

neuropsychologically-based psychoeducation approaches to improving health and science literacy related to COVID-19.

**Categories:** Aging

**Keyword 1:** aging (normal)

**Keyword 2:** everyday functioning

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## 8 Walking for Cognitive Function in Older Adults: A Systematic Review and Meta-Analysis

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**Objective:** The world population is rapidly aging, and consequently, cognitive decline is becoming a larger public health crisis. There is no cure for dementia, but exercise has been consistently shown to improve cognitive function and slow cognitive decline in older adults. Given the many barriers to starting an exercise routine, walking is a particularly appealing intervention because it is safe, low-impact, and highly accessible (i.e., no upfront costs, no necessary equipment, and can be done almost anywhere and by anyone, given they are ambulatory). This abstract describes a systematic review and meta-analysis on peer-reviewed studies that examined randomized walking interventions for cognitive function in older adults.

**Participants and Methods:** The analyses included 1,286 older adults aged 55 and older (mean age = 73.1 years) across 19 studies that met inclusion criteria. All studies were randomized controlled trials (RCTs) of walking interventions with pre-post cognitive outcome data. A total of eight cognitive domains were identified: global cognition, attention, processing speed, working memory, language, visuospatial skills, declarative memory, and executive function. Effect sizes, measured as net treatment gain, were extracted and converted to Hedges' *g*. Three-level meta-analysis was used to account for dependency of effect sizes. Meta-regression analyses were used to examine whether the following variables moderated effect sizes: (a) cognitive status, (b) baseline activity

level, (c) age, (d) walking intervention duration, and (e) duration of individual walking sessions.

**Results:** Participation in walking interventions significantly benefitted broad cognitive functioning (Hedges' *g* = 0.19). The cognitive domains that specifically benefitted from walking were global cognition (*g* = 0.60), processing speed (*g* = 0.15), working memory (*g* = 0.22), declarative memory (*g* = 0.18), and executive functioning (*g* = 0.15). Cognitive status moderated this relationship, so that cognitively impaired older adults showed greater cognitive benefit from walking interventions. Baseline activity level did not moderate the effect; being sedentary at baseline yielded an effect size significantly greater than zero. The remaining moderator analyses were nonsignificant.

**Conclusions:** This systematic review and meta-analysis shows that walking interventions are associated with broad improvement in cognitive function in older adults. Walking benefits global cognition, processing speed, working memory, declarative memory, and executive function—the same cognitive domains that decline with normal cognitive aging. These findings are particularly important because walking is among the safest and most universally accessible forms of exercise. This will help healthcare providers make better lifestyle recommendations to their older patients. Future research should more rigorously examine potential moderating variables, such as walking intensity.

**Categories:** Aging

**Keyword 1:** cognitive functioning

**Keyword 2:** treatment outcome

**Keyword 3:** neuropsychological assessment

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## 9 The Likelihood to Disclose Symptoms of Sickness During the COVID-19 Pandemic Increases with Age Across Adulthood

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**Objective:** Compliance with safety precautions plays significant role in containing pandemic. On a personal level, one critical precaution is to disclose sickness status to people who one comes into direct contact with. Yet, factors governing this personal decision remain uncertain. This study examined age-related differences across adulthood in (i) the likelihood to disclose symptoms of sickness (LDSS) during COVID-19 pandemic, (ii) the level of COVID-19-associated anxiety (CAA), and (iii) the relationship between LDSS and CAA.

**Participants and Methods:** Data were obtained from a large-scale survey “Measuring Worldwide COVID-19 Attitudes and Beliefs” (Fetzer et al., 2020). Retained data included sociodemographic characteristics, number of chronic conditions and self-rated quality of health for USA sample ( $n=11,445$ ) which we stratified by age into five groups (18-29 years old  $n=2065$ ; 30-39  $n=3765$ ; 40-49  $n=2463$ ; 50-59  $n=1760$ ; 60+  $n=1392$ ). Disclosure of sickness was measured with statement: “in the past week if I had exhibited symptoms of sickness, I would have immediately informed the people around me”, where participants self-rated it on the scale from 0–“does not apply at all to me” to 100–“applies very much to me”. We computed LDSS score with thresholds:  $\leq 50$ –unlikely/uncertain,  $> 50$ –likely, 100–certain to disclose. CAA symptoms were measured with the following statements which participants self-rated on a scale from 1–“does not apply at all” to 5–“strongly applies”: I am nervous when I think about current circumstances; I am calm and relaxed; I am worried about my health; I am worried about the health of my family members; I am stressed about leaving my house. ANOVA w/Bonferroni post-hoc tests compared LDSS and CAA between the age groups. Multivariate regression (accounting for: gender, education, self-rated health, number of chronic conditions) examined LDSS–CAA relationship.

**Results:** Age groups were comparable in gender (~40% males), education (~17 years of education), and relationship status (~65% married/cohabitating). Most participants rated own health as good and reported one chronic condition. LDSS was increasing with aging,  $F(df=4)=35.552$  ( $p<0.001$ ), with 72% youngest vs. 85% oldest adults indicating certainty about disclosing sickness status. Anxiety about own health was increasing with age,  $F(df=4)=7.319$  ( $p<0.001$ ), while anxiety about health of family members was decreasing with age,  $F(df=4)=25.398$  ( $p<0.001$ ). Middle-aged adults

showed the highest anxiety related to thinking about the current circumstances,  $F(df=4)=10.476$  ( $p<0.001$ ), and feeling stressed about leaving own house,  $F(df=4)=6.368$  ( $p<0.001$ ). LDSS was positively related to anxiety about health of family members and/or feeling stressed about leaving own house in young and middle-aged adults ( $B=0.042$ ,  $p=0.001$ ,  $CI_{95\%}=0.017-0.068$ ), but not related to any CAA symptoms in adults aged 60+.

**Conclusions:** This study suggests that people can become more likely to disclose sickness status as they age and can be prone to different CAA symptoms across life stages. The results further indicate that distinct CAA symptoms can play a role in LDSS in young and middle adulthood, but may lose significance in older age. Acknowledgement of these diverse mechanisms can inform clinical practice dedicated to individuals with illness anxiety, as well as can help develop age-targeted campaigns that promote compliance with the safety precautions.

**Categories:** Aging

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## 10 Female *APOE* $\epsilon 4$ Carriers with Slow Rates of Biological Aging Have Better Verbal Memory Performance Compared to Female Carriers with Faster Rates of Aging, Independent of Chronological Age, Education, and Depressive Symptoms.

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**Objective:** The presence of an  $\epsilon 4$  allele of the apolipoprotein E gene (*APOE*  $\epsilon 4$ ) is considered the strongest genetic risk factor for Alzheimer's disease (AD) in the US. Evidence suggests that *APOE*  $\epsilon 4$  carriers have worse memory performances compared to *APOE*  $\epsilon 4$  non-