SESSION 5950 (SYMPOSIUM)

CARDIOVASCULAR HEALTH, FUNCTIONAL DISABILITY, AND LEISURE ACTIVITIES PROFILES IN RELATION TO MENTAL AGING

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We investigated cardiovascular health, functional disability and leisure activities profiles independently and in relation to cognitive decline and dementia in high and low-medium income countries using data from the English Longitudinal Study of Ageing, Irish Longitudinal Study on Ageing and Brazilian Bambui Cohort Study of Aging. Functional loss among older Brazilians has shown a hierarchical sequence over the 15-year follow-up, with the highest incidence in functional disability reported for dressing, followed by getting out of bed, bathing/showering, walking across a room, using the toilet and eating (de Oliveira). Using the Life's Simple 7, an ideal cardiovascular health scoring system evaluating the muscular strength, mobility and physiological stress, we showed a reliable prediction of cognitive trajectories in a representative sample of Irish individuals (De Looze). Within the same cohort, we report discrepancies between men and women in functional decline driven by domestic tasks, rather than determining differential cognitive trajectories (McGarrigle). In an English representative sample, we found that participants with an increasing number of functional impairments over almost a decade were more likely to be classified with subsequent dementia compared with those with no impairments and this may imply a more comprehensive ascertainment during the prodromal stage of dementia (Cadar). In contrast, a reduced risk of dementia was found for individuals with higher levels of engagement in cognitively stimulating activities, that may preserve cognitive reserve until later in life (Almeida). Identifying factors that influence cognitive aging and dementia risk in a multifactorial perspective is critical toward developing adequate intervention and treatment.

FUNCTIONAL IMPAIRMENTS AND DEMENTIA INCIDENCE IN THE ENGLISH LONGITUDINAL STUDY OF AGEING

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Functional disability might be related to an increased risk of dementia or could represent a prodromal stage. We examined the occurrence of functional impairments over eight years follow-up and their association with dementia incidence in 1,666 participants aged 65+ from the English Longitudinal Study of Ageing. Growth models with distal outcome were used to examine whether different trajectories of functional abilities (activities of daily living (ADL); and instrumental activities of daily living (IADL)) between 2002/03 and 2010/11, were associated with dementia incidence four years later (2014/15). Participants with an increasing number of functional impairments (Class III), were more likely to be classified with subsequent dementia compared with those with no impairments (Class I). An increased risk was also observed for individuals with raised levels of impairments (Class II). We found IADLs more sensitive than ADLs, and this may imply a more comprehensive ascertainment during the prodromal stage of dementia.

CARDIOVASCULAR PROFILES FOR PHENOTYPING COGNITIVE TRAJECTORIES IN THE IRISH LONGITUDINAL STUDY ON AGEING

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Cardiovascular risk factors are increasingly recognized as modifiable risks for cognitive decline and dementia in later life. The Life's Simple 7, an ideal CV health scoring system, has been recently put forward as a tool for the promotion of brain health. This study aims to evaluate the LS7 as risk prediction tool for cognitive decline trajectories (MMSE, immediate/delayed recall and verbal fluency) in 2,739 adults aged ≥50 years from TILDA. We investigate if indices of muscular strength (grip strength), mobility (Time Up and Go, walking speed) and physiological stress (e.g. orthostatic blood pressure and heart rate recovery) as add-ons to the LS7 improves prediction of cognitive trajectories; and, in a subcohort, we assess CV health score in association with multimodal brain measures. Identifying the factors that influence the onset and trajectory of cognitive decline in a multifactorial perspective is critical toward lowering dementia risks and developing adequate intervention and treatment.

GENDER-SPECIFIC DETERMINANTS OF INSTRUMENTAL ACTIVITIES AND ASSOCIATIONS WITH COGNITIVE DECLINE IN TILDA

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Detecting functional decline is critical in recognizing clinical progression into mild cognitive impairment and dementia as people age. This study aimed to investigate differences in Instrumental Activities of Daily Living (IADL) and associations with cognition by gender. Data are from five waves of TILDA, a nationally representative cohort of 8,175 aged ≥50 years, measured every 2 years between 2009 and 2018. IADL assessed were preparing a hot meal, doing household chores, shopping for groceries, making telephone calls, taking medications, and managing money. Cognition was assessed using the Mini-Mental-State Examination (MMSE). Latent class analysis and growth mixture modelling techniques were used to identify IADL and cognitive latent classes and examine change trajectories. IADL trajectories differed by gender and were associated with cognitive decline. Functional decline discrepancies between men and women may be driven by domestic tasks within IADL which are associated with social gender roles, rather than determining differential cognitive trajectories.