

MEDIATING EFFECT OF GRIP STRENGTH TRAJECTORY ON THE ASSOCIATION BETWEEN EXERCISE AND WEAKNESS: A DYADIC APPROACH

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This study aimed to explore the mediating effect of grip strength trajectory on the longitudinal association between regular exercise and weakness in grip strength using a dyadic approach. We used six waves of the Korean Longitudinal Study of Aging (KLoSA) collected every two years from 2006 to 2016. The sample was middle and old-aged Korean couples who participated in all six waves of the survey (N=1,967). The outcome variables were husbands' and wives' grip strength at Wave 6, coded as a binary variable (0=clinically weak, 1=normal). The mediating variables were husbands' and wives' trajectories of grip strength across Waves 1 and 5. Independent variables were three dummy variables indicating couple's participation in regular exercise (both engaged in regular exercise, only husband did, only wife did). Reference group was both not doing regular exercise. Results showed several significant mediational pathways. For husbands, engagement in regular exercise of both spouses and only husband were associated with higher grip strength at Wave 1, and slower decline in grip across waves was related to lower likelihood of having a clinically weak grip strength at Wave 6. As for wives, engagement in exercise of both spouses was associated with higher grip strength at Wave 1 which in turn was related to lower likelihood of having a clinically weak grip strength at Wave 6. These results suggest longitudinal dyadic processes through which engagement in regular exercise affects weakness in grip strength among older Korean couples.

MOTIVATIONAL INTERVIEWING TO ENGAGE OLDER INPATIENTS IN FALL PREVENTION: PILOT RANDOMIZED CONTROLLED TRIAL

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Motivational Interviewing (MI) is an evidence-based approach for fostering behavior change and holds potential to engage patients in behavior change related to fall prevention. A two-arm, unblinded, pilot randomized controlled trial was conducted in a hospital setting to determine the feasibility (recruitment and retention), establish suitable procedures for the intervention (duration and quality of MI), and to test study measurements (fear of falling, importance and confidence related to fall prevention, patient activation, fall prevention behaviors, and fall rates). Participants were high fall risk older inpatients (age ≥ 65). The intervention arm received MI at one time during hospitalization in addition to routine hospital fall prevention intervention. The control arm received the routine hospital care for fall prevention only. Measures were collected at baseline, 2-days, 1-week, 1-month, and 3-month. A total of 120 inpatients were

contacted by the study team and 67 were randomized: intervention arm (n=36) and control arm (n=31). Approximately 66% of participants completed the study at the 3-month data collection and MI intervention took an average of 21 minutes and was of adequate quality. The intervention group reported less fear of falling after the MI intervention and maintained fall prevention behaviors over time ($p < .05$). The study identified that MI for fall prevention at a hospital setting was feasible to deliver and provided insights into suitable study procedures and beginning evidence for a positive impact of MI.

THE BUILT ENVIRONMENT INFLUENCED THE INCIDENCE OF FALLS IN OLDER ADULTS LIVING IN THE UNDERSERVED COMMUNITY

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The built environment is commonly cited as a facilitator to local walking. Although health promotion programs targeting physical activity are available, few studies have investigated the associations of the perceived neighborhoods with the incidence of falls in the minority communities. Hence, the purpose of this preliminary study was to understand whether the perceived built environment influenced the fall experiences in older adults living in the underserved community. The preliminary cross-sectional survey was conducted at the regional health clinic in Flint, MI. Descriptive statistics and analysis of variance (ANOVA) were performed using SAS v8.4. The eligibility criteria included over 65 years old and Flint residents. Of 132 participants, the mean age was 69.75 (SD=5.00). The majority were female (68%), African Americans (80%), single, divorced or widowed (80%), and > GED (84%). The ANOVAs supported that "had fallen in the past year" was associated with "stores are within easy walking distance," "easy to walk to a transit stop" and "there is a dirt strip that separates the streets from the sidewalks." The fall experience was more likely to associate with the sedentary lifestyle and the comorbidities such as diabetes, fatigues, muscle spasms, and chronic pain. To summarize, the built environment increased the incidence of falls in the past year. Those who had fallen had poor health conditions. Further studies are needed for older adults to engage in physical activity. It is essential to develop the age-friendly support systems and accommodations to local walking in this community.

EARLY FRAILTY PHENOTYPES AND PREDICTIONS OF COGNITIVE AGING: EVIDENCE FROM THE VICTORIA LONGITUDINAL STUDY

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Frailty is an aging condition that reflects multisystem decline. A prominent approach to frailty assessment is to create an index, whereby responses across multiple indicators of