IPABulletin

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The ALIVE National Centre for Mental Health Research Translation

A Cognitive Rehabilitation Therapy. Psychogeriatrics Unit EOXI of Vigo (Galicia, Spain)



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PRESIDENT'S MESSAGE – MANABU IKEDA

Dear Colleagues,

At the time of this message, the accelerating spread of COVID-19 has been progressively fading despite an ongoing pandemic risk globally. Now that it has been 3 years since the onset of the pandemic, it may be an opportune time to investigate how the pandemic affected older adults, especially vulnerable populations



like the physically, mentally or cognitively frail. There is good news on the horizon, including the development of biomarkers and disease-modifying drugs for dementia, which will be important topics included at the upcoming IPA congress.

I want to extend my sincere thanks to everyone, especially the organizing committee members, who are preparing for the IPA International Congress in Lisbon (June 29 – July 2, 2023). This year's congress will include an opening keynote speech, 4 plenary sessions, 6 workshops, 22 symposia, and more than 230 poster presentations. It will be a great pleasure to see and hear from so many of you in person, especially after the physical distancing associated with the pandemic.

As always, I wish you the very best over the next few months and thank you for your dedication to supporting IPA.

With Kindest Regards.

Dr. Manabu Ikeda

EDITOR'S NOTE

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EDITOR'S NOTE - TZUNG-JENG HWANG

Our long-expected IPA Congress will take place in about 3 months. The organizing committee has been working diligently to arrange a meeting with diverse and rich content for participants. There will be workshops, plenary sessions, symposia, early career programs, oral communications, poster presentations, and discussions with the chief editor of IPA's official journal:

International Psychogeriatrics. Besides, Lisbon's historical scenery



would certainly offer participants fresh and exotic experiences. We look forward to meeting you in person there.

In the "International Psychogeriatrics Review Column", Ms. Peiyuan Zhang (USA) reviews the paper "A tablet-based intervention for activating nursing home residents with dementia: results from a cluster-randomized controlled trial" by O'Sullivan et al. (2022). O'Sullivan et al. used a cluster-randomized controlled approach to examine the effect of a tablet-based intervention (TBI) on apathy compared to conventional individual activity sessions (CAS) in 8 weeks. They found TBI did not significantly reduce apathy but could reduce the number of psychotropic medications. Possible factors were discussed, such as a high rate of staff turnover, increased stress related to TBI, etc. Future studies may need to fully consider the challenges of implementing TBI, so that these interventions can be tailored to improve quality of life among persons with dementia.

There are 4 articles in "Research and Practice", and 2 in "Around the World". In "Research and Practice", Dr. Tsu-Hsuan Hu (Taiwan) reviews sleep disturbance across different stages of cognitive decline. Sleep disturbance represents one of the earliest symptoms of Alzheimer's disease. EEG slowing in REM sleep shows the highest correlation with cognitive decline and may be a sensitive marker of the neurodegenerative process in early stages. Dr. Lindsay Groenvynck et al. (the Netherlands) report their study on transitioning from home to a nursing home in older adults with dementia. They found older persons and informal caregivers need information, support, time, and a partnership with the healthcare professional throughout the transition process. Dr. Cho-Hsiang Yang et al. (Taiwan) conduct a review of the eight-item informant interview to differentiate aging and dementia (AD8). They find several factors that can affect AD8 performance, including disease prevalence, geographical region, socioeconomic context, education level, understanding of questions, respondent personality, and conduct and flow of administration. Lastly, Drs. Snehasree Neogy and Debanjan Banerjee (India) discuss clinical challenges in neuropsychological assessments, especially from the perspective of India.

EDITOR'S NOTE, continued from page 2

In "**Around the World**", Drs. Victoria J Palmer et al. (Australia) report The ALIVE National Centre for Mental Health Research Translation, which aims to implement innovations in mental health care to address unmet physical health needs, embed prevention across the life span, and use lived-experience models for delivering mental health care at-scale across primary care and community settings. Dr. Javier Vicente-Alba (Spain) shares with us the psychogeriatrics unit from the psychiatry service of Vigo (Galicia, Spain) has developed the first cognitive rehabilitation program integrated into the public health system.

Please submit articles to express your thoughts at ipa.b.editor@gmail.com.

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IPA MEETINGS AND EVENTS



2023 IPA International Congress Lisbon, Portugal • June 29-July 2, 2023

Congress-at-a-Glance

Thursday, 29 June

Workshops

- 1) Evidence-Informed Approach to De-Prescribing of Atypical Antipsychotics (AAP) in the Management of Behavioral-Expressions (BE) in Advanced Neurocognitive Disorders (NCD): Results of a Retrospective Study.
- 2) Develop, implement and evaluate technology for social health in dementia: lessons in best practice from the EuropeanDISTINCTnetwork
- 3) Cognitive Assessment for Older People in Daily Clinical Practice – A Primer
- 4) Humanitarian Crisis and Old Age Mental Health
- 5) Mitigating Ageism in Everyday Clinical Care
- 6) Young-onset Dementia (YOD), new developments, part 1 and part 2

Emerging Concepts in Combating Ageism, Protecting and Promoting Human Rights and Mental Health of Older Persons

Presenters: Amal Abou Rafeh and Claudia Mahler



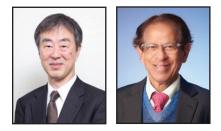


Friday, 30 June

Healthy Ageing and the Role of the Environment Presenter: John Beard

Late onset psychosis / schizophrenia ç

Presenters: Manabu Ikeda and Dilip Jeste



Saturday, 1 July

The importance and value of psychosocial care in dementia in historical perspective, with reflection and commentary

Presenter: Rose Marie Droes



Disease-modified Drug Presenter: TBD Sunday, 2 July

The role of social connectedness in multifactorial demential syndrome. Does social life matter? - IPA/INTERDEM webinar

Presenter: Marjolein de Vugt and Sube Banerjee



Closing Remarks Presenter: IPA President-Elect Anne Margriet Pot



Click Here For Full Congress Program

IPA MEETINGS AND EVENTS



JOIN US FOR IPA'S NEXT WEBINAR...

"CROSS-CULTURAL PERSPECTIVES ON DEMENTIA: THE AFRICAN PERSPECTIVE" THURSDAY, APRIL 20TH AT 9:00 AM CDT

(click here for your local time)

Register now with this link

Hello IPA colleagues,

It is our pleasure to present to you, on behalf of the International Psychogeriatric Association (IPA), this new webinar: **Cross-Cultural Perspectives on Dementia: The African Perspective.**

Dementia is a worldwide problem, and cultural perspectives may vary. On April 20, 2023, join us for the IPA webinar series on "Cross-cultural perspectives on dementia: The African Perspective." Eminent dementia experts from Africa will present data on epidemiology, care management, stigma, and perspectives on behavioral and psychological symptoms of dementia. In this webinar, participants will gain an understanding of the unique cultural and contextual factors that contribute to the experience of dementia in Africa.

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.

Prof. Myrra Vernooij-Dassen, PhD Chair, IPA Webinar Series

WEBINAR PRESENTERS-



Presenter: Dr. Adesola Ogunniyi

Dr. Adesola Ogunniyi is a Professor of Medicine at the College of Medicine, University of Ibadan and Consultant Neurologist to the University College Hospital, Ibadan. He is a Fellow of the Nigerian Academy of Science, the Academy of Medicine Specialties of Nigeria, and the Nigerian Academy of Medicine. His research interest is the epidemiology of neurodegenerative diseases. He received his medical degree from the University of Ife, Ile-Ife (now Obafemi Awolowo University) and residency training at the University College Hospital, Ibadan specializing in neurology. He had neuroepidemiology fellowship at the National Institutes of Health, Bethesda, USA (1986-87). He is well published, and reviews articles for many journals.



Presenter: Dr. Olusegun Baiyewu

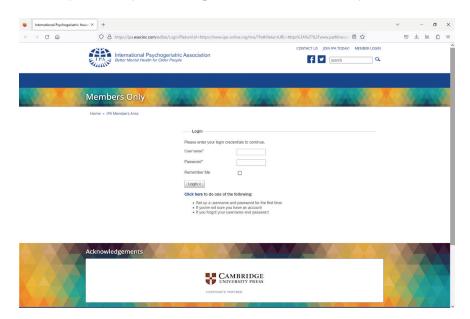
Olusegun Baiyewu is a professor of psychiatry with specialization in old age psychiatry. A current member of IPA and was a member of its Board of Director between 2007 and 2013. He was an associate editor of International Psychgeriatrics up till 2019 and has been a reviewer for good number of peer review journals in aging, geriatrics and psychogeriatrics for many years. He was Chair of African Reginal Initiative of the IPA for a couple of years and the Chair of the Geriatric Psychiatric Section of the Association of Psychiatrists in Nigeria; that section is an Affiliate of the IPA. Dr. Baiyewu is a member of some other international organizations interested in health and welfare of older adults. His research interests are in Dementia, Behavioral and Psychological Symptoms in Dementia, and Depression; areas in which he has worked for over 30 years and has considerable number of publications in peer review journals. He recently led a team that studied dementia in community dwelling oldest old Nigerians. He is a member of the African Dementia Consortium, a group working on genetics of Alzheimer disease in 9 African countries. He retired formally for the university services in 2017 but has been invited to continue giving support to educational programs and research as well as mentoring younger colleagues.

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REVIEW OF "DEMENTIA KNOWLEDGE AND ASSOCIATED FACTORS AMONG OLDER CHINESE ADULTS, continued on next page

REVIEW OF "A TABLET-BASED INTERVENTION FOR ACTIVATING NURSING HOME RESIDENTS WITH DEMENTIA: RESULTS FROM A CLUSTER-RANDOMIZED CONTROLLED TRIAL" BY O'SULLIVAN ET AL.

Peiyuan Zhang, doctoral student, School of Social Work, University of Maryland

Key highlights

- A multicomponent tablet-based non-pharmacological intervention (TBI) did not reduce apathy among nursing home residents with dementia. Changes in apathy scores between the TBI and control group (conventional activity session) was not statistically significant.
- A reduction of psychotropic medication was found for the TBI group compared to the control group, which demonstrates a potential benefit of this nonpharmacological intervention. Improvement in

global quality of life following the intervention was revealed across both groups, which indicates possible effectiveness of both interventions.

A high rate of staff turnover adversely impacted the quality of implementation in a nursing home setting, and its own intense intervention contents may account for non-significant group differences in apathy.
 Future research is warranted and should consider the burdens of the study on both staff and residents and its influence on attrition rate.

Dementia is one of the greatest health challenges globally with no cure is in sight currently. According to WHO (2021), around 55 million people live with dementia, and the number is expected to rise to 78 million in 2030, forecasting tremendous medical and care costs. To improve the quality of care for people with dementia (PWD), numerous trials are investigating treatments for different symptoms of dementia. However, despite being one of the most common neuropsychiatric symptoms in dementia apathy does not get enough focus. With often undesirable effects of medical treatment (O'Sullivan et al, 2022), research interest in non-pharmacological interventions for managing apathy has been growing. However, due to lack of a standardized approach, research results have been mixed and understanding of its effects remain unclear.

To fill in these gaps, O'Sullivan et al. (2022) used a clusterrandomized controlled approach to examine the effect of tablet-based intervention (TBI) in apathy (primary outcome) compared to conventional individual activity sessions (CAS). Meanwhile, effects on secondary outcomes including quality of life and neuropsychiatric symptoms were also investigated. Participants were randomly assigned to either TBI or CAS groups at the nursing home level to avoid contamination across groups. Ten nursing homes in Berlin Germany were recruited from June 2016 to May 2017. Based on eligibility criteria related to dementia diagnosis or cognitive impairment and power analysis, 162 participants were included in this study. Participants received regular TBI (n = 80) with stimulating activities developed to engage people with dementia or CAS (n = 82) for 8 weeks.

This prospective longitudinal study reported three major findings. First, there was no statistically significant differences in the level of apathy between the TBI intervention group and the CAS control group. Apathy Evaluation Scale – Informant version (AES- I) was used to assess apathy, and a linear mixedeffect model analysis showed that the average AES-I score was 48.27 (95% CI 45.32, 51.21) post-intervention in the TBI group which was similar to the CAS group at 48.51 (95% CI 45.61, 51.42). Thus, this finding did not support the authors' hypothesis that TBI could reduce apathy in PWD. However, given the fact that the level of apathy decreased slightly in both groups (mean decrease in AES-I of 0.61 points, 95% CI – 3.54, 2.33 for TBI and 0.36 points, 95% CI – 3.27, 2.55 for CAS) more effective interventions are needed. Considering several

REVIEW OF "A TABLET-BASED INTERVENTION FOR ACTIVATING NURSING HOME RESIDENTS WITH DEMENTIA, continued on next page

REVIEW OF "A TABLET-BASED INTERVENTION FOR ACTIVATING NURSING HOME RESIDENTS WITH DEMENTIA, continued from page 7

studies reported beneficial outcomes of occupational therapy, sports activities, and musical therapy in decreasing apathy, despite mixed results, it would be worthwhile incorporating these activities into information and communication technologies (ICT)-based intervention strategies. With more research and greater understanding more effective strategies for reducing apathy can be developed for the future.

The second finding is that a reduction of psychotropic medication was found for the TBI group compared to the CAS group. A generalized estimating equations model analysis showed that group differences in number of psychotropic medication prescriptions following in the intervention was statistically significant (mean in TBI 1.56, 95% CI 1.37, 1.76; mean in CAS 1.99, 95% CI 1.81, 2.17). This result points to the potential for non-pharmacological interventions in reducing the number of psychotropic drugs for nursing home residents with dementia. However, since the difference in NPI-NH scores used for assessing neuropsychiatric symptoms were not statistically significant, the reduction in psychotropic prescriptions cannot be interpreted as an improvement in neuropsychiatric symptoms. Future studies could investigate the impact of ICT-based interventions on psychotropic medication prescriptions further.

O'Sullivan et al. (2022) reported another major finding which indicated an improvement in quality of life for both groups post-intervention. In terms of ecological momentary assessments of quality of life, improvement was greater for the CAS group compared to the TBI group (β = .43; 95% CI .30, .56, p<.001). Since the results of non-pharmacological interventions often do not last after the cessation of the intervention, the results of this study are very meaningful for patients, family, and nursing home staff; clinicians could have a better understanding about what situational activities are more effective in improving quality of life for PWD.

The challenges unique to PWD and their families call for rigorous research on strategizing effective treatments and improving quality of life. Although O'Sullivan et al. did not detect significant changes in apathy across groups, the study still had important clinical and research implications. First, in terms of the intervention content, it is important for researchers to be mindful of the additional physical and mental burdens placed on PWD when designing future interventions. Given the fact that most participants (85%) failed to complete the originally scheduled 24 sessions, and 13 participants in the TBI group terminated the study because the TBI was too mentally challenging and stressful, researchers should carefully consider the biopsychosocial characteristics of this population. Second, this study was implemented in nursing homes with high staff turnover, which may partly explain why only 59% of interventions requiring staff assistance were carried out. Future studies should account of different reasons for attrition and develop back-up plans in-advance.

In conclusion, this novel study delivered an intervention using a portable computer as the main device. With increasing prevalence of this technology, ICT-based interventions may have great potential in the future for PWD. In the meanwhile, researchers should be mindful of potential barriers of novel technology (e.g., unfamiliarity, mental burdens). Future studies may need to fully consider the challenges of implementing ICT-based interventions, so that these interventions can be further designed and tailored to improve quality of life among PWD.

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- O'Sullivan, J. L., Lech, S., Gellert, P., Grittner, U., Voigt-Antons, J. N., Möller, S., Kuhlmey, A., & Nordheim, J. (2022). A tabletbased intervention for activating nursing home residents with dementia: results from a cluster-randomized controlled trial. *International psychogeriatrics*, 34(2), 129–141. <u>https:// doi.org/10.1017/S1041610221000818</u>
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Peiyuan Zhang, is a doctoral student in the University of Maryland School of Social Work. She is also a fellow of Association for Gerontology Education in Social Work. Her research focuses on palliative care education and advance

care planning facilitation among people with dementia. Email address: peiyuanzhang@ssw.umaryland.edu

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SLEEP DISTURBANCES ACROSS STAGES OF COGNITIVE DECLINE

Tsu-Hsuan Hu, M.D

National Taiwan University Hospital, Department of Family Medicine

Key highlights

- Sleep disturbance is highly prevalent among older adults across different stages of cognitive decline.
- Sleep disturbance represent one of the earliest symptoms of Alzheimer's disease and can negatively impact cognitive function and neuropsychiatric symptoms.
- The most common aspects of sleep disturbance

Sleep disturbances are common among people with Alzheimer's disease (AD), other dementia and mild cognitive impairment. The prevalence of sleep disturbances varies significantly, depending on the dementia subtypes, the severity of people in the sample being studied, and the measures used to identify sleep problems. In a recent systematic review and meta-analysis, the prevalence of any sleep disturbance was 26% and 19% for clinically significant sleep disturbance in people with dementia living in the community [1]. Patients with Lewy body dementia, vascular dementia and frontotemporal dementia report higher prevalence of sleep disturbance than AD. The consequences of poor sleep quality in dementia patients may have negative consequences related to unwanted behaviors, agitation, delirium, increased fall risk, greater caregiver burden, and early nursing home placement. Identification of sleep disturbances may contribute to early detection of cognitive decline, which could provide an opportunity for appropriate management and modification of potential risk factors.

Previous studies have shown that poor sleep quality is associated with worsening cognitive function and contribute to AD. The candidate mechanisms linking sleep disturbances to the neuropathophysiology of AD may be hyperarousal features of insomnia. Miranda G Chappel-Farley et al. hypothesized that different aspects of hyperarousal compromised are rapid eye movement (REM), sleep efficiency, sleep latency, and sleep duration in pathological older adults.

EEG slowing in REM sleep shows the highest correlation with cognitive decline, which may be a sensitive marker of the neurodegenerative process in early stages.

including physiological, cortical, and emotional-cognitive can dysregulate hypothalamic-pituitary-adrenal (HPA) axis activity, disrupt the balance of AB and tau protein production and clearance, and result in a heightened systemic and neuroinflammatory state, thereby facilitating AD neurodegeneration [2]. In addition, short sleep duration and circadian rhythm disruption compound AD pathogenesis by interacting with hyperarousal-associated effects and on AD biomarkers directly. Neuroinflammation is also considered a crucial mediating pathway of sleep disturbances in mild cognitive impairment (MCI) and AD [3]. The amyloid cascade hypothesis supposes that β-amyloid (Aβ) deposition may activate microglia and astrocytes and release inflammatory factors in response; it may also lead to pineal gland calcification, causing the reduction of melatonin, and this relationship is bidirectional, because melatonin has anti-inflammatory properties in itself. Although there are many possible mechanisms between sleep disturbances and cognitive decline, further studies are needed to clarify the pathophysiology.

Sleep disturbances can not only generate or accelerate cognitive decline, but also represent one of the earliest symptoms of AD. To clarify the relationship between sleep quality and pathological aging, there is greater interest in identifying the main characteristics of sleep and sleep

SLEEP DISTURBANCES ACROSS STAGES OF COGNITIVE DECLINE, continued on next page

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disturbances in the continuum of cognitive decline. Despite the high prevalence of poor sleep and sleep disturbances in healthy older adults, pathological aging including MCI and AD still are associated with worse impoverishment of sleep [4]. The most common aspects compromised are rapid eye movement (REM), sleep efficiency, sleep latency, and sleep duration. MCI patients show intermediate sleep disorders between healthy subjects and AD patients. The main differences include reduced percentage of REM sleep and higher percentages of stage 1 and stage 2 sleep in AD compared to MCI and healthy subjects, and reduced REM sleep in MCI compared to healthy older adults. A secondary analysis in 2022 further showed insomnia symptoms increased risk of progression from cognitively normal status to MCI at 4-year follow-up but did not appear to be significant from MCI to dementia [5]. One possible explanation is that insomnia may arise in the preclinical phase of AD reflecting early stages of neurodegeneration.

In addition to clinical features, other objective examinations such as electroencephalographic (EEG) may provide further information across different stages of cognitive impairment. Previous studies have revealed that patients with AD show increased low-frequency (0.5-7.0 Hz) activity and decreased high-frequency activity in awake EEG starting in prodromal stages [6]. Triphasic waves and lack of clear EEG distinction between wakefulness, drowsiness, and light sleep were noted as well. Different EEG features were also observed in AD, MCI and healthy subjects during sleep and pre-sleep/ post-sleep wakefulness. A cohort study focusing on detailed topographic and frequency-specific alterations in EEG revealed that the primary EEG indices differentiating AD/MCI from healthy older adults were a decrease in alpha activity in temporo-parieto-occipital regions, a decrease in sigma activity during both NREM and REM sleep, and an increase in delta activity during REM sleep and wakefulness in temporofrontal regions [7]. Among the alterations, EEG slowing in REM sleep shows the highest correlation with cognitive decline, which suggests that REM sleep may be a sensitive marker of the neurodegenerative process in early stages.

Sleep disturbance is not only an early symptom of cognitive decline, but also a predictor of poor outcomes in those with AD. It may worsen cognitive function and neuropsychiatric symptoms, and lead to reduced quality of life. Both subjective and objective evaluation can help identify sleep disturbance in those with cognitive decline earlier, and therefore offer timely management and prevention strategies.

[Image(s) or figure(s)] nil

For further reading:

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SLEEP DISTURBANCES ACROSS STAGES OF COGNITIVE DECLINE, continued from page 10



Dr Tsu-Hsuan Hu is a fellow of the Department of Family Medicine at National Taiwan University Hospital. Her areas of interest include geriatrics, palliative medicine and travel medicine.

THE TRANSITION FROM HOME TO A NURSING HOME: THE PERSPECTIVES OF OLDER PERSONS, INFORMAL CAREGIVERS, AND HEALTHCARE PROFESSIONALS.

Lindsay Groenvynck^{1,2}, Bram de Boer¹⁻², Jan P H Hamers¹⁻², Theo van Achterberg², Erik van Rossum¹, Hilde Verbeek¹ ¹Department of Health Services Research, CAPHRI Care and Public Health Research Institute, Living Lab of Ageing and Long Term Care, Maastricht University, Maastricht, the Netherlands.

²KU Leuven Department of Public Health and Primary Care, Academic Centre for Nursing and Midwifery, Leuven, Belgium.

Key highlights

- The transition from home to a nursing home can be defined by three phases: the pre-transition, midtransition and post-transition phase.
- Older persons and informal caregivers need information, support, time, support and a partnership with the healthcare professional throughout the transition process.
- Informal caregivers experience paradoxical emotions

during the transition from home to a nursing home. Their prospective and retrospective needs differ. Additionally, they look for a balance between their need for distance versus the need to remain involved.

 Older persons living with dementia fear the idea of having to move to a nursing home. Their future care wishes are to remain autonomous individuals who are in contact with others.

INTRODUCTION

The transition from home to a nursing home is common for older persons living with dementia and informal caregivers. The transition can generally be described as having three phases. First is the pre-transition phase. This is the time to make a transition decision and choose a nursing home. The mid-transition phase is the time that the older person waits on the waiting list for a place in a nursing home. This phase ends when the older person resides in the nursing home. Finally, in the post-transition phase, both the older person and the informal caregiver adapt and adjust to the new living situation [1]. Despite being an often-reoccurring care process, many care transitions are fragmented, leading to negative outcomes for all involved [2]. For older persons, it can lead to medicationassociated events, fall injuries, and even mortality. Informal caregivers, who often play a central role during this care process, can be burdened with feelings of sadness and failure. Healthcare professionals can experience burnout as a result of duplication of services. The latter can have financial implications for the general healthcare system.

To improve this care process and avoid negative outcomes, interventions must be implemented that consider the needs and perspectives of those involved. Currently, Interventions

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to improve this care process are scarce. Moreover, most interventions focus on the post-transition phase. This is unfortunate as research has shown that the pre- and midtransition phase experiences can significantly impact the experiences during the post-transition phase [3].

Therefore, we aimed to improve the transition from home to a nursing home by understanding the perspectives of older people living with dementia, informal caregivers, and healthcare professionals. This research project is part of TRANS-SENIOR, a European-funded research network.

IDENTIFYING NEEDS AND INTERVENTIONS

This research project was started by identifying the needs of older persons and informal caregivers during the transition from home to a nursing home. A literature review was conducted. The review identified studies that focused on the experiences of older persons and/or informal caregivers during the care transition. Based on these experiences, the research team identified a list of needs. These needs were analyzed, leading to the TRANSCIT-model. It is an abbreviation for TRANsition Support, Communication, Information, and Time. The model identifies the four key components and the need for a partnership throughout the transition process [1].

Additionally, we conducted a scoping review to identify existing interventions to improve the care process [4]. The study identified 17 studies describing 13 distinct interventions. The interventions consisted of five singlecomponent and eight multi-component interventions. The single-component interventions were smaller, focused interventions. The multi-component interventions were longer interventions with multiple sessions. In general, only one intervention included the entire transition process. The majority of studies focused only on the post-transition phase. Moreover, when comparing the interventions with the TRANSCIT-model, the results showed that none of the interventions considered the key needs. The interventions also only focused on one or two participants rather than looking at the entire care triad of older persons, informal caregivers, and healthcare professionals [4].

PERSPECTIVES OF FAMILY AND OLDER PERSONS WITH DEMENTIA

To understand the identified needs, a qualitative, interpretative study was conducted [3]. We interviewed informal caregivers, who played an important role during the transitional care process of a loved one, to understand their perspectives. The results showed that informal caregivers identified three paradoxes. The first paradox was the initial negative emotions versus positive emotions of relief and acceptance. These emotions were strongly influenced by the healthcare system. Specifically, if the informal caregivers received the necessary support during the move, more positive emotions were expressed. Especially, the day of the move and the first days after the move were associated with negative emotions. The second paradox was the retrospective need for a timely care process versus the prospective need to avoid the transition. This meant that informal care avoided the transition process until the home situation was no longer safe and they were burned out. However, when looking back on their experiences, they would have liked to have a timely planned and organized care process. The third paradox focused on the need for distance versus the need to remain involved. Where the informal caregivers struggled to find a balance between being involved in the life of the older person while also keeping some distance and trusting the care that was provided [3].

Finally, interviews were conducted to get an understanding of the perspectives of older persons living with dementia regarding a possible move to a nursing home. The results indicated that most older persons feared moving to a nursing home; they associated it with loss. Moreover, the potential, future nursing home resident wished to remain autonomous and in contact with others. They defined autonomy as the wish for respect regarding preferences and choices while remaining independent. Individuality was seen as personalized care and the possibility of continuing hobbies and routines. Moreover, the older persons wanted to hold on to their social contacts by remaining close to friends and family.

THE TRANSITION FROM HOME TO A NURSING HOME, continued on next page

THE TRANSITION FROM HOME TO A NURSING HOME, continued from page 12

FUTURE DIRECTIONS

What is currently lacking is knowledge based on a prospective insight of older people's and their caregivers' experiences throughout the transition journey. Previous studies indicate a gap between needing and accepting help, and caregivers often reflect differently regarding previous decisions retrospectively [5]. Therefore, we are conducting patient journeys at the moment. Here, the researcher follows older persons, informal caregivers, and healthcare professionals throughout the transitional care journey from living at home to moving to a nursing home. The study's goal is to better understand the prospective experiences of the participants and their perspectives throughout the transition process. Data are collected through interviews and informal conversations. Results are expected by the end of this year.

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transition from home to living in a nursing

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THE EIGHT-ITEM INFORMANT INTERVIEW TO DIFFERENTIATE AGING AND DEMENTIA (AD8): A BRIEF LITERATURE REVIEW

Cho-Hsiang Yang, MD, Yi-Ting Lin, MD, Tzung-Jeng Hwang, MD, PhD Department of Psychiatry, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taipei, Taiwan

Key highlights

- The AD8 is a brief instrument for dementia screening with varying cutoff values across different regions of the world.
- Factors that can affect AD8 performance include disease prevalence, geographical

Dementia, also known as major neurocognitive disorder, causes distress and burden to affected individuals, their carers, and their communities throughout the course of the disease. This has become a global challenge because the prevalence of dementia nearly triples every decade among older adults and many countries are experiencing or anticipate aging and aged societies. Dementia treatment at an early stage may slow its progression, and hence a convenient screening instrument for early detection is required.

The 8-Item Informant Interview to Differentiate Aging and Dementia (AD8) has been developed, validated and translated into various languages. Numerous studies have used the AD8 to measure cognitive impairment, but the debate on whether this brief tool is useful during health examinations for older adults in the general population remains (Galvin et al., 2012, Wan et al., 2016, Wright et al., 2022).

Although the initial AD8 study and several following have suggested a cutoff value of 2 (Galvin et al., 2005), it has appeared that optimal cutoff values may differ across various geographical regions of the world. For example, a score of 3 and above was recommended for cases of dementia in Brazil (Correia et al., 2011), China (Wang et al., 2023), India, Iran (Pourshams et al., 2022), Japan (Meguro et al., 2015), Philippines (Dominguez et al., 2021), Singapore, South Korea region, socioeconomic context, education level, understanding of questions, repondant personality, and conduct and flow of administration.

• A better strategy would be to screen at-risk populations for symptoms and signs of cognitive decline.

(Ryu et al., 2009), and Thailand (Thaipisuttikul et al. 2022); while a score of 4 and above was reccomended in Spain (Pardo et al., 2013), and 5 and above was reccomended in Turkey. (Usarel et al., 2019) Correia et al. (2011) explained that education levels, socioeconomic context, and resondant understanding of questions might contribute to such differences.

The conduct and personality types of respondents may have an additional impact on the rating of AD8. Although the AD8 was initially designed as an informant-based interview, many studies evaluated its performance when used as a self-reported questionnaire. Buchanan et al. (2018) pointed out that neuroticism of informants is associated with higher ratings of severity of the cognitive decline of the subjects being evaluated. Others found that self-assessment of one's cognitive ability using the AD8 may be less accurate than that reported by informants, which may be related to level of insight and severity of dementia (Dong et al., 2013, Kelleher et al. 2016, Chio et al., 2018, Ryu et al., 2020, Denny et al., 2021).

Furthermore, the sequence of test administration may affect performance on the AD8. The initial study used the Clinical Dementia Rating (CDR) as a reference standard, with a general score of 0.5 regarded as diagnostic of very mild dementia. Many authors adopted similar strategies in defining dementia and the severity of dementia in their

THE EIGHT-ITEM INFORMANT INTERVIEW TO DIFFERENTIATE AGING AND DEMENTIA (AD8): A BRIEF LITERATURE REVIEW, continued on next page

THE EIGHT-ITEM INFORMANT INTERVIEW TO DIFFERENTIATE AGING AND DEMENTIA (AD8): A BRIEF LITERATURE REVIEW, continued from page 14

studies, but little was known about the flow of assessment procedures. Given the CDR evaluates cognitive function in a manner that is more refined than that of the AD8, the administration of the CDR before the use of AD8 may falsely improve accuracy on the AD8. For instance, the Turkish study specified their flow of test administration as such, and their data generated a supreme, if not perfect, area under the receiver operating characteristic curve. (Usarel et al., 2019)

Participant selection and disease prevalence may alter performance as well. Theoretically, sensitivity and specificity are inherent to a test and unaffected by disease prevalence (Galvin et al., 2012), but the initial AD8 study stated that including participants with more severe dementia increased sensitivity. In addition, a major limitation of most AD8 studies was that the prevalence of dementia was higher in the sampled population compared to the general population (Christensen, 2012). Applying such a screening tool to the general population can lead to a low positive predictive value. Several studies pointed out that inadequate specificity or high false positive rates would jeopardize the utility of AD8. (Larner, 2015, Shaik et al., 2016, Tak et al., 2021) In 2020, the United States Preventive Services Task Force commissioned a review of the evidence on screening for cognitive impairment in community-dwelling adults. It concluded that the current evidence was insufficient to assess the balance of benefits and harms of screening for cognitive impairment in older adults who do not show recognized signs or symptoms of cognitive impairment.

Overall, the AD8 was developed as a brief screening tool for dementia with different cutoff values found in different countries. Many factors could affect its performance, including disease prevalence across clinical settings, geographical region, socioeconomic context, education level, understanding of questions, repondant personality, and conduct and flow of administration. It is reasonable, in general, to consider the targeted population, the psychometric properties of test, and the goal of such secondary prevention, before using a screening method like the AD8. For the best interest of persons living with dementia on the community level, in particular, appropriate strategies might be taken to maximize benefits. It would be better to target an at-risk population with symptoms or signs of cognitive impairment. By choosing appropriate populations for screening, we can minimize false positive results, refrain from causing anxiety, and avoid unnecessary medical examinations and expenses.

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THE EIGHT-ITEM INFORMANT INTERVIEW TO DIFFERENTIATE AGING AND DEMENTIA (AD8): A BRIEF LITERATURE REVIEW, continued on next page

THE EIGHT-ITEM INFORMANT INTERVIEW TO DIFFERENTIATE AGING AND DEMENTIA (AD8): A BRIEF LITERATURE REVIEW, continued from page 15



Dr. Yi-Ting Lin is the deputy secretary general of the Taiwanese Society of Geriatric Psychiatry. He obtained his MD and MS degrees from the National Taiwan University. Upon completion of his residency training, he was offered to be an attending physician at the Department of Psychiatry. His current study involves the use of transcranial magnetic stimulation to investigate brain mechanisms of mental illness.

CLINICAL CHALLENGES IN NEUROPSYCHOLOGICAL ASSESSMENTS – PERSPECTIVES FROM INDIA

Snehasree Neogy, Debanjan Banerjee APOLLO Multispecialty Hospitals (AMHL), Kolkata, India

Key highlights

- Neuropsychological assessments (NPA) are not diagnostic, but complement clinical understanding and management of neurocognitive disorders (NCD)
- A tailored assessment based on initial screeners followed by comprehensive neuropsychological batteries is ideal
- NPA are mostly westernized; hence adaptation in other areas needs socio-cultural and linguistic context,

familiarity, training, and adequate interpretation

- Literacy issues, standardization, resource and time constraints, cultural adaptability, and clinical relevance are the usual challenges
- More training and research are needed to make neurocognitive assessments a valuable clinical tool in dementia care

The history of neuropsychology in India dates back more than four decades. Over this time much of the focus has been on adapting existing neuropsychological assessments to the Indian population, focusing on reducing cognitive deficits in various clinical conditions, and prognostication. Most tests have originated in the West, and therefore have needed adaptation for our varied socio-cultural contexts.

India, with its varied and high populace, is one of the fastest ageing nations in the world. According to the Report of the Technical Group on Population Projections for India and States 2011-2036, there are nearly 138 million older adults in India in 2021 which is expected to further increase by around 56 million by 2031.

Ever since it was understood that populations differing in their demographic characteristics show variability in test performance; population-based normative studies were needed to reflect the construct it is posited to measure. Even when certain measures are developed in the patient's native language, and for examinees with a similar cultural context, within group differences in test scores may exist due to variability within a culture. This comes as a challenge to the Indian population. Most neuropsychological assessments are based in the United States and other Western nations, with a primarily English-speaking population. A host of culturespecific factors influence the test scores on which the norms are based. Thus, interpretation of such test scores in the Indian population need to be evaluated with caution.

In India, the cognitive tests and assessments are carried out by students who have completed a Masters degree (postgraduation), Masters in Philosophy (M.Phil.) degree or

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Doctoral degree in clinical psychology. Clinical psychologists as a part of the curriculum receive a fair amount of exposure in the field of neuropsychology and gain a license from the Rehabilitation Council of India (RCI) for clinical practice. This training which is part of the usual two-to-threeyear curriculum is however a basic capsulated brush-up. Only a few of them are specifically trained in conducting neuropsychological assessments, and per se, no separate licensing as a neuropsychologist is available at present. Considering the varied cognitive tests, their individual nuances, norms, and interpretations, intensive training and practice are needed to master them in a clinical population. Further, use in research is different from that in the clinics, as the purpose served varies. In the latter, the test results are also used specifically to prognosticate the condition, aid the diagnosis, plan cognitive training/rehabilitation, and provide feedback to patients and families. Few clinical psychologists go on to pursue a Doctoral program with a specialization in Neuropsychology. Many times doctors with MD-level training in general medicine, neurology, or psychiatry conduct neuropsychological evaluations.

Due to the growing need for cognitive testing, increased prevalence of dementia, lack of standardized assessments, lack of uniform training, a limited number of providers, and time constraints, formal cognitive assessments are often replaced by brief non-standardized screenings in busy out-patient settings. While they serve the immediate purpose in most cases, screeners like the Hindi Mental Status Examination (HMSE) (which is adapted from MMSE), which is literacy sensitive, has a ceiling effect and is heavily based on the memory domain. The HMSE is also not a great tool for assessing improvement with anti-dementia drugs (change in cognitive status over time).

According to the 2011 language Census of India, there are 121 languages and 22 official languages in our nation. Neuropsychological tests frequently need to be translated because assessments often are not available in the language the patient is most comfortable speaking. This dilutes the basic tenet of an empirically standardized assessment tool due to the variability post translation. Few scales have been adapted for some Indian languages like the Mini Mental Status Examination and Montreal Cognitive Assessment Scale, but the diversity of Indian languages outnumbers the adaptations. A translator is always not readily available which makes it difficult to conduct these tests in the Indian population. Copyright issues of many rating scales form another important barrier in their usage.

A considerable segment of the Indian population on whom these assessments are done are not formally educated. Performance on cognitive tests depends heavily on literacy and understanding the testing context. Often existing tests need to be simplified, keeping the basic format of the test structure intact. This is mostly done to suit the performance and comprehension abilities of the patients. The Indo-US Cross-National Dementia Epidemiology Study is one of the best examples of such adaptation. Studies show Serial Subtraction, a sub test for attention, is successfully applied when replaced with a real-life situation. Tests of praxis require a great deal of persuasion in rural areas, as most are illiterate. Recall tests need practical situation stories while visual recognition objects need to be socio-culturally familiar.

Most older adults in the Indian population have not been previously exposed to such cognitive testing and treat such cognitive examinations similarly to school exams, which makes performance anxiety a crucial factor. Difficulty in answering is akin to "memory loss" which alarms the patient and family alike as they may perceive an "illness" at play. Thus, the instructions need to be given with caution, to appear non-specific and not too reassuring when a patient requests for multiple clarifications during the test.

Also, imagine an average Indian farmer from a rural region exposed to a barrage of memory tests from a doctor which could freak the patient out! After all, serial subtraction, copying figures or building blocks may be too "exotic" for them to relate to health or memory.

Additionally, there is a lack of awareness and understanding of the importance of neuropsychological evaluations among

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healthcare professionals and the general public in India. Stigma associated with neuropsychological disorders can make it difficult for individuals to seek help and receive appropriate treatment. Socio-economic disparities also play a role as neuropsychological assessments may not be readily available or affordable for individuals from lower financial backgrounds. Limited availability of specialized services for specific disorders is also a problem in many parts of India. Geriatric psychiatrists and neurologists are themselves limited in number and cross-disciplinary liaison, which is a must in these cases, remains a challenge.

Despite existing challenges efforts are consistently being made to improve the availability and quality of neuropsychological assessments in India. Resources, training and logistics have improved over the last decade, and language-specific validated scales are on the rise. It is important to remember that nothing beats a thorough clinical examination and tailored history from both the patient and family which is the gold standard. Structured cognitive assessments are not substitute but complementary to this practice. While screeners (like HMSE) may serve the purpose in busy community settings, detailed assessments (ACE-III, CERAD, ADAS-Cog, Indian neuropsychological batteries like the NNB-E) will be needed for specific patients, more so in tertiary healthcare centers with experienced staff. Lobar function testing based on symptom profiles and history can further potentiate our understanding. Associated assessments of functioning, activities of daily living and neuropsychiatric symptoms make it comprehensive.

Key factors for neuropsychological assessments are highlighted in Table 1.

Socio-cultural and linguistic sensitivity form the core of any cognitive testing and need to be kept in mind particularly for a westernized-cognitive-tool applied in a low-and-middleincome country like India. Special attention needs to be devoted to training and research in neuropsychology. Primary care healthcare providers and dementia-healthcare staff need to be accustomed to basic screeners like the HMSE. In a LMIC like India, the majority of dementia-related care takes place in primary care settings where basic and focused cognitive assessments are especially needed at this time.

Table 1: Key factors for cognitive assessments in clinical settings

- For routine clinical practice Clinical interview is the GOLD STANDARD
- Cognitive assessment scales are **NOT used to** diagnose dementia/MCI
- Concordance of clinical findings, imaging and neuropsychological findings occur only in a few cases
- Such assessments are necessary for prognostication, feedback and assessing treatment response
- Use brief screener initially followed by a detailed assessment (if needed)
- Schedule follow-up assessment after three to six months
- Socio-cultural sensitivity, comprehension, language, and consideration of the context and circumstances of assessment are VITAL
- GPCOG, HMSE, ACE-R, MOCA, Cognitive Screening Battery (CSB) are commonly used screeners in Indian settings
- A feedback needs to be discussed with the treating clinician and patient/family based on the interpretation of the cognitive tests
- Use structured testing for cognitive training, remediation and rehabilitation, whenever possible (especially in Traumatic brain injuries and dementia)
- BPSD and psychiatric comorbidities will bias cognitive test scores
- Case by case tailored assessment is the **BEST APPROACH**

** In clinical practice – Any testing is meant to help the diagnosis and aid in the treatment. Hence based on patient profiles in developing countries, the cognitive assessments need to be time, resource and economy sensitive.

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THE ALIVE NATIONAL CENTRE FOR MENTAL HEALTH RESEARCH TRANSLATION

Victoria J Palmer PhD,^{1,2}, Michelle Banfield PhD^{1,3}, Sandra Eades AO Bachelor of Medicine PhD,^{1,2} and The ALIVE National Centre for Mental Health Research Translation Investigators ¹The ALIVE National Centre for Mental Health Research Translation ²University of Melbourne ³Australian National University

Key highlights

- The ALIVE National Centre for Mental Health Research Translation is funded by a special initiative in mental health for five years (2021-2026) by the Australian National Health and Medical Research Council.
- The centre aims to implement innovations in mental health care to address unmet physical health needs,

The ALIVE National Centre for Mental Health Research

Translation marks a new era in mental health research across Australia. It was funded by the Australian National Health and Medical Research Council (NHMRC) Special Initiative in Mental Health (SIMH GNT2002047) (2021-2026) and was established at the peak of the COVID-19 pandemic (particularly in Victoria, where the Centre is located). The National Centre's mission is to transform mental health and wellbeing through primary care and community action, and achieve a vision of vibrant communities that support mental health and wellbeing enabling people to thrive.

The National Centre embodies the values of lived-expertise, wisdom in practice, authenticity, an evidence-based approach, inclusivity, and bravery. These values were co-created with our 40± Centre investigators across 15 universities and network partner organisations, such as Neami National, SANE, Mental Health Australia, and the Agency for Clinical Innovation (NSW Health) in 2021. We strive to embody these values while engaging in all research activities and collaborations.

Centre research translation and capacity building activities are operationalised through three networks. The first network is our 170 member-strong capacity building Next embed prevention across the life span and use livedexperience models for delivering mental health care at-scale across primary care and community settings.

 Three networks (one that includes a tailored capacity building arm for lived-experience researchers) and four research programs will meet these aims.

Generation Researcher Network (NGRN) which aims to engage and develop future mental health research leaders. The NGRN encompasses advanced degree students in mental health research, and early and mid-career researchers across Australia. Within the NGRN are an additional 145 members who constitute the lived-experience research collective. The collective membership is independent of the NGRN and is a tailored arm which aims to develop much needed, and largely absent career development support for researchers bringing lived experience to research practices. Lived-experience research collective membership is across universities (77%) and those engaged in service roles and government consumer and career consultant roles (24%). Researchers who apply to the lived-experience research collective have dual membership to the NGRN. Membership to the NGRN more than doubled in 2022 from 65 to the current 170 members.

A Co-Design Living Labs Network provides end-to-end research design to translation activities, meaning that mental health-related research can be shaped by co-design members using priority-setting methods and new models of care for healthcare improvements. There are 2000+ community members either living with mental illness, carers,

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or family/kinship group members in the Co-Design Living Labs program coordinated by The University of Melbourne who have been invited from completed mental health research studies; the program will be scaled across the National Centre's university partners.

An Implementation and Translation Network assists with translating models of care or technologies and apps that show promise in one setting, into another. The network members comprise Centre partner organisations, external organisations, other interested individuals, and individual practice and service delivery-focused members. Demonstration Projects exploring implementation and scale are a focus in this network aiming to find answers to the questions related to implementability, stability and sustainability.

All networks and the lived-experience research collective operate with co-lead groups (up to ten) comprised of mixed representatives of investigators of the Centre and wider non-Centre members who reflect different parts of the mental health ecosystem. Co-leads from the lived-experience research collective attend meetings to operationalise our embedded model of lived-experience research. Our embedded model of lived-experience operates at all levels from the Co-Directorship, including a lived-experience research lead and the Aboriginal and Torres Strait Islander people's research lead. The National Centre's board and committees have two co-chairs with lived-experience of mental ill-health and two carer /family kinship group cochairs.

The research programs of the Centre support short-term projects (for example, an Implementation Co-Evaluation of Head to Health and the Urgent Mental Health Care Centre in Adelaide) and Centre flagships such as The Long Conversation which is focused on identifying the who, what, where and how of lived-experience research nationally. The ALIVE National Centre is focused on models to deliver and embed prevention across the life course, and meet unmet physical health needs with people living with severe mental illness and priority populations such as Aboriginal and Torres Strait Islander people.

In 2021-22 we facilitated nine presentations in a Virtual Translation Café Series hosting international and national guests with over 400 attendees. The Co-Design network supported the design of SANE's digital service model for people with complex mental health needs with 65 people with lived-experience coming together to develop the experiential values for the model which is now rolling out in Australia.

Ove 500 Australians who identified as having livedexperience of mental ill-health, or as being a carer, family and kinship group member (or both) have contributed to our genesis priorities, and 115 to the subsequent prioritization using online co-design for the development of a national roadmap for mental health research translation. In February 2023, the Centre released the first stages of roadmap development with the Phase 1 Consensus Statement Short Horizons 2023 Implementation Actions. Work continues with co-design of an Aboriginal and Torres Strait Islander people's wellbeing pathway in the roadmap. In focus for 2023 is also the codesign of our children and families pathway ensuring priorities of families where a parent experiences mental illness. Each year our impact and progress is evaluated through an Annual Symposium which for 2023 aligns with our priority theme of Holistic Care.

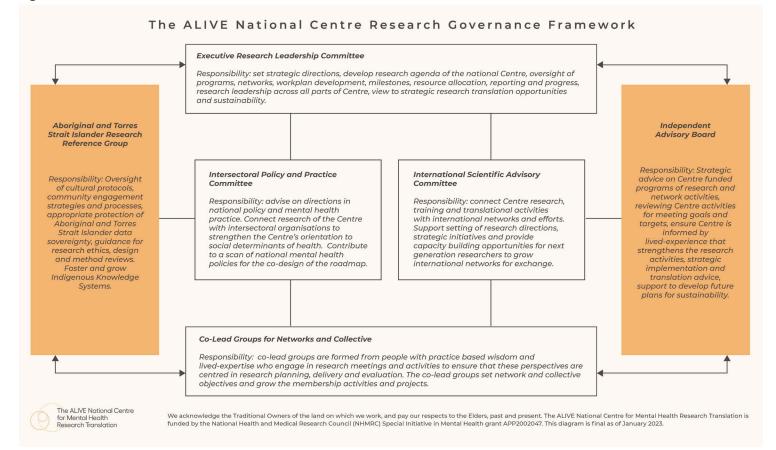
The Centre's operates a community-led definition of Lived-Experience as its approach to working collaboratively. Community-led approaches to lived-experience mean that we are always working with people to implement their lived-expertise, while also being guided by the ways in which any given community may articulate and shape their understanding of Lived-Experience. This is important for acknowledging the experiences of Aboriginal and Torres Strait Islanders in relation to the ongoing impacts of colonisation, violence, and trauma, and also important for acknowledging intersectionality and issues of equity in our work.

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Figure 1. Research Governance Framework



For further reading: Website: https://alivenetwork.com.au/ Phase 1 consensus statement: https://midd.me/XF2C



Victoria Palmer and Sandra Eades (AO) and Michelle Banfield are Co-Directors of the ALIVE National Centre for Mental Health Research Translation funded by the NHMRC.

The co-diresctorship reflects lived-experience, and Aboriginal and Torres Strait Islander leadership at all levels of Centre research and translation activities. Contacting <u>v.palmer@</u> <u>unimelb.edu.au</u>]

THE COGNITIVE REHABILITATION THERAPY AT THE PSYCHOGERIATRICS UNIT OF VIGO IN GALICIA, SPAIN

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Key highlights

- Cognitive Rehabilitation Therapy is a nonpharmacological treatment that seeks to improve cognitive functions in Mild Cognitive Impairment.
- Cognitive Rehabilitation Therapy programmes are used

Psychiatry Associate Professor. Department of Psychiatry of Universidad de Santiago de Compostela (USC) (A Coruña, Spain)

Cognitive Rehabilitation Therapy seeks to improve aspects of cognitive decline, including behavioral aspects, and aims to improve one's ability to adapt while encouraging autonomy. There are many types of these therapies and programmes which have evolved over time and incorporate computer and virtual reality techniques.

In Galicia (Spain), Cognitive rehabilitation Therapy programs are usually used in day centers or residential facilities, and do not exist as an offering within the public health system (SERGAS). The Psychogeriatrics Unit from the Psychiatry Service of Vigo has developed the only cognitive rehabilitation program for older adults integrated into the public health system. It is made up of a multidisciplinary team (Dr. Águeda Rojo, psychiatrist; Mrs. Nuria Carrera, Nurse Specialist in Mental Health and Mr. Telmo Ruibal, Clinical Psychologist). During a visit to the unit, we learned that their program began in May 2017. It is aimed for people with a diagnosis of Mild Cognitive Impairment, and individually for people with dementia in a very early stages. The project has been gaining capacity over time, increasing from initially one computer license to three computer licenses at present.

The computer program is called GRADIOR, which addresses different cognitive functions, and the program starts at "baseline" or basal capacity. This program performs an analysis of the user's progress and provides averages for each in day centers or residential facilities.

The Psychogeriatrics Unit from the Psychiatry Service of Vigo (Galicia, Spain) has developed the first program integrated in the public health system.

cognitive domain which can be uploaded to the patient's history. The program duration is 6 months and consists of two 30 to 35 minutes sessions per week. The program duration has been limited due to a current waiting list but could be repeated in a year.

For referral, Dr. Rojo requires an established diagnosis and completion of a neuropsychological evaluation. If there is no evaluation, an initial neuropsychological assessment is performed (Camcog) at the beginning and conclusion of the program to track progress. Referrals for the program are from the Dementia Unit (Neurology), Geriatrics and from Psychiatry. Attrition from completing the program is often due to adherence problems (motivation, access difficulties) or to the existence of an abrupt or severe cognitive decline. Thus far there have been positive results of the program and a positive response from the patients.

WHAT IS GRADIOR?

Gradior is a cognitive rehabilitation program developed by the INTRAS Foundation, an entity dedicated to the treatment and research in Mental Illness, Neurodegenerative Diseases and Social Services. It is a computerized multimedia neuropsychological evaluation and rehabilitation system that allows training cognitive functions. The user interacts with a touch screen and follows a series of visual and sound instructions until completing the assigned tasks. This program was designed in 1999 and has evolved and been updated to the present version (2020 suite Gradior). There are multiple

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AROUND THE WORLD

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publications on its use, characteristics, and effectiveness.

For further reading:

- Franco, M.; Jones, K.; Woods, B.; Gómez, P. (2009). "Gradior: A personalized computer-based cognitive training programme for early intervention in dementia". En Moniz-Cook, E.; Manthorpe, J. (2009) Early Psychosocial interventions in Dementia. Evidence-based practice. Jessica Kingsley Publishers. London. UK
- Irazoki, E., Contreras-Somoza, L.M.; Toribio-Guzmán, J.M.; Jenaro-Río, C.; van der Roest, H.; Franco-Martín, M (2020). "Technologies for Cognitive Training and Cognitive Rehabilitation for People With Mild Cognitive Impairment and Dementia. A Systematic Review". Frontiers in Psychology, DOI: 10.3389/fpsyg.2020.00648 https://www.gradior.es/



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Rehabilitation Cognitive Therapy