

(ADNI). Individuals who scored less than 2 on the CDRS were included in the MCI group ($n=197$), while individuals that scored 2 or higher on the CDRS were included in the dementia group ($n=73$). A simple linear regression was utilized to compare the MCI group to dementia group across CR and EF performance.

Results: There was significant correlation between CR and EF performance in the MCI group as quantified on total CDRS score ($F(200) = .353, p = .0, p < .05$). CR was not observed to be predictive of EF in the dementia group ($F(200) = .031, p = .666, p > .05$).

Conclusions: Findings are consistent with prior research suggesting CR is protective during early stages of dementia, but not in the later disease stages. As prior research has shown the expression of dementia is based on a complex interaction between genetic and lifestyle factors that are unique to each person, future research exploring the potentially protective role of CR amongst pre-symptomatic adults with a genetic predisposition for developing dementia may expand our understanding of the potential role of CR on dementia prevention and progression.

Categories: Dementia (Non-AD)

Keyword 1: cognitive reserve

Keyword 2: executive functions

Keyword 3: mild cognitive impairment

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62 Moral Reasoning Through the Eyes of Behavioral Variant Frontotemporal Dementia

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Objective: Persons with behavioral variant frontotemporal dementia (bvFTD) have been shown to exhibit altered morality, manifested as atypical utilitarian tendencies towards sacrificial moral dilemmas. This takes the form of

endorsing harmful actions towards single individuals, including vulnerable or relationally close individuals (e.g. children, loved ones), in order to promote the greater good for the community or society as a whole. The dual process model of moral cognition interprets such tendencies as deriving from a lack of emotional engagement, whereas moral emotion theory views them as selective impairment in prosocial sentiments. We hypothesized that both the widespread neuropsychological practice of using sacrificial moral dilemmas to evaluate moral reasoning, and these tests' overreliance on quantitative results, inadequately represent how persons with bvFTD reason and feel while responding to moral dilemmas. To evaluate this hypothesis, we applied a mixed-methods approach to identify the reasoning, motivations, and emotional experiences of bvFTD persons during their deliberation about moral scenarios.

Participants and Methods: We conducted semi-structured interviews with 14 participants: 7 persons with bvFTD & 7 older healthy controls. Transcripts were coded in Atlas 5.0 to characterize the underlying reasoning, emotions, response processes, and values that emerged when responding to a structured set of moral dilemmas. Our dilemmas measured utilitarian reasoning holistically by incorporating both sacrificial and impartial/altruistic components, as suggested by the 2-dimensional model of utilitarianism.

Results: Unexpectedly, bvFTD persons articulated a prosocial compass when asked about their values, stating they were organizing their choices predominantly around kindness and altruism, even when they were making choices to harm loved ones or vulnerable individuals to promote the greater good. During moral deliberation, persons with bvFTD showed significantly less metacognition (bvFTD = 10%, HC = 90%) but reported more positive emotions (joy; bvFTD = 83%, HC = 17%) than negative (frustration; bvFTD = 30%, HC = 70%) compared to controls. Qualitatively, this observed emotional outlook was typically coupled with a more rigid, simplistic viewpoint (e.g., "I felt great, it was a no brainer"), suggesting a moral understanding lacking emotional nuance and complexity.

Conclusions: Our data showed that bvFTD persons' utilitarian responses to moral dilemmas did not arise from an emotionally flat or antisocial cognitive perspective, but instead were guided by positive emotionality, simplistic reasoning, and prosocial values. These findings

challenge the current understanding of the reasoning processes and experiences of persons with bvFTD and highlight the importance of incorporating mixed method approaches in dementia research that take into consideration the viewpoint of the cognitively compromised individual.

Categories: Dementia (Non-AD)

Keyword 1: social cognition

Keyword 2: decision-making

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63 Longitudinal Decline in Everyday Functioning: Exploring the Incremental Validity of Neuropsychiatric Symptoms in Dementia

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Objective: Decline in everyday function is a hallmark of dementia and is associated with increased caregiver burden, medical spending, and poorer quality of life. Neuropsychiatric symptoms (e.g., apathy, hallucinations) can also occur in those with dementia and have been associated with worse everyday functioning cross-sectionally. However, research on which neuropsychiatric symptoms are most associated with everyday functioning in those with dementia longitudinally has been more limited. Further, it is unknown which neuropsychiatric symptoms may add incremental validity beyond cognition in predicting everyday function longitudinally. The current study aimed to address both of these gaps in the literature by identifying which neuropsychiatric symptoms are most associated with everyday function over time and if symptoms add incremental validity in predicting everyday function beyond cognition in those with dementia.

Participants and Methods: Older adult participants ($N = 4525$), classified as having dementia at baseline by the National

Alzheimer's Coordinating Center, were examined. Severity of neuropsychiatric symptoms were measured via the Neuropsychiatric Symptoms Questionnaire- Informant. Everyday function was assessed via the Functional Activities Questionnaire- Informant. Memory (Logical Memory immediate and delayed) and executive function (Digit Symbol Test, TMT-A and TMT-B) composites were created to assess cognition. Severity of neuropsychiatric symptoms at baseline were analyzed as predictors of everyday functioning beyond demographic factors and cognition at baseline and over the course of five years using multilevel modeling.

Results: At baseline, severity of the majority of symptoms, excluding irritability, manic symptoms, and changes in appetite, were associated with everyday function (all $p < .05$). When examining everyday functioning longitudinally, only severity of hallucinations, apathy, motor dysfunction, and sleep dysfunction were associated with differences in everyday function over time (all $p < .01$).

Conclusions: There is heterogeneity in the degree to which neuropsychiatric symptoms are associated with everyday functioning over time in those with dementia. Additionally, our results show that some neuropsychiatric symptoms are associated with longitudinal changes in everyday function beyond domains of cognition show to be associated with function. Clinicians should pay particular attention to which neuropsychiatric symptoms individuals with dementia and their families are reporting to aid with treatment planning and clinical decision making related to autonomy. Future research would benefit from examining pathways through which neuropsychiatric symptoms are associated with everyday functioning over time in this population, and if treatments of neuropsychiatric symptoms may improve everyday function in this population.

Categories: Dementia (Non-AD)

Keyword 1: everyday functioning

Keyword 2: neuropsychiatry

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