

mediator, the conditional indirect effect was not significant (95% CI[-.0009, .0070]). There was a trend suggesting at low (95% CI[-.2421, -.0140]) and average (95% CI[-.1658, -.0083]) levels of p-tau, FA of the fornix was a significant mediator but was non-significant at high levels of p-tau (95% CI [-.1322, .0341]). The RD moderated mediation model was non-significant. The FA and RD exploratory dual moderated mediation models were non-significant. However, the APOE4 x p-tau interaction with FA of the fornix as the mediator suggested a trend. At low levels of p-tau, increased education was related to a significant moderated mediation.

Conclusions: Results suggest that FA of the fornix is a significant mediator between the relation of APOE4 and memory, and this may be dependent upon p-tau levels. When p-tau burden load was high, the path by which APOE4 impacts memory performance was not through white matter microstructure degradation. Additionally, the potential buffering effects of education may be most robust at lower levels of p-tau burden.

Categories: Aging

Keyword 1: apolipoprotein E

Keyword 2: brain structure

Keyword 3: aging disorders

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8 A Feasibility Study of a Virtually-Delivered Ecologically-Oriented Neurorehabilitation of Memory (EON-MEM) Protocol in Older Adults

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Objective: The prevalence of memory complaints in older adults is between 25 and 50%, with poor memory associated with decreased quality of life and declines in daily functioning. Memory training programs are a method for training older adults on strategies and skills to improve memory performance. We conducted a feasibility study of a virtually-delivered adaptation of an Ecologically-Oriented Neurorehabilitation of Memory (EON-Mem) in

improving memory for healthy older adults. The primary purposes of this study included: (1) determine the feasibility of conducting EON-Mem virtually with older adults, (2) determine whether a randomized control trial using EON-Mem in older adults is of value, and (3) determine whether electronic delivery of memory training programs with ecological validity is beneficial for older adults.

Participants and Methods: Twenty-five older adults 55 years of age and older were recruited for participation in a memory training program. All testing and intervention sessions were completed virtually through the Zoom platform. Measures of emotional functioning (Hospital Anxiety and Demographics Scale, health-related quality of life (Short Form-36) and cognitive functioning (Ecological Memory Simulations and Repeatable Battery for Neuropsychological Status; RBANS) were administered before and following the intervention. Participants attended one virtual treatment session per week, with sessions ranging between 60-90 minutes, for a total of six weeks. Between treatment sessions, participants were asked to complete daily homework assignments that allowed them to apply strategies to real-world situations. A priori, feasibility was set at an 80% completion rate and variables that influenced completion are reported.

Results: To address questions regarding feasibility (e.g., adherence, attrition, etc.), we calculated descriptive statistics (i.e., count statistics, means, standard deviations, and range) on sample information. Of the 25 participants enrolled in the study, 21 participants completed all steps of the study (84% completion rate) showing the delivery format is feasible. The average age of our sample was 61.7 (SD = 5.9) years and average years of education was 17.06 (SD=2.36). Excluding those who dropped, average completion was 72.76 days (SD=18.65, range=47-124). Across all six weeks, homework completion averaged 66.4% (33/49). There were varying effects of the EON-Mem for the EMS memory outcomes with the greatest proportion showing reliable improvement on the ability to recall names (10 participants [42%]). Regarding the RBANS, the greatest proportion of participants showed reliable improvement on the Story Memory task (i.e., four participants [17%]), but only two (9%) showing reliable change on the total Memory Index score.

Conclusions: Overall, a virtual administration of EON-Mem in older adults was feasible.

Regarding memory changes, the majority of the sample did not demonstrate reliable improvement in memory which might have been due to a variety of reasons including the fact that our sample had a high level of education and low level of memory impairment. Notably, however, this was a feasibility study, not an intervention study. Therefore, future directions should focus on randomized controlled trials to determine efficacy.

Categories: Aging

Keyword 1: teleneuropsychology

Keyword 2: cognitive rehabilitation

Keyword 3: aging (normal)

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9 The Relationship Between Depressive Mood and Mini Mental Status Examination Scores in Individuals with Heart Failure

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Objective: Heart failure occurs when the heart is unable to support a flow of blood that meets the body's needs, ultimately resulting in decreased oxygenation throughout the body—including the brain. Results of previous research suggest that individuals with heart failure exhibit both localized and diffuse neuropsychological deficits. The aims of this study are to meta-analytically examine a) the performance of participants with heart-failure and healthy controls on the Mini Mental State Examination (MMSE), a neuropsychological test of general cognition, and b) the role of depressive mood as a potential moderator of performance on the MMSE in these participants.

Participants and Methods: Two researchers independently searched eight databases for articles that examined the neuropsychological functioning of patients with heart failure.

Inclusion criteria identified studies that had a heart failure group with a comparable control group and reported on neuropsychological assessment for both groups. Studies were excluded if a heart failure group had any other type of major organ failure or if the comparison was between different classes of heart failure rather than between a heart failure group and healthy controls.

Results: A meta-analysis using a random-effects model revealed a statistically significant and large effect size estimate ($g = 0.727$, $p < .001$) CI [.331, 1.123]. The heterogeneity was found to be statistically significant and in the large range, $I^2 = 83.027\%$, $\tau^2 = .155$, $p < .001$. A meta-regression analyzing the relationship between depressive mood and MMSE effect size estimates was statistically significant, Q residual = 8.715, $df = 3$, $p = .03$.

Conclusions: This study is the first to examine the relationship between depressive mood and general cognitive status (as measured by the MMSE) in participants with heart failure. The strong relationship between cognitive status and heart failure, and the role of depression in explaining a statistically significant portion of the heterogeneity in the relationship seen in primary studies, highlights the importance of accurately assessing depression when studying the effect of heart failure on cognition. Further research needs to examine the impact of depression on quality of life in patients with heart failure as potentially mediated by difficulties in cognition.

Categories: Medical/Neurological Disorders/Other (Adult)

Keyword 1: cardiovascular disease

Keyword 2: depression

Keyword 3: cognitive functioning

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10 Delivering Acceptance and Commitment Therapy remotely for children and young people with neurological conditions: experiences of Clinical Psychologists

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