of 70.23 ( $SD = 7.17$ ). We conducted staged stepwise regression analyses to test our hypotheses.

**Results:** Our results evidenced that younger grandparents and those providing supplementary care showed higher levels of psychological well-being than non-caregivers. Moreover, the analyses suggested that sociodemographic variables and the caregiving role lost their significance when psychological resources were taken into account. The character strengths of optimism, courage, humor, justice, problem-solving, and emotional intelligence explained the 32.7% of psychological well-being variance.

**Conclusions:** Our study stands out the influence of character strengths on the well-being of grandparents who develop a role as supplementary caregivers for their grandchildren. It is essential to carry out psychoeducational programs that enhance the resources that can benefit the psychological well-being of grandparents.

## **P42: Experiential avoidance and gratitude impact in emotional distress among old people post COVID-19 crisis**

**Authors:** Cristina Velasco, Javier López, Gema Pérez-Rojo, Cristina Noriega, M<sup>a</sup> Isabel Carretero, Patricia López, Leyre Galarraga.

Some studies have shown that older people experience less experiential avoidance and more gratitude when they were compared with younger people (López, 2020). These variables might be important to improve the mental health of older people, especially in crisis situations. **Objective:** Investigate the relationship between experiential avoidance (EA), gratitude and distress in old people post crisis COVID-19. **Methods:** A cross-sectional study was carried out. Data from 361 people older than 60 years. The mean age was 68,44 (SD= 5.31), 62.9% were woman. The sample included in the cross-sectional analysis consisted of who provided data on the Acceptance and Action Questionnaire - II (AAQ-II; Bond et al., 2011), Gratitude subscale of the Values in Action Inventory of Strengths-Short Form (Littman-Ovadia, 2015) and Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983). Pearson's correlations were used to explore the relationships among study variables including EA, gratitude, and emotional distress. Lineal regression analyses were used to investigate the incremental explained variance in emotional distress according to the main hypotheses. Standardized regression coefficients  $\beta$  were used to determine the relative contribution of these variables. **Results:** EA and gratitude were negatively correlated ( $r=-.27$ ;  $p < .000$ ). Gratitude and emotional distress were negatively correlated ( $r=-.30$ ;  $p < .000$ ). EA and emotional distress were positive correlated ( $r=.61$ ;  $p < .000$ ). Regression analyses indicated that AAQ-II and gratitude were significant predictors of emotional distress among old people. AAQ-II and gratitude were added. AAQ-II and gratitude were significant predictor of emotional distress  $R^2_{adj}=62.7\%$  explain the model. **Conclusion:** EA and gratitude are powerful factors to predict emotional distress in a crisis among older people. EA is an important construct in the understanding of emotional distress. This is an initial step to deep in the process of internal experiences and promoting gratitude can be very beneficial to generate programs to promote mental health in old people.

## **P46: Subjective cognitive decline and frailty status: results from the Compostela Ageing Study**

**Authors:** David Facal, Alba Felpete, Lucía Pérez-Blanco, Ingri Sandoval, Ana Nieto-Vieites, María Campos-Magdaleno, Cristina Lojo-Seoane

**Objective:** The relationship between objective cognitive performance and physical frailty has been explored in the recent literature and cognitive frailty has emerged as a strong field of study in psychogerontology. However, less is known about the relationship between subjective cognitive status and physical frailty. The aim of this communication is to present the relationships found between subjective cognitive decline and physical frailty in the third wave of the Compostela Aging Study, the first in which frailty status has been studied.

**Methods:** Cognitive and neuropsychological, functional, and affective assessment was conducted with persons over 50 years of age with subjective memory complaints in the health area of Santiago de Compostela. 149

participants who completed the third wave of the study and who did not present dementia or other serious pathologies were selected. Mild Cognitive Impairment (MCI) was diagnosed according to the current criteria in a special meeting of the research team. In the participants without MCI, the intensity and severity of their complaints were assessed according to the Subjective Cognitive Decline (SCD) criteria. Physical frailty was assessed following the frailty phenotype as described by Fried et al.

**Results:** Only 4 participants (2.7%) presented physical frailty (3, 4 or 5 criteria in the frailty phenotype). Of those presenting physical pre-frailty (1 or 2 criteria), 36 were MCI (23.8%), 33 SCD (21.9%) and 36 controls. Finally, 40 participants (26.5%) presented no frailty criteria (8 with MCI, 13 with SCD and 19 controls). Participants with SCD and pre-frailty were of intermediate age and they had more years of education than the group with MCI and pre-frailty, although these differences were not significant. They have significantly more symptoms of depression (GDS) and worse mental health status (GHQ-12) than participants without frailty and pre-frailty controls, and more symptoms of anxiety (GAD-7) than participants without frailty.

**Conclusion:** The relationship between subjective memory complaints and frailty could help to establish groups at special risk of cognitive impairment in phases prior to objective cognitive decline, being these groups particularly optimal targets for preventive intervention. However, a detailed characterization of these subgroups is still required.

## **P53: Brain, Diabetes and Cognition**

**Authors:** Edgardo Reich, M.D., Elena Halac, M.D, Carlos Torres, M.D. Patricia Castaño, M.D. Department of Neuroscience and Department of Diabetes, Buenos Aires University

Diabetes mellitus (DM) is a chronic metabolic disease, characterized mainly by elevated levels of blood glucose, associated with other important metabolic disturbances. Prevalence of DM is dramatically increasing worldwide, but especially in western countries, due to several factors as like diet, lifestyle and population aging.

Recent studies demonstrate that some diabetic patients have an increased risk of developing cognitive decline and dementia compared with healthy individuals. Although this may reflect brain changes as a consequence of diabetes, the coexistence of diabetes and cognitive dysfunction suggest common risk factors and causative mechanisms.

Cognitive dysfunction, including mild cognitive impairment and dementia, is increasingly recognized as an important comorbidity and complication of diabetes that affects patient's health and diabetes management with several public health implications. The aim of our work is to give an overview of cognitive dysfunction in people with diabetes, describing its clinical features and their biochemical basis and future perspectives.

## **P54: The Valladolid Multicentre Study: Clinical Difference Between Age Groups in a Sample of Geriatric Patients Referred to 7 Liaison Psychiatrics**

**Authors:** Eduardo Fuster Nacher, M<sup>a</sup> Desamparados D. Perez Lopez, Miguel Alonso-Sánchez, Eduardo Delgado Parada, Leire Narvaiza Grau, Monica Prat Galbany, Maria Iglesias Gonzalez, Cristina Pujol Riera

**Introduction and Objectives:** It is well known that geriatric patients are at increased risk of developing comorbid medical and psychiatric conditions, and a large proportion of them are admitted to psychiatric liaison units (LPUs). The aim of this study is to determine which clinical differences between age groups (65- 74 years and  $\geq 75$  years) are statistically significant to potentially warrant special attention when referring to an LPU.

**Methods:** This is an observational, cross-sectional and comparative multicentre study. We collected data from 165 patients ( $\geq 65$  years) admitted to 7 Spanish general hospitals and referred to each LPU from different departments. Data were collected over a period of one and a half months. Psychiatric examinations were performed during the patients' stay in the wards. The sample was divided into two age groups of patients and a comparative analysis was done.

**Results:** We obtained a sample of 165 patients with a mean age of 76.03 years (42.10% < 75 years, 57.83%  $\geq 75$  years). We analysed several variables between two age groups: the youngest (65- 74 years) and the oldest ( $\geq 75$  years).

In the younger group (mean age 69.87 years), the mean Barthel index before admission was 93.23 (52.1% with independent ambulation) and at the time of our first assessment was 54.62, before 82.71 of the older group (mean age 80.63). The mean Lawton index was 4.44 (6.35 for the older group) and the Charlson index was 6.38 (5.6 for the older group). 21.11% reported falls in the last 6 months, compared to 27.6% in the older group. The most common reason for referral was anxiety/depression symptoms in both groups (52.12% and 56.53%) and agitation (24.46% in the older group). After the LPU visit, the main diagnoses were adjustment disorder in both groups (25.3% and 25.53%) and delirium in the older group (23.4%). Antidepressants and benzodiazepines were the most common psychotropic drugs prescribed before the LPU visit, and benzodiazepines were the most common drugs discontinued after the LPU visit in both groups.

**Conclusions:** Clinical differences were found between two age groups (65-74 years and  $\geq 75$  years) at LPU, which could allow professionals to improve their attention and interventions.

## **P60: Development of a participant-driven dementia learning program by people living with dementia**

**Authors:** Fumiko Miyamae, Mika Sugiyama, Tsutomu Taga, Sumiko Kenjo, Mitsuo Morikura, Hiroyuki Iwata, Mayumi Kaneko, Tsuyoshi Okamura

**Objective:** All older adults, including those already living with dementia, should be provided with adequate knowledge about dementia and be aware of how to navigate the social resources available to them. The purpose of this study was to develop a practical program to help older adults living in the community learn about cognitive decline and how to use related social resources.

**Methods:** Program participants included attendees of a community center for dementia support in a major Japanese city, as well as the residents of a large housing complex in the local area. Within the cohort, there were participants who willingly disclosed to having dementia. The program began in February 2021 and was held once a month for a total of 15 hour-long sessions. A participant survey was administered at each session to gather the demographic information of participants and their understanding of the program. Additionally, the staff conducted recorded verbal discussions about the program, which were then reviewed using thematic analysis.

**Results:** The program structure was as follows: (1) participants decided the theme; (2) the first half of each session comprised lectures, while the second half included discussion and group work; and (3) rules for discussion were established (do not interrupt, do not unilaterally deny what people say, maintain confidentiality). The average number of participants per session was 12.1. Survey results indicated that 70.5% of participants were female and, in terms of age, the largest number of attendees were 81-90 years old (48.5%). Most participants "understood the program content well" (72.5%) and indicated that "they would strongly like to participate again" (64.2%). The recorded participant discussions about the program were suggested, after review, to be more superficial as a result of Japanese people's particular attitude of not wanting to bother others.

**Conclusion:** Participants were highly satisfied with the program and were able to help develop a practical program for people living with dementia to learn effectively. A challenge was that participants had a "do not want to bother others" mindset, which could inhibit them from expressing their true wishes and make them less likely to use social resources.

## **P68: Early psychiatric referral after attempted suicide helps prevent suicide reattempts: A longitudinal national cohort study in South Korea**

**Authors:** Hyewon Kim<sup>1</sup>, Yuwon Kim<sup>2</sup>, Myung-Hee Shin<sup>3</sup>, Yoo-Jung Park<sup>4</sup>, Hyung-Eun Park<sup>4</sup>, Maurizio Fava<sup>5</sup>, David Mischoulon<sup>5</sup>, Mi Jin Park<sup>6</sup>, Eun Ji Kim<sup>7</sup>, Hong Jin Jeon<sup>7,8,9,10</sup>

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10 Department of Clinical Research Design and Evaluation, Samsung Advanced Institute for Health Sciences and Technology (SAIHST), Sungkyunkwan University, Seoul, South Korea.

**Introduction:** Although people who attempted suicide tend to repeat suicide attempts, there is a lack of evidence on the association between psychiatric service factors and suicide reattempt among them.

**Methods:** We used a nationwide, population-based medical record database of South Korea to investigate the use of psychiatric services before and after the index suicide attempt and the association between psychiatric service factors after the index suicide attempt with the risk of suicide reattempt.

**Results:** Among 5,874 people who had attempted suicide, the all-cause mortality within 3 months after the suicide attempt was 11.6%. Among all subjects who attempted suicide, 30.6% of them had used psychiatric

services within 6 months before the suicide attempt; 43.7% of them had used psychiatric services within 3 months after the suicide attempt. Among individuals who had visited clinics following attempted suicide, the cumulative incidence of suicide reattempt over a mean follow-up period of 5.1 years was 3.4%. About half of suicide reattempts occurred within 1 year after the index suicide attempt. Referral to psychiatric services within 7 days was associated with a decreased risk of suicide reattempt (adjusted hazard ratio, 0.51; 95% confidence intervals, 0.29-0.89).

**Conclusion:** An early psychiatric referral within 1 week after a suicide attempt was associated with a decreased risk of suicide reattempt.

## **P72: Diagnostic pathways for people living with rare types of dementia**

**Author:** Ian Davies-Abbott

**Background:** The pathways to diagnosis for people living with rare types of dementia are poorly understood. In Wales, a predominantly rural country, only 53% of people living with dementia have received a formal diagnosis of any form of dementia compared to 71% in England (Welsh Government, 2018). Some practitioners believe that a number of Welsh communities remain fearful of statutory services, particularly the large bilingual population who tend to access dementia services between 4.3 and 7.3 years later than monolinguals (Hedd Jones, 2018). This inevitably impacts on the numbers of people diagnosed with rarer forms of dementia and their ability to locate and negotiate appropriate pathways to access an accurate diagnosis. This study investigated the experience of people using these pathways to understand how a rare dementia diagnosis is delivered in Wales.

**Method:** Ten semi-structured interviews were conducted with people living with a rare dementia or caring for a person with a rare dementia. These interviews considered the onset of symptoms, the experience of using healthcare services to receive a diagnosis and the support provided following diagnosis. The interview data was mapped across individual pathways and a thematic analysis was undertaken to explore shared perspectives.

**Result:** A diagnosis of rare dementia was illustrated as a journey with five potentially recurring landmark points (initial contact, initial referrals, provider referrals, private referrals and diagnosis). Despite some identical diagnoses, no participants followed the same pathways with private healthcare often used to gain a degree of control over a pathway, if the person had the financial means to access this. Two themes were identified throughout the landmark points (involvement and dispute). *Involvement* illustrated the need to have a degree of control over the pathway whilst *dispute* acknowledged the overwhelming feeling that accessing a diagnosis often felt like a personal battle between those affected and health services, or between different aspects of health services themselves.

**Conclusion:** Whilst the experiences illustrated the unstructured pathways to a rare dementia diagnosis, these experiences will support services in Wales and countries with similar populations to consider how structured pathways can result in a timelier diagnosis and more supportive experiences.

**References:** Hedd Jones, C. (2018). *Access to dementia services for bilingual (Welsh and English) residents*. Retrieved from [https://www.assembly.wales/research documents/18-017/18-017-web-english.pdf](https://www.assembly.wales/research%20documents/18-017/18-017-web-english.pdf)

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## **P82: A video-based qualitative analysis of case conferences to reduce BPSD**

**Authors:** Janne Myhre and Bjørn Lichtwarck , The Research Centre for Age-Related Functional Decline and Disease (AFS), Innlandet Hospital Trust, Ottestad, Norway

**Background and objectives:** Case conferences are described as a goal-oriented, systematic method that team members can use to develop person centred treatment actions for a particular care problem. However, not all case conferences have proven to be effective. The Norwegian Targeted Interdisciplinary Model for the Evaluation and Treatment of Neuropsychiatric Symptoms (TIME) is an effective multicomponent model based on case conferences that informs approaches to behavioural and psychological symptoms in residents with dementia. Our aim was to explore how TIME case conferences structured based on cognitive behavioural therapy (CBT) contributed to person-centred actions and how the specific structure of the TIME may have contributed to the effectiveness of the model.

**Methods:** We used video observation of six case conferences. Videos in research provide extended opportunities for studying in detail the complexity of interactions that take place in social groups. We analysed these videos by iteratively watching them and performing a thematic cross-case analysis of their transcripts. Based on Habermas's theory of communicative action, we emphasized what was talked about in the case conferences, and the display of communication between the participants in the case conferences.

**Results:** Our findings showed that the theoretical principles behind the TIME, including both person-centred care and the inductive structure of CBT, reflected many aspects of Habermas's theory of communicative actions. In particular, the TIME case conferences emphasized the lifeworld perspective for both residents, staff, and contributed to what Habermas labelled communicative rationality as a means to develop shared understanding among staff and create person-centred action.

**Conclusions:** One causal assumption of how and why the TIME case conferences contributed to the effectiveness of the TIME in reducing BPSD in nursing homes is that the specific inductive structure of the case conferences with the column technique based on the ABC method together with PCC emphasized the importance of the lifeworld for both the resident and the staff. Even though case conferences have been highlighted as useful, it is not indifferent how these case conferences are structured and conducted.

## **P84: This has been far from easy: How do people affected by dementia in Wales experience their diagnosis, and how can it be improved?**

**Authors:** Jennifer Roberts & Gill Windle, on behalf of the Rare Dementia Support Impact Study team.

**Background:** The Dementia Action Plan for Wales (UK), published in 2018, includes aims for improving assessment and diagnosis, as well as suggestions for what might characterise services that provide optimal support. Wales is a largely rural country, a factor shown previously to impede access to services. Suitable support for people living with rarer dementias is also limited, which may be further exacerbated by living in a rural area. This a relatively unexplored area of research.

**Objectives:** This study explored diagnosis and post-diagnostic support experiences of people affected by dementia across Wales, as well as exploring any differences as a function of type of dementia (typical/rare), and rurality (rural/urban). Further, it sought to gain insight and recommendations from people living with dementia and their carers around how the process may be improved for people in Wales.

**Methods:** A survey was developed using a range of both closed- and open-ended questions. It explored respondents' experiences guided by the aims of the Dementia Action Plan for Wales around diagnosis and post-diagnostic support. The survey was shared online, open to anyone living with, or caring for someone living with dementia in Wales.

**Results:** 71 respondents completed the survey (people with dementia, n=10; carers/family members, n=61), living in rural/semi-rural (n=37) and in urban/suburban (n=34) areas, and experiences from people affected by both rare (n=17) and typical (n=49) dementias are reported (plus n=5 with no specific diagnosis). The results identified several challenges in the provision of support, indicating that there is some way to go before realising the ambition of Wales becoming a dementia-friendly nation. There are, however, examples of satisfaction with services and testimonials of good practice.

**Conclusion:** The results of this work highlight areas to target within the Dementia Action Plan for Wales to improve support, and more broadly provide recommendations for improving policy and practice, based on the experiences and wishes of people with lived experience.

## **P85: Risks of suicide among family members of suicide victims: A nationwide sample of South Korea**

**Authors:** Yoo JH(1), Jang J(1)(2)(3), Park SY(4)(5), Kim YY(4), Kim EJ(1)(2), Lee G(2), Seo J(2), Na EJ(1)(2)(6), Park JY(2), Jeon HJ(1)(2)(7)(8)(9).

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**Objective:** Identifying the risks of completed suicide in suicide survivors is essential for policies supporting family members of suicide victims. We aimed to determine the suicide risk of suicide survivors and identify the number of suicides per 100,000 population of suicide survivors, bereaved families of traffic accident victims, and bereaved families with non-suicide deaths.



**Methods:** This was a nationwide population-based cohort study in South Korea. The data were taken from the Korean National Health Insurance and Korea National Statistical Office between January 2008 and December 2017. The relationship between the decedent and the bereaved family was identified using the family database of the National Health Insurance Data. Age and gender were randomly matched 1:1 among 133,386 suicide deaths and non-suicide deaths. A proportional hazard model regression analysis was conducted after confirming the cumulative hazard using Kaplan-Meier curves to obtain the hazard ratio (HR) of completed suicide in suicide survivors.

**Results:** Using 423,331 bereaved families of suicide victims and 420,978 bereaved families of non-suicide deaths as the control group, HR of completed suicide in suicidal survivors was found to be 2.755 [95% confidence limit (CL): 2.550-2.977]. HR for wives committing suicide after husbands' suicide was 5.096 (95% CL: 3.982-6.522), which was the highest HR among all relationships with suicide decedents. The average duration from suicide death to suicide of family members was 25.4 months. Among suicide survivors, the number of suicides per 100,000 people was 586, thrice that of people in bereaved families of traffic accident victims and in bereaved families of non-suicide deaths.

**Conclusion:** The risk of completed suicide was three times higher in suicide survivors than in bereaved families with non-suicide deaths, and it was highest in wives of suicide decedents. Thus, socio-environmental interventions for suicidal survivors must be expanded.

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DOI: 10.3389/fpsy.2022.995834

PMCID: PMC9614235

PMID: 36311502

Conflict of interest statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## **P91: Symptoms of Anxiety and Depression after stroke – a follow up study in outpatients followed in a rehabilitation recovery unit**

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**Background:** Depression and anxiety persist in a large number of patients after stroke. Anxiety affects around one third of patients during the first year. Nowadays, this phenomenon receives significantly less attention compared to other psychological problems, and poor psychological services after the onset of the disease were reported in previous studies. Some patients have access to specialized rehabilitation units (“Integrated Continuing Care Unit, UCCI”) that can ameliorate anxiety and significantly improve health-related quality-of-life (QoL), avoiding depression and improve patients' functional disability.

**Objective:** To analyze the associations between anxiety/depression symptoms and QoL in patients with chronic stroke, during and after discharge from UCCI.

**Methods:** An observational, longitudinal and descriptive study was carried out with patients with a clinical history of stroke discharged from hospitals in Portuguese central area, aged  $\geq 65$  years, without dementia diagnosis. Patients were observed at admission at the rehabilitation unit, discharge, and 6 and 12 months after discharge, and data were collected through a protocol composed of several self-completion instruments, namely the Hospital Anxiety and Depression Scale (HADS) and Stroke Specific Quality-of-Life Scale (SS-QoL). Data on clinical and demographic variables were collected and analyses performed to describe associations with HADS scores. Data were collected from August/2020 to July/2022 and analyzed using SPSS®, V.26.0.

**Results:** A cohort of 154 stroke patients was assessed (M/F ratio=1.8, age  $75 \pm 9$  years). Anxiety scores were 6.8(4.8) (6 months) and 5.8(4.1) (12 months). Depression scores were 8.7(5.3) (6 months) and 8.1(4.7); (12 months). Anxiety total score at 6 months was significantly related ( $p < 0.05$ ) with 3 domains of SS-QoL (Personality, Social Role and Work/Productivity). However, no differences were found at 12 months. Depression was significantly related with all domains of SS-QoL except Vision ( $p < 0.05$ ).

**Conclusion:** HADS score for anxiety were normal (0-7) at 6 and 12 months; however, depression remain in the Borderline abnormal classification (8-10), 6 and 12 months after stroke, which appear to have a negative impact in almost all SS-QoL domains of patients with chronic stroke. The current study highlights the need to prevent depression symptoms after stroke as this can negatively affect the functional recovery of the entire ongoing rehabilitation process.

## **P97: Can Death Cafés contribute to the creation of a “death-inclusive society” that will be the ground for the Advance care planning?**

**Authors:** Kae Ito, Mayumi Hagiwara, Tsuyoshi Okamura

**Objective:** The aim of this study was to examine the potential contribution of Death Cafés to the creation of a society that is inclusive of death, which is necessary for ACP, through an analysis of the motivations and orientations of Death Cafés hosts to run Death Cafés.

**Methods:** Interviews were conducted with 16 host of Death Cafés. Interview transcripts were segmented, coded and categorized, focusing on motivations and orientations for running Death Cafés.

**Results:** Motivation for running Death Cafés were categorized into four categories: “The bereavement experience of the host”, “The identity crisis of the host”, “Dissatisfaction with a society in which death is taboo”, and “Unlocking new possibilities for Buddhist temples”

The orientation of Death Cafés was categorized into two categories. Namely, “Personal growth” and “Community development”.

Attitudes towards the attendees with grief were categorized in two categories. “Not mentioned” and “Welcome participation/refer to more appropriate projects”.

The characteristics of the host and venue were categorized as “Buddhist monk and/or Buddhist temple” and “Other”.

The relationship between these four factors was examined. When the host's bereavement experience was the motivation for starting the Death Cafés, they tended to regard death as an overwhelming experience and to run

an individually oriented Death Cafés with the intention of personal growth. When the motivation for starting the Death Cafés was dissatisfaction with a society that considered death a taboo subject, attitudes towards death tended to be neutral and the café tended to be socially oriented with the intention of community development. Where the motivation for starting the Death Cafés was to expand the possibilities of the Buddhist temple, which was one of the subcategories of "Community development", attitudes towards death were neutral and café tended to be both individual and socially oriented.

**Conclusion:** Death Cafés held in Buddhist temples may have the potential to contribute to the creation of a death-inclusive society in Japan and could be an ACP implementation strategy.

## **P101: Factors Associated with Psychotropic Use in People with Dementia Living in Their Own Homes in the Community: A Systematic Review and Meta-Analysis**

**Authors** Kerryn Loftus, Anne Wand Juanita Breen Glenn Hunt, Carmelle Peisah

**Background:** Most people living with dementia do so at home, comprising approximately 30 million people globally. Despite extensive research on psychotropic medication use in long-term care settings, there has been little comparative research looking at psychotropic use in people living with dementia at home.

**Objectives:** The study aim was to systematically review the literature to identify factors associated with psychotropic medication use in people living with dementia at home.

**Methods:** The PROSPERO-registered review was conducted using PRISMA guidelines. A comprehensive search of four databases (2010 to 2020) was undertaken for the systematic review to identify empirical studies. A combination of MESH search terms for dementia, community-dwelling, and psychotropic medications were used. Suitable data were subject to meta-analysis using Comprehensive Meta-Analysis to calculate raw data to event rates and pooled, adjusted event rates for different modifier sub-analyses. Thematic analysis was utilised to synthesise emergent factors and a meta-analysis undertaken on suitable data.

**Results:** The search identified 619 articles of which 39 met inclusion/exclusion criteria. Use of psychotropics ranged from 18.7% for anxiolytic/hypnotics, to 26.9% for antipsychotics and 33.1% for antidepressants. Thematic analysis suggested that psychotropic prescribing was associated with a range of patient and environmental factors, including, but not limited to: (i) age (<75yr; >90yr); (ii) gender (being male); (iii) more advanced functional decline; and (iv) living alone. There was a conspicuous absence of data pertaining to carer and prescriber factors. Significant associations were identified in the meta-analysis between psychotropic use and respite in full-time care or hospitalisation as well as co-morbid psychiatric illness.

**Conclusion:** The reasons for psychotropic prescribing in this population remain poorly understood. Significant associations and knowledge gaps identified here generate opportunities for further research and development of targeted interventions to improve care and meeting the needs of this population group. This includes cautionary trigger questions for prescribers including: What am I treating? Who am I treating? How will I measure response? How can I ensure that psychotropics initiated in respite/hospital are used short-term only?

## **P102: Supporting Informal Carers to Undertake Regular Physical Activity from Home: a Co-design and Prototype Development Study of a novel app, "CareFit"**

**Authors:** Kieren J Egan<sup>1</sup>, William Hodgson<sup>2</sup>, Bradley MacDonald<sup>1</sup>, Barbara Fawcett<sup>3</sup>, Mark D Dunlop<sup>1</sup>, Alison Kirk<sup>2</sup>, Roma Maguire<sup>1</sup>

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**Background:** Informal carers (unpaid family members and friends), are critical to millions worldwide for the ongoing delivery of health and well-being needs. However, the physical and mental wellbeing of caregivers is often poor including low levels of physical activity, frequently owed to contributing factors such as lack of time, lack of support and motivation. Thus, accessible evidence-based tools to facilitate physical activity for carers are urgently needed.

**Objective:** The aim of this study was to co-design and develop a novel mobile app to educate and support carers in the undertaking of regular physical activity. This is achieved via integration of the transtheoretical model of behaviour change and UK physical activity guidelines across 8 weeks of use.

**Methods:** We co-designed a mobile app, "CareFit," by directly involving caregivers, health care professionals, and social care professionals in the requirements, capturing, and evaluation phases across a number of Agile Scrum development sprints. Requirements for CareFit were grounded in a combination of behavioural change science and UK government physical activity guidelines.

**Results:** Participants identified different barriers and enablers to physical activity, such as a lack of time, recognition of existing activities, and concerns regarding safely undertaking physical activity. Requirements analysis highlighted the importance of simplicity in design and a need to anchor development around the everyday needs of caregivers (eg, easy-to-use video instructions, reducing text). Our final prototype app integrated guidance for undertaking physical activity at home through educational, physical activity, and communication components.

**Conclusions:** Integrating government guidelines with models of behavioural change into a mobile app to support the physical activity of carers is novel and holds future promise. Integrating core physical activity guidelines into a co-designed smartphone app with functionality such as a weekly planner and educational material for users is feasible acceptable and usable. Here we will document the latest developments on the project including an ongoing national study currently taking place in Scotland to test the prototype with 50 carers.

## **P106: Palliative care for people with advanced dementia**

**Authors:** Kuei-Yu Liang, MD<sup>a</sup>, Yu-Hsuan Lai<sup>b</sup>, Chung-Chi Ho, MS<sup>c</sup>

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**Objective:** Dementia is currently the seventh leading cause of death and one of the major causes of disability and dependency among elderly. In Taiwan, there are at least 300,000 people live with dementia. However, only 1.64% of people with dementia received palliative care. In this paper, we describe a real-world experience of palliative care for people with advanced dementia.

**Method:** Case report.

**Result:** Mrs. H, A 90-year-old illiterate woman, was referred to Home Care team after several admissions for urinary tract infection. Her past medical history included cerebral infarction with left hemiparesis 4 years ago. Over one year prior our first visit, her family had begun to notice a problem with her recent memory. Thorough investigation for dementia was arranged. She scored 11/30 on the Mini-Mental State Examination. Mixed Alzheimer's and vascular dementia was impressed.

The Home Care service consisted of a once-monthly visit by physician and nurse. In the first year of service, we delivered active directed treatment for dementia. We also discussed nonpharmacological approaches for dealing with physical and behavior symptoms in each visit.

Then Mrs. H was hospitalized again due to fever and abdominal pain. Abdominal aortic aneurysm was diagnosed along with urinary tract infection. She had hypoactive delirium for two months after discharge. Meanwhile, Home Care team arranged a family meeting to discuss prognosis and appropriateness of palliative care. In the following two years, we focused on deprescribing and interventions for pain, dyspnea, eating problem, infection, and agitation to promote Mrs. H's comfort and quality of life. Psychological support was crucial to facilitate continuity in carer and care setting. Mrs.H did not have burdensome transition anymore and passed away peacefully at home as her preference.

**Conclusion:** The need for palliative care in dementia is anticipated to increase over the next decades in Taiwan. In the patient presented, Home Care team acknowledged and offered palliative care to help her to live as comfortably as possible until death and to help carers cope during the course. A multidisciplinary health care is highly recommended for complex needs in dementia.

## **P123: Cognitive Disorders and Impact on Caregivers: The COGCARE Study protocol**

**Authors:** M. Gonçalves-Pereira <sup>1</sup>, B. Pedrosa <sup>2</sup>, M. Braga <sup>1</sup>, M.J. Marques <sup>3</sup>, C. Balsinha <sup>1</sup>, A. Verdelho <sup>4</sup>, E. Albanese <sup>5</sup> for the COGCARE Study Group

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**Introduction and objectives:** Dementia is associated with a high burden of disease, impacting patients, families and society. Nevertheless, related epidemiological data is becoming outdated, given the difficulties of implementing costly and laborious fieldwork surveys. Data is also difficult to retrieve from health and social services' information systems. Overall, we must improve the feasibility and validity of case definition regarding dementia and the assessment of caregivers' consequences.

The 10/66 Dementia Research Group diagnostic algorithm is a cross-culturally valid method(1). A 'short 10/66' was also validated(2), but not in Portugal. We intend to assess its feasibility and validity in Portuguese samples, using REDcap (a browser-based, metadata-driven software) in mobile devices. Additionally, we aim to assess dementia family caregivers' subjective burden and psychological distress, contrasting primary care and hospital outpatient settings.

**Methods:** A multicentre mixed-methods study will be conducted on fifty dyads of older people with dementia and their caregivers, plus 150 dyads of 'controls' and their close family members, as informants. The 'short 10/66' will be administered. Dementia caregivers' assessments include the Zarit Burden Interview and Self-report Questionnaire. Quantitative analyses will estimate the sensitivity and specificity of the 'short 10/66' dementia case definition. Semi-structured qualitative interviews will be conducted with participants and research assistants, exploring their experiences with the assessment process; thematic analysis will then be used.

**Implications:** We expect this study to facilitate the diagnosis of dementia and data collection in health/social services on a routine basis, which will potentially improve the feasibility and decrease the costs of epidemiological surveys and allow for prevalence monitoring in Portugal.

**References:** 1. Gonçalves-Pereira, Cardoso, Verdelho, et al. The prevalence of dementia in a Portuguese community sample: a 10/66 Dementia Research Group study. *BMC Geriatr.* 2017;17(1):261. 2. Ibnidris, Piumatti, Carlevaro, et al. Italian version of the short 10/66 dementia diagnostic schedule: a validation study. *BMJ Open.* 2021;11(6):e045867.

## **P126: Older adults' psychological distress: exploring the role of implicit age stereotypes**

**Authors:** María Del Sequeros Perdroso-Chaparro, Isabel Cabrera, José A. Fernandes-Pires, Maria Marquez-González, Laura García-García, Inés García-Batalloso, Andrés Losada-Baltar

**Objective:** Self-perceptions of aging seem to be a key variable to understand physical and mental health (see the systematic review conducted by Tully-Wilson et al., 2021). Following Levy's (2003) stereotype embodiment theory, negative attitudes towards aging originate as aging stereotypes (e.g., "older people are frail"; Warmoth et al., 2016) during childhood. They are internalized and reinforced in adulthood, both consciously and below conscious awareness, becoming aging self-stereotypes in old age and affecting self-perceptions of aging (Levy, 2003). Kordnat et al. (2016) developed an implicit association test (IAT; Greenwald et al., 1998) to assess implicit age stereotypes for specific life domains (health and family domains) across the life span and found positive stereotypes towards older people for family domain and negative for health domain. However, the associations between implicit age stereotypes and adults' psychological distress have been scarcely analyzed. The aims of this communication are: a) to present the preliminary data of the validation of the implicit association test (IAT, Greenwald et al., 1998) to measure implicit aging stereotypes and b) to explore the relationship between implicit aging stereotypes and older adults' psychological distress (loneliness, guilt associated with self-perception as a burden, and anxiety and depressive symptoms).

**Methods:** The IAT used is an adaptation of the IAT developed by Kordnat et al. (2016). The IAT explores the relationship between the categories of sickness/health and old/young age. The task has a target category that consists of: a) a set of 6 words of physical and mental sickness (e.g., frail, weak, sad, lonely) and 6 words of physical and mental health (e.g., healthy, energetic, happy, in company); and b) 6 photos of old people and 6 photos of young people.

**Results:** Preliminary results of the implicit aging stereotypes task associations with older adults' psychological distress in 100 community dwelling older adults will be presented.

**Conclusion:** Findings will be discussed. The implicit (below awareness) assessment of the aging stereotypes with the IAT in older adults could provide a better understanding of the role of aging stereotypes in older adults' psychological distress, avoiding the weaknesses of assessing the construct through self-report measures.

### **P139: Psychotherapy for Anxiety and Anxiety related symptoms in Mild Cognitive Impairment - A Case Treated with Morita Therapy-**

**Authors:** Masahiro Shigeta, Keisuke Inamura, Department of Psychiatry, The Jikei University School of Medicine

Morita Therapy is a psychotherapy which originated in Japan. Conventionally, it had been applied to 'neurosis'. The patients who have anxiety symptoms make various efforts in order to be free from the unpleasant emotion. Morita Therapy (1) does not try to eliminate anxiety and its symptoms and builds the patients' attitude to leave these symptoms as a natural course, and (2) to focus on the feeling that they should aspire to enhancing their life and to encourage them to exert their lust for life. The authors presumed that this concept can be applied to anxiety symptoms in patients with mild cognitive impairment (MCI) and attempts to intervene. This case is for a male patient aged 74 years old with MCI with the complaint of subjective cognitive impairments. He had severe anxiety for his own cognitive impairment and recognized a severe decrease of Quality of Life (QOL) due to worrying about his own excessive anxiety. The authors implemented the therapeutic approach to address his anxiety and encouraged him to improve his QOL by accepting the anxiety, not excluding it. During the therapeutic process, various problems were evident, such as the caregiver's excessive fear of dementia, so education about the nature of dementia was provided to dispel the stigma for the family members. As a result, the patient's anxiety was decreased, and his daily activities were observed in spite of his subjective cognitive decline. This case suggested that Morita therapy was effective for anxiety symptoms in patients with MCI.

### **P147: Internet-delivered guided self-help Acceptance and Commitment Therapy for family carers of people with dementia (iACT4CARERS)**

**Author:** Naoko Kishita (University of East Anglia)

**Background and objective:** Despite the high prevalence of anxiety and depression, many family carers of people living with dementia are not able to access timely psychological support due to various barriers such as lack of respite care and a shortage of skilled therapists. Online treatments have the potential to improve access, and also scalability, reducing inequalities in access to care. This uncontrolled feasibility study aimed to evaluate whether it is feasible to deliver internet- delivered guided self-help Acceptance and Commitment Therapy (iACT4CARERS)

within primary and secondary care services in the UK, and whether the intervention is acceptable to family carers of people living with dementia.

**Method:** Family carers of people living with dementia presenting with mild to moderate anxiety or depression were recruited through healthcare services and public advertisements. Participants were offered eight, guided, self-help online ACT sessions adapted for the needs of family carers. Participants were also allocated a therapist who responded to questions to support their completion of each weekly session. Participants completed questionnaires assessing anxiety, depression and other outcomes before and after the intervention. They were also invited to attend an individual semi-structured interview to provide feedback on iACT4CARERSE at the end of the study.

**Results:** Seventy-nine participants attended the screening session over six months, and 33 eligible participants (age range 47-85) received iACT4CARERS. Further, 70% of participants completed seven or all eight sessions, and 27% of participants were lost to follow-up, but none of the reasons for early withdrawal was related to the intervention. There was preliminary evidence of improvements in anxiety, depression and psychological flexibility, particularly in anxiety, which demonstrated an average reduction of 26% on the GAD7 anxiety scale. The results of qualitative interviews suggested that iACT4CARERS is acceptable to family carers. Positive carer experiences were particularly facilitated by the relatedness of the contents, increased feelings of connectedness and the user-friendliness of the online platform.

**Conclusion:** The feasibility study provided evidence for the feasibility and acceptability of iACT4CARERS. This feasibility study led to an ongoing full-scale randomised controlled trial testing the clinical and cost effectiveness of iACT4CARERS. Recent developments of the iACT4CARERS project will be discussed.

## **P150: Social media use and well-being with bipolar disorder during the COVID-19 pandemic**

**Authors:** Norm O'Rourke, Ariel Pollock Star

**Background:** Reliable and consistent social support are associated with the mental health and well-being of persons with severe mental illness, including bipolar disorder (BD). Yet the COVID-19 pandemic and associated social distancing measures (e.g., shelter-in-place) reduced access to regular social contacts, while social media use increased concomitantly.

**Objective:** For this study, we had two goals. First we report descriptive information regarding social media use (SMU) by persons with BD during COVID-19 (all platforms). Specific to Facebook, we next developed and tested a hypothesized model in order to identify direct and indirect associations between BD symptoms, social support, loneliness, life satisfaction, and social media use. Responses were collected during the global spread of the Delta variant and prior/concurrent with the Omicron variant, 20 months after the World Health Organization declared COVID-19 a global pandemic.

**Methods:** Over eight weeks, participants were recruited using social media advertising micro-targeted to adults with BD. On average, participants were 53.96 years of age ( $SD = 13.22$ , range 20-77 years), they had completed 15.40 years of education ( $SD = 4.28$ ) and were diagnosed with BD 19.60 years ago ( $SD = 10.31$ ). Path analysis was performed to develop and test our hypothesized model.



**Results:** Almost all participants (93%) reported having both Facebook and LinkedIn accounts; 91.1% reported regular use of either or both. During the pandemic, most (60.8%) reported accessing social media several times a day; 36% reported using social media more often since the emergence of COVID-19. Specific to Facebook, the model we hypothesized differed somewhat from what emerged. The resulting model suggests that symptoms of depression predict loneliness and inversely, social support and life satisfaction. Social support predicts social Facebook use whereas passive Facebook use predicts life satisfaction. Symptoms of depression emerged as indirect predictors of SMU via social support.

**Conclusions:** Our findings suggest that the operational definition of passive-active SMU requires further analysis and refinement. In contrast to theory, passive Facebook use appears positively correlated with well-being among certain populations. Longitudinal data collection over multiple points is required to identify associations between BD symptoms, social media use and well-being over time.

## **P125: Guilt for perceiving oneself as a burden in adults who present physical limitations. Associated factors and age differences**

**Authors:** María Del Sequeros Perdroso-Chaparro, Isabel Cabrera, José A. Fernandes-Pires, Maria Marquez-González, José Ángel Martínez-Huertas, Eva-Marie Kessler, Andrés Losada-Baltar

**Objective:** Previous research has suggested that negative self-perceptions of aging and lower sense of control were significantly associated with worse physical and mental health, including physical limitations and feelings of guilt for perceiving oneself as a burden. However, no study has analyzed the associations of these variables when jointly considered and assessed the potential differences in the associations between people aged 40 to 59 years and people aged 60 years and older. The objective of this study was to assess the potential differences in the associations mentioned above between people aged 40 to 59 years and people aged 60 years and older.

**Methods:** Participants were 377 people over 40 years (206 aged 40 to 59 years and 171 participants aged 60 years and older) who answered an online survey. The association between negative self-perceptions of aging, perceived control, physical limitations, and guilt for perceiving oneself as a burden was tested through path-analyses, with differences between age groups tested through multigroup analysis.

**Results:** Significant differences between age groups were obtained. The results suggest that the influence of negative self-perceptions of aging on guilt for perceiving oneself as a burden is indirect through lower sense of control in participants aged 40 to 59 years; in participants aged 60 and over, negative self-perceptions of aging had a direct and indirect effect on guilt through greater physical limitations.

**Conclusion:** Negative self-perceptions of aging seem to be a relevant variable to understand feelings of guilt for perceiving oneself as a burden in both middle-aged adults and older adults. However, this study documents potential differences in the correlates of guilt for perceiving oneself as a burden between participants aged 40 to 59 years and individuals aged 60 years and older. Specifically, the results suggest that the associations between negative self-perceptions of aging and guilt for perceiving oneself as a burden are modulated by lower sense of control in middle-aged and by greater physical limitations in older adults. These results support the relevance of social and cognitive processes related with aging for understanding feelings of guilt for perceiving oneself as a burden.

## **P152: Early detection and evolution of Mild Behavioral Impairment in a sample of people with subjective cognitive complaints**

**Authors:** Sabela C. Mallo, PhD<sup>1</sup>, Cristina Lojo-Seoane<sup>1</sup>, PhD, Ana Nieto-Vietes<sup>1</sup>, Arturo X Pereiro, PhD<sup>1</sup>, and Onésimo Juncos-Rabadán, PhD<sup>1</sup>  
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**Objective:** Mild behavioral impairment (MBI) is a validated diagnostic entity, that describes the emergence of later life neuropsychiatric symptoms (NPS) in pre-dementia states. The aim of this study was to estimate the prevalence of MBI in people with subjective cognitive complaints (SCCs) in primary care centers and observe the evolution in a longitudinal study.

**Methods:** Three hundred twenty-three participants belonging to the CompAS longitudinal study who attended primary care centers with SCCs and without previous diagnosis of dementia and other neurological or psychiatric disturbances underwent clinical, neurological, and neuropsychological examinations at baseline and at two follow-up times (around 24 and 60 months). At each evaluation point participants were diagnosed as Cognitively Unimpaired (UC), Mild Cognitive Impairment (MCI) and SDC; at the follow-up assessments dementia was diagnosed as well. Diagnosis of MBI was made via a series of semistructured independent interviews with patients and relatives in accordance with the ISTAART-AA criteria and using the Spanish MBI-C cut-off point (Mallo et al, 2019). Frequencies of participants diagnosed in each category were obtained and evolution of the MBI along the follow-up evaluations was studied.

**Results:** MBI diagnosis prevalence was 22.9% at baseline corresponding to 74 individuals of which at 24 months follow-up were MBI stable 31.1%, 14.9% evolved to MCI, 1.3% to dementia and 40% to CU, (attrition 12.2%). At 60 months follow-up, from the 23 individuals with MBI, 6 remained stable (26.1%), 6 (21.1%) evolved to MCI, 2 (8.7%) to dementia, 3 (13%) to CU, (attrition 26.1%) (Figure 1).

**Conclusions:** Results indicated that almost a quarter of individuals attending primary care centers with SCCs without previous diagnosis of dementia or psychiatric disorders are MBI. An important part of them evolve to UC or MCI, and only a minority progress to dementia. More studies are needed to analyze the cognitive, personal, and biological factors that determine this evolution.

**References:** Mallo et al. (2019). Assessing mild behavioral impairment with the mild behavioral impairment checklist in people with subjective cognitive decline. *International psychogeriatrics*, 31(2), 231-239. <https://doi.org/10.1017/S1041610218000698>

## **P160: Electroconvulsive therapy for neuropsychiatric symptoms in dementia: survey among Dutch physicians**

**Authors:** Annette O.A. Plouvier, Julia Revet, Raymond T.C.M. Koopmans, Maria I. Lapid, Rob M. Kok, Debby L. Gerritsen

**Objective:** Neuropsychiatric symptoms (NPS) are common in people with dementia and have a negative effect. Commonly used pharmacological and psychosocial interventions are not always effective and NPS can become

refractory. Electroconvulsive therapy (ECT) may be effective for (severe) agitation and aggression and is well tolerated. Nevertheless, its application seems limited in the Netherlands. We explored the application of and attitudes of physicians towards ECT for (severe) NPS in older people with dementia in the Netherlands.

**Methods:** A survey study among geriatricians, elderly care physicians and old-age psychiatrists in the Netherlands in July 2020. An online invitation was included in the digital newsletter of the professional society or directly sent to the professional network of one of the authors (in case of old-age psychiatrists). The questionnaire included 20 closed- and open ended questions on demographic characteristics, experiences with (consideration of) referral for/application of ECT and attitudes towards ECT.

**Results:** Sixty-one respondents completed the survey, eight had ever considered ECT. Two of these eight referred patient(s) for depressive behavior, sometimes combined with agitation. Lack of experience, ECT not being included in guidelines for this indication, unfamiliarity with possible (side) effects and risks, ethical and practical issues were the main reasons of the respondents for not considering ECT. Most respondents were open to referring patients with dementia for ECT to treat (severe) NPS, specifically in case of refractory symptoms.

**Conclusion:** Respondents are not negative about ECT, yet rarely consider it due to lack of awareness and knowledge and the ethical and practical issues related to its application. Although the response to our survey was low and the number of respondents is limited, we do feel that ECT may be an alternative for palliative sedation, which is used incidentally in cases of refractory NPS in the Netherlands. Further exploring the support base and possibilities for application of ECT-treatment for refractory NPS might therefore be worthwhile.

## **P166: Elderly diabetic and non-diabetic patients in Portuguese RNCCI Convalescence Units: Are they different?**

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**Objective:** Diabetes Mellitus (DM) is one of the most prevalent chronic diseases, whose incidence has been increasing especially in the elderly, , being estimated that over one-quarter of people over the age of 65 years have diabetes.

Diabetes implications, whether due to acute or chronic complications, namely cognitive and functional impairments, can be devastating and usually determine the need for more supervision, implying a caregiver. For a better clinical characterization of DM, this study aimed to compare older adults, with and without DM, hospitalized in the Convalescence Units (CUs) of the Portuguese National Network of Integrated Continued Care (RNCCI).

**Methods:** This cross-sectional study included older adults ( $\geq 65$  years old) admitted into three CUs in northern Portugal. The inability to communicate was considered an exclusion criterion. A comprehensive assessment protocol was used, which comprised the Mini Mental State Examination (cognitive function), the Katz Index, and

the Lawton Index (basic and instrumental activities of daily living). A comparative analysis between patients' groups (with and without DM) was performed using the Mann-Whitney and Chi-Square tests.

**Results:** The final sample included 202 older adults (99 diabetics and 101 non-diabetics), with a mean age of 77 ( $\pm 7$ ) years, mostly (69.8%) women. Comparing the patients with and without DM, the first group had more dyslipidemia (97% vs. 62.1%,  $p < 0.001$ ) and osteoporosis (97% vs. 67%;  $p < 0.001$ ), as well as more comorbidities (6 vs. 5;  $p < 0.001$ ) and daily medication (9 vs. 7;  $p < 0.001$ ). Moreover, DM patients had more cognitive impairment (52.5% vs. 34.0%;  $p = 0.008$ ) and greater dependence on instrumental activities of daily living (57.6% vs. 37.6%;  $p = 0.009$ ). A tendency was found regarding the presence of a caregiver for those with diabetes (75.8% vs. 63.1%;  $p = 0.051$ ).

**Conclusion:** Patients with diabetes had more associated diseases and prescribed medicines, presented more cognitive impairment, greater dependence on instrumental activities of daily living, and were more likely to have a caregiver. This study will contribute to a better knowledge about the clinical and psychosocial characterization of older adults with DM in a specific context, allowing the development of future care plans and the adoption of better strategies for this group's specificities.

## **P170: Safety and Tolerability of Brexpiprazole for the Treatment of Agitation in Alzheimer's Dementia: Pooled Results From Three Phase III Trials**

**Authors:** Anja Farovik, Maia Miguelez, Daniel Lee, Mary Slomkowski, Nanco Hefting, Dalei Chen, Klaus Larsen, Eva Kohegyi, Mary Hobart, Alpesh Shah, Alvin Estilo, Moeen Panni, Pedro Such, George T. Grossberg

**Objective:** Agitation in Alzheimer's dementia (AAD) is prevalent, distressing, and burdensome. Medications for agitation are commonly prescribed off-label, although use is hindered by safety and tolerability concerns. This pooled analysis evaluates the safety and tolerability of brexpiprazole in patients with AAD.

**Methods:** Data were pooled from three Phase 3, 12-week, placebo-controlled trials (NCT01862640, NCT01922258, NCT03548584) (overall, and by brexpiprazole dose). The primary objective of each trial was to assess the efficacy of brexpiprazole on agitation. Safety was a secondary objective.

**Results:** 658 patients were randomized to brexpiprazole (0.5–3 mg/day, depending on the trial;  $n = 655$  treated), and 389 patients were randomized to placebo ( $n = 388$  treated). Mean baseline age was 73.5–74.2 years, and mean time since diagnosis of Alzheimer's disease was 28.2–35.6 months. The pooled incidence of treatment-emergent adverse events (TEAEs) was 51.1% with brexpiprazole, with no notable differences between doses, and 45.9% with placebo. The incidence of serious TEAEs was 6.4% (brexpiprazole) versus 4.1% (placebo), and the incidence of TEAEs leading to discontinuation was 6.3% versus 3.4%, respectively. TEAEs that occurred in  $\geq 2\%$  of patients receiving brexpiprazole and more than in placebo-treated patients were insomnia (3.7% versus 2.8%), somnolence (3.4% versus 1.8%), nasopharyngitis (2.7% versus 2.6%), and urinary tract infection (2.6% versus 1.5%). Other TEAEs of interest included falls (1.7% versus 2.6%) and sedation (0.3% versus 0.0%). TEAE categories of interest included extrapyramidal symptom (EPS)-related TEAEs (5.3% versus 3.1%), cardiovascular TEAEs (3.7% versus 2.3%), and cerebrovascular TEAEs (0.5% versus 0.3%). The mean change from baseline to last visit in Mini-Mental State Examination score was 0.21 (brexpiprazole) and 0.14 (placebo). Six patients receiving brexpiprazole (0.9%) and one patient receiving placebo (0.3%) died; none of the deaths was considered related to brexpiprazole.

**Conclusion:** Based on pooled data, brexpiprazole was well tolerated in patients with AAD, and had a clinical safety profile consistent with that of brexpiprazole in other indications. Patients receiving brexpiprazole had a similar incidence of sedation, EPS events, falls, cardiovascular events, and cerebrovascular events compared with placebo, and no worsening of cognition. The incidence of death was low, and no deaths were considered related to study treatment.

## **P171: Identifying pre-agitation biometric signature in dementia patients: A feasibility study**

**Authors:** Samira Choudhury, Abeer Badawi, Mervin Blair, Sarah Elmi, Khalid Elgazzar, Amer M. Burhan

**Objectives:** Agitation and aggression (AA) occur frequently in patients with dementia (PwD), are challenging to manage, and are distressing for PwD, families, caregivers, and healthcare systems. Physiological parameters, such as Actigraphy, Heart Rate Variability, and Electrodermal Activity, measured via wearable sensors are correlated with AA in PwD. It is unclear whether these parameters could be compiled into an operational algorithm to create a pre-agitation biometric marker (i.e. parameters of Autonomous Nervous System's arousal: elevated EDA, more frequent HR, lower heart rate variability (HRV), as well as higher motor activity) capable of predicting episodes of AA. This study will assess the feasibility and clinical utility of collecting physiological parameters via wearable multi-sensor Empatica E4 device in relation to clinically recorded episodes of AA in PwD.

**Methods:** This study is leveraging a clinical trial (ClinicalTrials.gov/NCT04516057) taking place at Ontario Shores Centre for Mental Health Sciences. Participants are inpatients, males and females, 55-years old or older, with clinically significant AA, and a diagnosis of a Major Neurocognitive Disorder due to Alzheimer's disease or multiple aetiologies. Participants wear the E4 device for 48 to 72 hours on three occasions during the 8-week study period. Participant demographics, and clinical measures used to assess behavior are collected at specific time intervals during the study period.

**Results:** The study is ongoing and currently to-date we have been able to acquire approximately 240 hours of recordings from patients. We will be presenting feasibility data (proportion of participants successfully completing a minimum 48-hours of recordings), correlation analysis between physiological measures and clinical measures to identify pre-agitation triggers. Further, we will use generalized linear models to test whether physiological measures can predict pre-agitation triggers. This study will allow estimation of sample size needed to detect a meaningful effect size, which will be determined from the prediction model. Deep learning using Python will be used to create a predictive algorithm using the physiological data to profile participants' behaviors and detect pre-agitation triggers.

**Conclusion:** Early detection of AA in PwD will allow caregivers to offer timely, 260ndividualized, non-medical or medical interventions which will help avoid crises and critical incidents and improve quality of life of the PwD and their caregivers.

## **P174: Project Connect 80+**

**Authors:** Sergio Alexandre Alfonso Silguero, Enrique Arriola Manchola, Leticia Crespo, Yadira Bardales Mas, Kevin O'hara Ventimilla, Petra Peña Labour, Arlovia Herasme Gullón

**Introduction:** -Patients with a memory deficit, as well as patients with small deficits in various cognitive areas, with the requirement that there is no functional impairment in their domestic or work life, do not meet the

criteria to be diagnosed with dementia, but they do meet the criteria for a diagnosis of mild cognitive impairment (MCI), which constitutes a transitional state between normal aging and mild dementia.

-Every year, 15% of patients with MCI with involvement only in the memory section, go on to be diagnosed with dementia.

In recent years, the use of a food for special medical purposes (FSMP), Souvenaid®, has been introduced into clinical practice, which, due to the composition of its active ingredient, Fortasyn connect (omega-3 fatty acids, uridine, choline, vitamins C, E, B6 and B12, selenium and folic acid) helps to:

- Promote the development of neuronal synapses, demonstrating that it maintains the integrity of white and gray matter.
- Reduce loss of functional connectivity.
- Increase hippocampal cholinergic synapses and cholinergic neurotransmission.
- Improve cognitive performance dependent on the hippocampus

**Objective:** A survey has been developed to explore the impact of a nutritional intervention, through the use of an FSMP in the areas related to cognition, functionality, and behavior, in a geriatric cohort with MCI older than 80 years. (Connect - Survey in the environment of mild cognitive impairment).

Survey: Each Geriatrics and Neurology professional had to select 5 cases that met the following characteristics: Presence of MCI, Age ≥ 80 years, and Receiving Souvenaid.

The professional sent CRO Alpha Bioresearch the list of caregivers with their contact details. The CRO contacted the subjects by telephone 3, 6, and 12 months after starting Souvenaid to carry out the survey.

**Methodology:** The survey collects the perception of the patient and caregiver's cognition, functionality, and behavior, through a Likert scale with 5 possible response alternatives. The questionnaire is divided into two different parts:

-Data about the treatment (questions 1 to 5)

-Questions about the patient's health (questions 1 to 12);

The last one is divided into three parts: data on cognition 3 questions (questions 1 to 3), data on functional abilities with 5 questions (questions 4 to 8), and data on behavior 4 questions (questions 9 to 12).

**Results:** Regarding the treatment at 12 months, there is a tolerance that reaches 76%, and 88% do not present problems with the administration of what is prescribed. The most common time of day for administration is breakfast and snacks. The most used flavor was vanilla and cappuccino. The most common way to acquire it was the direct route.

Regarding cognitive functions, the ability to remember is improved by 20%, orientation by 12%, and recognition by 8%, maintaining stability without changes by around 60-70%. Functional capacities improved between 8 and 16%, presenting no changes between 68-80%. Regarding the behavior, the improvement is between 12 to 28% in the evaluated items, presenting no changes between 60-84%.

**Conclusions:** There is stabilization at 3, 6, and 12 months both in cognition, functionality, and behavior. The positive impression of the perceived improvement in memory (around 20%) and apathy (exceeding 20% and reaching 28% per year) are striking.

## **P176: Efficacy of Melatonin in Delayed Sleep Phase Disorder: An Umbrella Review**

**Authors:** CT Tang, SM Tan, Sengkang General Hospital

**Objective:** The most recent treatment guidelines on delayed sleep phase disorder recommend the use of melatonin. However, these guidelines are in need of an update. Numerous systematic reviews and meta-analyses have since been conducted. This research aims to summarize all systematic reviews and meta-analyses investigating the efficacy of melatonin in delayed sleep phase disorder.

**Methods:** We performed a literature search using Pubmed, Embase, Cochrane Database of Systematic Reviews and Google. Characteristics and findings of all eligible systematic reviews and meta-analyses were summarised.

**Results:** Five reviews, which included trials up to 2014, were obtained. The timing of melatonin administration and outcomes of interest varied considerably amongst the trials. All of the reviews found improvement in sleep-onset latency, while two reviews noted advancement in melatonin onset time.

**Conclusions:** There is a need for more updated evidence exploring the use of melatonin in delayed sleep phase disorder. Future studies should also specify if they are evaluating the hypnotic and/or chronobiotic effects of melatonin and consider these in their design.

## **P178: Scope of post-diagnostic dementia care by Japanese primary care clinics using team-based care models**

**Authors:** Shuji Tsuda, Kae Ito

**Objective:** Primary care clinics (PCCs) in Japan have acquired the capacity for screening and diagnosing dementia in its early stage. They face challenges in accommodating the complex care needs of people with early-stage dementia in collaboration with other healthcare providers in the community. The study aims were; 1) to classify team-based care models of PCCs for post-diagnostic care for people with early-stage dementia in Japan's Community-based Integrative Care System and 2) to compare the scope of care in each model.

**Methods:** We conducted a cross-sectional postal survey to certified Dementia Support Doctors working in PCCs in Tokyo. To classify team-based care models, the questionnaire asked about the members, roles, and collaboration of the community-wide care team for early-stage dementia in which participants' PCCs were involved. We gathered information on care provision across seven domains that PCCs offered for people with early-stage dementia. Three-step latent class analysis was performed to classify models and analyze differences in the proportions of care provision in each domain. The Tokyo Metropolitan Institute for Geriatrics and Gerontology institutional review board approved the study.

**Results:** From the 188 responses, PCCs' team practices were categorized into three classes, which we named "co-managed," "carved-out," and "stand-alone" models. While the first two ran an extended care team through in-person communication across facilities in the community, the last applied a minimal team approach with limited and indirect external interaction. The "co-managed" and "carved-out" models were distinguished by how team members shared decision-making responsibilities for patient care. Maximum likelihood estimation grouped 46.6%, 32.8%, and 20.6% of the PCCs into each model in the above order. The three models significantly differed in the proportions of care provision in five of seven domains. The proportions in each domain were the highest for the "co-managed" model (60.7-100%), followed by the "carved-out" (46.2- 98.2%) and "stand-alone" (25.7-88.6%) models.

**Conclusion:** PCCs in Japan's Community-based Integrative Care System formed three models of post-diagnostic support for people with early-stage dementia. Considering the application of the team approach and the breadth

of care provision, either “co-managed” or “carved-out” models are recommended with available community resources in mind.

## **P181: Outreach initiative to promote healthy ageing: Experiences from a Geriatric Psychiatry Unit in India**

**Author:** Sivakumar Palanimuthu Thangaraju

**Aim:** To describe the experience, challenges and solutions in implementing an outreach initiative to promote healthy ageing

**Background:** Prevalence of mental health conditions in older adults is increasing rapidly in developing countries like India due to population ageing. UN Decade of Healthy Ageing (2021-2030) has been launched with focus on combatting ageism, promoting age friendly environment, integrated care and providing access to good quality long term care. Implementing interventions to promote healthy ageing in the Indian context has significant challenges in the background of limited availability dedicated elderly friendly health and social care systems.

**Methods:** Description of the outreach initiatives launched by the Geriatric Psychiatry Unit, Department of Psychiatry, National Institute of Mental Health and Neurosciences a tertiary care academic unit for old age psychiatry in India.

**Results:** A systematic and comprehensive outreach initiative for healthy ageing has been implemented over 2 years. The main objectives for the initiative includes promoting awareness about ageing and mental health, promoting age friendly environment, training of caregivers, volunteers and other stakeholders, psychosocial intervention in old age homes, promoting integrative medicine for healthy ageing and providing geriatric tele-psychiatry services. The important strengths of this initiative has been collaboration with non-governmental organizations, promoting active participation from older adults and volunteers, mobilizing resources through corporate social responsibility funding and effective use of technology.

**Conclusion:** The experience of implementing this outreach initiative has contributed to important learnings for the team. The proposed solutions to address the challenges in sustaining this initiative and scaling up to reach a larger population will be discussed.

## **P185: Comparison of social function in mild cognitive impairment and mild dementia using the Japanese version of the Social Functioning in Dementia scale (SF-DEM-J)**

**Authors:** Sumiyo Umeda<sup>a, b, c</sup>, Hideki Kanemoto<sup>a, \*</sup>, Maki Suzuki<sup>a, d</sup>, Tamiki Wada<sup>a, b</sup>, Takashi Suehiro<sup>a</sup>, Kyosuke Kakeda<sup>a, e</sup>, Yoshitaka Nakatani<sup>a, f</sup>, Yuto Satake<sup>a</sup>, Maki Yamakawa<sup>a</sup>, Fuyuki Koizumi<sup>a</sup>, Daiki Taomoto<sup>a</sup>, Sakura Hikida<sup>a</sup>, Natsuho Hirakawa<sup>a</sup>, Mamoru Hashimoto<sup>a, g</sup>, Kenji Yoshiyama<sup>a</sup>, Manabu Ikeda<sup>a</sup>

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### **Conflict of Interest and Disclosure Statement**

The authors declare no conflicts of interest associated with this manuscript.

**Objective:** The present study aimed to compare the social function between mild cognitive impairment (MCI), mild Alzheimer's disease (AD) dementia, and mild dementia with Lewy bodies (DLB) using the Japanese version of Social Functioning in Dementia scale (SF-DEM-J).

**Methods:** We interviewed 103 patients and family caregivers from June 2020 to March 2021: 54 patients with MCI, 34 with mild AD dementia, and 15 with mild DLB. We compared the caregiver-rated SF-DEM-J, Clinical Dementia Rating (CDR), MMSE, age, length of education, Geriatric Depression Scale (GDS), the University of California, Los Angeles Loneliness Scale (UCLA-LS), Neuropsychiatric Inventory (NPI), and informant version of the Apathy Evaluation Scale (AES) between MCI, mild AD dementia, and mild DLB groups using Kruskal-Wallis test with Dunn-Bonferroni correction for post-hoc analyses. We compared sex, living situation, and caregiver demographics between three groups using chi-square test. We performed correlation analysis between the score of each psychological test and the scores of SF-DEM-J within group using Spearman's rank correlation coefficient.

**Results:** For SF-DEM-J, the score of section 2 (communicating with others) was significantly worse in mild AD dementia than in mild DLB. The scores of section 1 (spending with others) and section 3 (sensitivity to others) and the total score did not significantly differ between three groups. The score of section 1 was significantly associated with MMSE in MCI, with anxiety and disinhibition of NPI, and AES in mild AD dementia, and with GDS in mild DLB. The score of section 2 was significantly associated with AES in MCI and mild AD dementia, with UCLA-LS in MCI, and with the length of education in mild DLB. The score of section 3 was significantly associated with agitation and irritability of NPI in MCI and mild AD dementia. The total score was associated with UCLA-LS and AES in MCI, and with AES in mild AD dementia.

**Conclusion:** Factors affecting social functioning differed between MCI, mild AD dementia, and mild DLB. Apathy, agitation and irritability affected social functioning in MCI and mild AD dementia while depressive mood affected social functioning in mild DLB.

## **P194: A comparison study between AD8 and modified AD8 for dementia screening**

**Authors:** Tzung-Jeng Hwang<sup>1</sup>, Cho-Hsiang Yang<sup>1</sup>

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**Objective:** The 8-item Informant Interview to Differentiate Aging and Dementia (AD8) was developed as a screening tool for dementia with a cutoff of 2 suggested by the initial study. However, various studies found different cutoff values, and many suggested a cutoff of 2 might result in a high false positive rate. A higher false positive rate in Taiwan was repeatedly shown when AD8 was self-administered in local government screening

programs. We have developed a modified version of AD8 (m-AD8) with the purpose of enhancing its specificity. This study aimed to compare the performance of AD8 and m-AD8.

**Methods:** The m-AD8 consists of all items adapted from the original AD8. Modifications included: (1) limiting the evaluated period to the past year instead of the past several years, (2) reselecting examples to reflect the socio-cultural context in Taiwan, and (3) rearranging the order of questions according to their complexity. We recruited 118 participant-informant dyads from a university teaching hospital. For each informant, the AD8 was administered first and then the Clinical Dementia Rating (CDR) to minimize contamination effect. The m-AD8 was administered 7 days later. Two geriatric psychiatrists made the final consensus DSM-5 diagnosis for each subject after considering all clinical information, including history, Mini-Mental State Examination (MMSE), CDR, and, if available, other past neuropsychological tests and neuroimaging.

**Results:** There were 59 subjects with normal cognition, 28 with mild neurocognitive disorder, and 31 with dementia (major neurocognitive disorder). When comparing dementia vs. non-dementia, the optimal cutoff value was 4 for both versions according to the Youden index. The AUC, sensitivity, and specificity were 0.893, 0.774, 0.862 for AD8, and 0.883, 0.741, 0.954 for m-AD8, respectively. The m-AD8 showed improved specificity, which was also true when the cutoff value was set as 2 or 3.

**Conclusion:** The optimal cutoff value for both versions was 4. The modification may change the performance of AD8 with improved specificity. These findings suggest that, depending on different situations, AD8 with a cutoff value higher than 2 may perform better in dementia screening.

## **P196: The effects of individual music therapy on well-being of nursing home residents with dementia: study protocol of a randomized controlled trial**

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**Background:** Dementia is often associated with Neuropsychiatric Symptoms (NPS) such as agitation, hallucinations, anxiety, that can cause distress for the resident with dementia in long-term care settings and can impose emotional burden on the environment. NPS are often treated with psychotropic drugs, which, however, frequently cause side effects. Alternatively, non-pharmacological interventions can improve well-being and maintain an optimal quality of life (QoL) of those living with dementia. Music therapy is a non-pharmacological intervention that can reduce NPS and improve well-being of persons with dementia.

**Objective:** The main aim of this study is to assess the effects of individual music therapy on well-being controlled for providing individual attention in nursing home residents with dementia and NPS.

**Methods:** The research is conducted at eight facilities of one nursing home organization in the Netherlands. The participants in the intervention group receive 30 minutes of individual music therapy (MT) in their own room by a music therapist twice a week for 12 weeks. The participants in the control group receive 30 minutes of individual attention in their own room by a volunteer twice a week for 12 weeks. Assessments will be done at baseline, 6 weeks and 12 weeks. An independent observer, blinded for the intervention or control condition, assesses directly observed well-being (primary outcome) and pain before and after the sessions. Nurses assess other secondary outcomes unblinded, i.e., perceived quality of life and NPS assessed with validated scales. The sleep duration is will be assessed by a wrist device called MotionWatch. Information about psychotropic drug use is derived from electronic medical chart review.

**Results:** We will present baseline data and preliminary results.

**Discussion:** The outcomes refer to both short-term and long-term effects consistent with therapeutic goals of care for a longer term. We hope to overcome limitations of previous study designs such as non-blinded designs and pragmatic designs in which music facilitators that were not only music therapists but occupational therapists and nurses. This study should lead to more focused recommendations for practice and further research into non-pharmacological interventions in dementia.

**Trial registration:**

The trial is registered at the International Clinical Trials Registry Platform (ICTRP) search portal in the Netherlands Trial Registration number NL7708, registration date 04-05-2019.

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## **P205: The effect of APOE e4 genotype on cognition, brain volume, glucose metabolism and amyloid deposition in AD**

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**Objective:** Many previous studies have shown that the APOE e4 genotype affects cognition, brain volume, glucose metabolism and amyloid deposition. However, these studies were conducted separately, and few studies simultaneously investigated the effects of the APOE e4 genotype on cognition, brain volume, glucose metabolism and amyloid deposition in Alzheimer disease (AD). The purpose of this study is to simultaneously investigate the association of the APOE e4 genotype with cognition, brain volume, glucose metabolism and amyloid deposition in patients with AD.

**Methods:** This is a cross-sectional study of 69 subjects with Alzheimer's disease (AD). All subjects were divided into carriers and noncarriers of the  $\epsilon$ 4 allele. Forty APOE  $\epsilon$ 4 carriers and 29 APOE  $\epsilon$ 4 non-carriers underwent neuropsychological, structural magnetic resonance imaging, <sup>18</sup>F-fluorodeoxyglucose positron emission tomography scans (<sup>18</sup>F-FDG-PET) and <sup>18</sup>F-Florbetaben amyloid positron emission tomography scans (amyloid PET). Analysis of covariance (ANCOVA) was conducted to compare the differences on cognition, brain volume, glucose metabolism and amyloid deposition between APOE  $\epsilon$ 4 carriers and non-carriers after controlling

demographics.

**Results:** APOE  $\epsilon$ 4 carriers had 50% lower scores of SVLT\_delayed recall compared to non-carriers ( $0.88 \pm 1.65$  vs  $1.76 \pm 1.75$ ). However, APOE  $\epsilon$ 4 carriers performed better on other cognitive tests than non-carriers (K-BNT ( $11.04 \pm 2.55$  vs  $9.66 \pm 2.82$ ), RCFT ( $25.73 \pm 8.56$  vs  $20.15 \pm 10.82$ ), and Stroop test\_color response ( $48.28 \pm 26.33$  vs  $31.56 \pm 27.03$ )). APOE  $\epsilon$ 4 carriers had slightly smaller hippocampal volume than non-carriers ( $3.09 \pm 0.38$  vs  $3.32 \pm 0.38$ ), but greater total brain cortical thickness ( $1.45 \pm 1.55$  vs  $1.37 \pm 1.24$ ).

**Conclusions:** We found that APOE e4 genotype is associated with cognition, brain volume in AD, suggesting that APOE e4 genotype can play a very important role in the underlying pathogenesis of AD.

## **P209: Psychological therapies for depression in older adults residing in long-term care settings: Are they effective?**

**Authors:** Yvonne Wells, Tanya Davison, Sunil Bhar, Colleen Doyle, Emily You, Steve Bowe, Patrick Owen, Leon Flicker

**Objectives:** This systematic review and meta-analysis aimed to (1) assess the effectiveness of psychological therapies for depression in older people living in long-term care (LTC) settings, and (2) investigate differences in effectiveness between types of psychological treatments.

**Methods:** We included randomised controlled trials (RCTs) with participants aged 65 years and older. Participants were required to present with (a) major depressive disorder (MDD) or (b) symptoms of depression based on a score over a cut-point on a validated depression measure. The study setting was LTC facilities, including nursing homes, assisted-living facilities, and residential aged care facilities, where some level of day-to-day care was provided by staff employed in the facility. Treatments were grouped and classified as cognitive-behavioural therapy, behaviour therapy, or reminiscence therapy.

**Results:** The literature review identified 19 studies for the qualitative synthesis: 18 were included in a meta-analysis. Results indicated a benefit for psychological treatments on depressive symptoms at end-of-intervention (standardized mean difference (SMD) -1.04, 95% CI -1.49 to -0.58; 18 trials, 644 participants), and at a medium-term follow-up (SMD -0.43, 95% CI -0.81 to -0.06; 8 RCTs, 355 participants), but not in the longer-term (SMD -0.16, 95% CI -0.58 to 0.27; 2 RCTs, 92 participants). There was no difference in outcomes between therapy types.

**Conclusion:** This systematic review demonstrated positive impacts of psychological therapies on symptoms of depression in older people living in LTC, both immediately after therapy and in the medium term, but longer-term impacts were not demonstrated.

## **P211: Quality of Life and participation in society of elderly people with aphasia**

**Authors:** Mika Konishi 1), Fumie Saito 1), Yukiko Miyasaka 1), Michitaka Funayama, Masaru Mimura 1)

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**Objective:** Aphasia is a communication disorder associated with impairments in spoken language, understanding, reading and writing that impacts upon daily activities, participation in society and the quality of life (QoL), and it is common in elderly patients in the context of vascular diseases. We aimed to investigate participation in society and the environmental factors and health-related QoL of elderly people with aphasia.

**Methods:** People with aphasia whose age was above 65 were included in this study. QoL was assessed by the Japanese version of the Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) and Life stage Aphasia Quality Of Life scale-11 (LAQOL-11), and the participation in society and the environmental factors as barriers was assessed by the Japanese version of the Community Integration Questionnaire (CIQ) and the Japanese version 2 of the Craig Hospital Inventory of Environmental Factors (CHIEF), respectively. We explored predictors such as aphasia severity, communication impairment, cognitive functions, motor paralysis, activities of daily living (ADL).

**Results:** We included 58 individuals (43 men; mean age 73.2 [SD 5.7] years) with aphasia after the mean 48 (SD 64.9) months of onset (of stroke, cerebral hemorrhage, subarachnoid hemorrhage, brain tumor, traumatic brain injury). The median of the total score of SAQOL-39 and LAQOL-11 was 3.91 (Quartile Deviation 0.47) out of 5 and 85.0 (QD 12.5) out of 110. The QoL was not associated with aphasia severity assessed by the Standard Language Test of Aphasia (SLTA) which is the most frequently used comprehensive aphasia rating scale in Japan, but poor QoL was significantly associated (Spearman correlations) with increased severity of communication impairment assessed by Communication ADL Test ( $P = 0.01$ ). Moreover, increased QoL was significantly associated with increased participation in society ( $P = 0.03$ ) and decreased environmental factors ( $P = 0.01$ ).

**Conclusion:** Poor communication ADL may have a negative effect on QoL in elderly people with aphasia. Also, we show that QoL is associated with participation in society. For patients with aphasia after retirement, specific rehabilitation of communication ADL might be beneficial and should be explored in future studies.

## **P212: The characteristics of neuropsychiatric symptom in mild cognitive impairment with diabetes mellitus.**

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**Objective:** Diabetes mellitus (DM) is known to be one of the risk factors for cognitive decline and dementia. Neuropsychiatric symptom (NPS) is present not only in dementia, but also mild cognitive impairment (MCI). In this study, we examined NPS of MCI with DM and compared MCI with DM and our MCI database to investigate the characteristics of MCI with DM.

**Methods:** The participants were subjects who were diagnosed as MCI from type 2 DM participants enrolled in Osaka University Hospital. To estimate NPS, we used Neuropsychiatric Inventory (NPI) score.

**Results:** The number of MCI subjects with DM who were estimated NPS was 19. According to the NPI score, apathy is the most severe symptom in MCI (average score =  $2.5 \pm 3.3$ ). This result was the same as the score of our

database. In the frequency of NPS, there was no difference between the results in NPI of MCI with DM and MCI of our data (n = 225) except for sleep disturbance and appetite/eating disturbance (chi-squared test,  $P < 0.05$ ). The sleep disturbance was more frequent in MCI with DM than in MCI of our database. On the other hand, the appetite/eating disturbance was less frequent in in MCI with DM than in MCI of our database. Moreover, the appetite/eating disturbance was not observed in MCI with DM.

**Conclusion:** NPS of MCI with DM is almost the same as MCI of our database except for sleep disturbance and appetite/eating disturbance. This result might be influenced by the disorder of lifestyle habits that is often observed in patients with DM or cognitive impairment of DM.

The limitation of our study is the small number of cases, further investigation is needed.

## **P153: The CIMA-Q and CompAS cohort studies on factors associated with Alzheimer's disease (AD): Exploring sociodemographic, health and neuropsychological profile of Subjective Cognitive Decline (SCD) participants from two culturally differentiated samples.**

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\*Some of the data used in the preparation of this proposal were obtained from the sample of the Consortium for the early identification of Alzheimer's disease - Québec (CIMA-Q; [cima-q.ca](http://cima-q.ca)). The CIMA-Q researchers contributed to the establishment of protocols, the implementation of the cohort, the ; obtaining of clinical, cognitive and neuroimaging data as well as the sequence of biological samples. A list of the researchers involved in the conception of CIMA-Q can be found on the website [cima-q.ca](http://cima-q.ca)

**Objective:** To explore commonalities and differences in the sociodemographic, health, and neuropsychological characteristics of participants with SCD recruited in two culturally differentiated cohort studies, namely CIMA-Q (Canada; Bellevile et al., 2019) and CompAS (Spain; Juncos et al., 2012).

**Methods:** Older adults with subjective cognitive complaints of the CompAS (N=251; 68.92% women; Control: 30.3%; SCD: 25.9%; MCI: 28.7%) and the CIMA-Q (N=179; 71.5% women; Control:16.1%; SCD: 36.8%; MCI:28.6%) were recruited, respectively, from primary care centers and memory clinics, excluding patients with dementia and other neurological or psychiatric disturbances. Cognitive complaints were assessed considering coincident items of the QAM and MFE questionnaires. Cut-off points for the 5%ile were calculated independently in both samples and according to this, participants were classified as SCD or controls (CompAS: N= 141; CIMA-Q: N=161) considering complaints relevance at baseline (Pereiro et al., 2021). Participants underwent neuropsychological assessment. Participants diagnosed as Mild Cognitive Impairment (MCI) were excluded from the analysis. Between cohort-studies and inter-group (control, SCD) differences were tested in the sociodemographic, health and neuropsychological measures considered. The Holm-Bonferroni correction was applied to reduce the probability of type I error ( $p < .003$ ).

**Results:** Identical cut-off points for 5%ile were obtained in both samples though SCD prevalence was slightly higher in CIMA-Q. For both samples, equivalence between Control and SCD participants in sociodemographic, health, functionality, and neuropsychological measures was observed. Only complaints and depressive symptomatology was significantly higher in SCD participants than in controls in both CompAS and CIMA-Q studies.

Participants of the CIMA-Q, Controls and SCD, showed significantly higher age, cognitive reserve proxies, comorbidity, and better attentional performance than the CompAS participants (see Table 1). CompAS participants, Controls and SCD, showed more neuropsychiatric symptomatology than CIMA-Q participants (see Table 1).

**Conclusions:** Control and SCD participants showed equivalence on sociodemographic, health, functional, and neuropsychological measures in both studies. However, significant between-sample differences in the two groups, particularly in SCD participants, were observed in sociodemographic, health, cognitive reserve, behavioral and attentional measures. Identification of these factors are critical to analyze the transcultural validity of cognitive complaints in predicting progression to AD.

Table 1. Between group (control, SCD) and Between study (CIMA-Q, CompAS) differences in sociodemographic, health, and cognitive measures

|                               | <b>CIMA-Q</b>                                | <b>CompAS</b>                                | <b>Between-studies differences</b>             |  |
|-------------------------------|--|--|--|--|
|                               | Between-group differences                    | Between-group differences                    | Control  | SCD  |
| <i>Sociodemographics</i>      |  |  |  |  |
| Age                           | NS   | NS   | CIMA-Q>CompAS; $F(1,124)=22.78$ ;<br>$p<.001$  | CIMA-Q>CompAS; $F(1,172)=36.97$ ;<br>$p<.001$  |
| Gender                        | NS   | NS   | NS   | NS   |
| Schooling (years)             | NS   | NS   | NS   | CIMA-Q>CompAS; $F(1,172)=20.74$ ;<br>$p<.001$  |
| Prof. qualification           | NS   | NS   | CIMA-Q>CompAS; $\chi^2_4=18.18$ ; $p=001$      | CIMA-Q>CompAS; $\chi^2_4=33.95$ ; $p<001$      |
| Cognitive reserve (quartiles) | NS   | NS   | CIMA-Q>CompAS; $\chi^2_3=13.57$ ; $p=004$      | CIMA-Q>CompAS; $\chi^2_3=42.56$ ; $p<001$      |
| Memory familiar antecedents   | NS   | NS   | NS   | CIMA-Q>CompAS; $\chi^2_1=15.03$ ; $p<001$      |
| <i>Neuropsychology</i>        |  |  |  |  |
| Subjective complaints*        | SCD>Control; $F(1,119)=147.17$ ,<br>$p<.001$ | SCD>Control; $F(1,177)=192.87$ ,<br>$p<.001$ | NS   | NS   |
| Charlson Index*               | SCD>Control; $F(1,115)=5.29$ ,<br>$p=.023$   | NS   | CIMA-Q>CompAS; $F(1,123)=394.96$ ;<br>$p<.001$ | CIMA-Q>CompAS; $F(1,168)=335.98$ ;<br>$p<.001$ |
| General cognition             | NS (MoCA)                                    | NS (CAMCOG-R)                                | --   | --   |
| GDS-15*                       | SCD>Control; $F(1,119)=8.60$ ,<br>$p=.004$   | SCD>Control; $F(1,176)=11.97$ ,<br>$p<.001$  | NS   | NS   |
| TMT-A (secs.)*                | NS   | NS   | NS   | NS   |
| TMT-B (secs.)*                | NS   | NS   | CompAS>CIMA-Q; $F(1,118)=12.56$ ;<br>$p<.001$  | CompAS>CIMA-Q; $F(1,163)=21.74$ ;<br>$p<.001$  |
| Verbal fluency                | NS   | NS   | NS   | NS   |
| Semantic fluency              | NS   | NS   | NS   | NS   |
| Boston test                   | NS   | NS   | NS   | NS   |
| NPI-Q                         | NS   | NS   | CompAS>CIMA-Q; $F(1,119)=16.68$ ;<br>$p<.001$  | CompAS> CIMA-Q; $F(1,162)=24.46$ ;<br>$p<.001$ |
| Immediate recall (RAVL test)  | NS   | NS   | NS   | NS   |
| Short delay (RAVL test)       | NS   | NS   | NS   | NS   |
| Long delay(RAVL test)         | NS   | NS   | NS   | NS   |
| Intrusions (RAVL test)        | NS   | NS   | NS   | NS   |
| IAVD*                         | NS   | NS   | NS   | NS   |

Note: \*On these measures, higher scores denote worse cognition or health condition. TMT: Trail Making Test (A and B forms); NPI-Q: Neuropsychiatric Inventory-Questionnaire; RAVL: Rey Auditory Verbal Learning; IAVD: Instrumental Activity of Daily Living.



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## **P167: Informal activities may explain improved depressive symptoms and resilience in nursing home residents: A cross-sectional study in Dutch and Flemish nursing homes**

**Objective:** Pleasant, meaningful, recreational or other activities are often used in depression treatment in nursing home (NH) residents. Residents may also undertake such activities alongside or without a treatment (informal activities). It is not clear if such informal activities can partially explain treatment effects. Our aim was to explore associations of depressive symptoms and resilience with informal activities in residents.

**Methods:** We calculated product scores of frequency and pleasantness for activities from 18 activity clusters in NH residents (AIM, Activities to Improve Mood inventory, Knippenberg et al., in prep). The Geriatric Depression Scale, 8 items (GDS-8, Jongenelis et al., 2007) and the Brief Resilience Scale (BRSnI, Dutch translation, Leontjevas et al., 2014) were administered when interviewing residents. Professional caregivers filled out the Nijmegen Observer Rated Depression scale (NORD, Leontjevas et al., 2011). Spearman's rho's of 0.20 to 0.39 and of 0.40 to 0.60 were regarded as weak and moderate, respectively.

**Results:** 277 Dutch speaking NH residents (male, N=104, 38%), from Flanders Belgium (male, N=137, 49.5%) and the Netherlands participated in the study. We found positive weak associations between the self-reported and observer-rated depression scales (GDS-8 and NORD), and between the AIM total score and resilience (BRSnI). Negative weak associations were found for both depression scales and resilience, and for the depression scales and AIM. Individual AIM clusters showed positive weak to moderate associations between resilience and activities stimulating cognition (e.g. reading, puzzling), activities related to nature (e.g. walking in a park, activities with animals), or doing something meaningful for others (e.g. helping with daily routines or volunteering). Regarding depression, next to the three mentioned clusters, negative weak to moderate associations were also found for craft activities, social activities, and showing a positive mindset (e.g. humour, giving compliments).

**Conclusion:** The results underscore the value of activities that residents may undertake on their own alongside or without a treatment. More research is needed to understand whether informal activities alongside or without a treatment may explain intervention effects (e.g. placebo effects) on depression or resilience, and how these activities may be used to improve treatment protocols.