

ASSESSING THE LONGITUDINAL RELATIONSHIP BETWEEN ALCOHOL USE AND DEPRESSION AMONG OLDER ADULT RETIREES

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Alcohol use and depression are underrecognized problems affecting older adults, and its prevalence has increased for baby boomers compared to prior generations. Approximately 40% of people aged 65+, drink alcohol and approximately 19% experience. Additionally, the loss of important roles in life – such as being an employee, could negatively influence mental health at retirement. Although there is mixed evidence about the direction of the association between alcohol and depression in this population, and little is known about how retirement influence it. Generalized mixed models were performed to test the effect of retirement, alcohol use – drinks per day and binge drinking, and depressive symptoms among older adults. We draw data from the Health and Retirement study (n=11,164). Results suggest that being retired was associated with decreased depressive symptoms (b=-0.04, p<0.05) and increased drinks per day (b=0.01, p<0.05) and binge drinking (b=0.11, p<0.05). Each additional drink per day (b=-0.11, p<0.05) and binge drinking (b=-0.07, p<0.05) lead to decreased depressive symptoms. Similarly, increased drinking or binge drinking were associated to decreased depressive symptoms. Regular drinkers might increase their drinking to occupy the additional free time that comes with retirement, to alleviate anxiety and feelings of loneliness as they lost their working roles and they might have lost relatives, which might increase the craving for alcohol. Given the prevalence of depression and alcohol use, and its detrimental effects among older adults. Further research needs to be done to understand the particularities of this group and to generate interventions focused on prevention.

DO CONTROL BELIEFS MODERATE THE RELATIONSHIP BETWEEN FUNCTION AND PHYSICAL ACTIVITY?

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Most older adults get far less than recommended levels of physical activity (PA), and interventions to improve PA have limited effectiveness. Barriers to PA include reduced physical function (PF) and diminished feelings of control, but their interactive influences on PA in older adults are unclear. Using two methodologies, the current study determined whether control beliefs modify the relationship between PF and PA. Data were from the second wave of the Midlife in the United States (MIDUS) study; the sample was constrained to participants with PA greater than 0 (n= 955, mean age= 54.27). PF (grip strength, gait speed, and chair stands) was measured during a clinic visit. Participants were asked about routine PA, from which a Metabolic Equivalent of Task score was calculated, and the extent to which they believed they have control over their life (0-7 scale). In linear regression models, including interactions between control beliefs and PF variables, gait speed and control were associated with PA; none

of the interaction terms were significant. The second model used a person-centered approach to explore the potential of non-linear relationships and differences in groups of people by creating typologies. The group with low control and slow gait speed had significantly lower PA than the other three groups. Results suggest nuanced associations among PA, PF, and control beliefs where feelings of control may compensate for slow gait speed in particular. They also support the use of person-centered approaches to identify non-linear associations between modifiable protective factors and key outcomes in aging research.

EFFECTIVENESS OF NUTRITIONAL EDUCATION FOR OBESE OLDER ADULTS WITH FRAILITY: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Obesity has been shown to intensify the decline of physical function and lead to frailty. Nutrition is an important method in managing obesity and frailty, while seldom reviews have ever explored the effects of nutritional education interventions. We conducted a systematic review (PROSPERO: CRD42019142403) to explore the effectiveness of nutritional education interventions in managing body composition and physio-psychosocial parameters related to frailty. Randomized controlled trials and quasi-experimental studies were searched in CINAHL, Cochrane Library, EMBASE, MEDLINE, PsycINFO, PubMed and Scopus from 2001 to 2019. Hand search for the reference lists of included papers was conducted as well. We assessed the quality of included studies by Cochrane risk of bias tool. Meta-analyses and narrative synthesis were used to analyse the data. Two studies with low risk of bias were screened from 180 articles, which involved 177 older people with an average age of 69.69±4.08 years old. The results showed that nutritional education was significantly effective in reducing body weight and fat mass than exercises, and it was beneficial to enhancing physical function and psychosocial well-being. But the effects of nutritional education in increasing muscle strength were not better than exercises. The combined effects of nutritional education and exercises were superior than either exercises or nutritional education interventions solely in preventing the loss of lean mass and bone marrow density, and in improving physical function. Due to limited numbers of relevant studies, the strong evidence of effectiveness of nutritional education interventions on reversing frailty is still lacking.

EVALUATING A MOBILE-HEALTH-ENHANCED BEHAVIORAL LIFESTYLE INTERVENTION FOR FRAILITY IN DIABETES: A FEASIBILITY STUDY

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Type 2 diabetes (T2D) and overweight are significant predictors of frailty in older adults. There are no widely accepted intervention strategies for frailty. The Look AHEAD (Action for Health in Diabetes) trial demonstrated the

efficacy of behavioral lifestyle intervention on weight loss and glycemic control in overweight older adults with T2D. It is unknown whether this intervention can prevent/delay frailty in older adults. We designed a feasibility study examining the effect of a behavioral lifestyle intervention enhanced with mobile technology (Fitbit) for self-monitoring of diet and physical activity on frailty and T2D outcomes over 6 months in overweight older adults diagnosed with T2D. Forty older adults were randomized to receive either 10 group sessions vs. one condensed session plus monthly phone calls for 6 months. In this analysis, we are reporting on Fitbit wear adherence and weight changes on the 20 participants in the group session for the first 6 group sessions. The study sample was aged 72.3 ± 6.4 years; 62% female; 52% Hispanic; BMI 33.7 ± 5.9 kg/m²; hemoglobin A1c 7.2%; frailty score 1.1 ± 1.0 kg/m². Thirteen (65%) are pre-frail, 6 (30%) are non-frail, and 1 (5%) is frail (using Fried criteria). Their weight (lbs.) changed from session 1 (210.2 ± 42.5) to session 6 (196.8 ± 44.2). Ten participants wore Fitbit every day between sessions, averaged at $92 \pm 12\%$. The preliminary evaluation showed the feasibility of using Fitbit to promote self-monitoring adherence in a behavioral lifestyle intervention and a positive trend for weight loss. Evaluating intervention effect on frailty at 6 months will provide us further insights.

EXPLORING THE MOTIVATORS AND BARRIERS OF OLDER ADULTS PARTICIPATING IN AN INTERACTIVE EXERGAME INTERVENTION

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Cognitive and physical activity are important to maintaining daily functioning in older adults. While bidirectional associations between cognitive and physical activity magnify with increasing age, elucidating shared benefits has been difficult as few interventions explicitly train on cognition and mobility simultaneously. We conducted focus groups among 14 older adults residing in an independent-living center who participated in an interactive video game study called Bandit the Dolphin, where participants simultaneously incorporated cognitive exercise and physical activity while navigating within a complex spatial environment to help Bandit jump, eat fish, and stun sharks. Using 'sneaky exercise' tactics, participants utilized upper extremities in conjunction with slight lower extremity movement to move Bandit within a 3-D oceanic environment. We conducted 3 semi-structured focus groups and analyzed the data using the "Sort and Sift, Think and Shift" method to assess general likes and dislikes as well as the primary motivators, barriers, and reasons for remaining in the study. Participants enjoyed the immersive nature, challenge, and "fun factor" of the game. Primary motivators for joining were generativity/helping others, self-improvement, from peer referrals, and because the study looked interesting. Key barriers reported in the study were exhaustion from standing, learning how to play in 3-D space, and frustration from lack of level advancement. Reasons for retention were due to the game being fun, a sense of duty, and fulfilling commitments. This

information will guide ongoing research efforts to design interactive video game interventions that are enjoyable for older adults and maintain high retention rates.

GENDER AND AGE MODERATE THE EFFECTS OF PARTNER SUBSTANCE USE ON PROBLEM DRINKING IN ADULTHOOD

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The current study examined whether partner substance use problems predict problem drinking and how gender and age moderate this relationship. Problem drinking refers to alcohol use resulting in alcohol dependence or health and social consequences. Participants were adults ($n=2142$, 53% female, mean age=54, range= 33-83) from Wave 2 of the Midlife Development in the United States (MIDUS) Study. Participants reported on both past 12-month problem drinking (e.g., emotional problems from drinking, urges to drink, month or "much time" drinking, drinking more to get effects, drinking more than intended, and alcohol-related role interference) and partner substance use problems. Results indicated that 22.2% of the sample reported at least one problem drinking behavior in the past year. Multiple linear regression analysis revealed a significant interaction between gender and partner substance use problems ($b=0.05$, $p=0.01$) such that for males having a partner with substance use problems was a risk factor for their own problem drinking. However, a three-way interaction with gender, age, and partner substance use problems ($b=-0.41$, $p<0.01$) indicated that partner substance use problems might have both gender and age-specific effects on problem drinking. Exploratory analyses of this interaction indicated that with age partner substance use problems might no longer promote risk for male problem drinking. Older adults are especially sensitive to the effects of alcohol for reasons such as lower tolerance, medication interaction, and health conditions. There is thus a need for identifying age-relevant factors associated with these drinking behaviors for intervention and prevention efforts.

GROWTH CURVE OF DISABILITY OF OLDER ADULTS OVER A 12-YEAR PERIOD: CAN IT BE MODIFIED BY AGE OR ENGAGING IN ACTIVITIES?

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Adopting a growth curve model, this study aims to fit a growth trajectory of disability of older adults over a 12-year period, and to investigate whether such a trajectory is modified by initial age and level of engagement in activities. The data are from the Chinese Longitudinal Healthy Longevity Survey, which includes 16,064 individuals aged 60 or above in the first wave in 2002 who were followed-up in four more waves until 2014. Disability in this study is measured by having any difficulty in performing six activities of daily living. Activities include physical exercise and eight leisure activities. To rigorously test the causal effect of engaging in activities on disability, we adopted a time-lagged growth curve model. In addition, disability status in the initial wave was controlled at baseline and an array of health status measures, such as physical functioning and cognitive