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

Susanna Joo,1 Hye Won Chai,2 and Hey Jung Jun1, 1. Yonsei University, Seoul, Korea, Republic of, 2. The Pennsylvania State University, University Park, Pennsylvania, United States

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

Hiroko Kiyoshi-Teo,1 Kathryn Northrup-Snyder,1 Elizabeth Eckstrom,1 Debbie Cohen,1 Nathan Dieckmann,2 and Sydnee Stoyles1, 1. Oregon Health & Science University, Portland, Oregon, United States, 2. Oregon Health & Science University School of Nursing, Portland, Oregon, United States

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

Rie Suzuki,1 Jennifer Blackwood,2 Shailee Shah,1 Sabah Ganai,1 and Kimberly Warden1, 1. Department of Public Health and Health Sciences, University of Michigan-Flint, Flint, Michigan, United States, 2. Physical Therapy Department, University of Michigan-Flint, Flint, Michigan, United States, 3. Hamilton Community Health Network, Inc., Flint, Michigan, United States

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, fatigue, 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 FRAILITY PHENOTYPES AND PREDICTIONS OF COGNITIVE AGING: EVIDENCE FROM THE VICTORIA LONGITUDINAL STUDY

Linzy Bohn1, Yao Zheng,1 G. Peggy McFall,1 and Roger A. Dixon2, 1. University of Alberta, Edmonton, Alberta, Canada

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
aging systems are summed to create a single score. These studies indicate that frailty is associated with adverse aging outcomes (e.g., mortality, dementia). We employ a data-driven approach to detecting and differentiating emerging frailty phenotypes and examine their associations with non-demented cognitive aging trajectories. Participants (n = 653; M age = 70.6, range 53-95) were community-dwelling older adults from the Victoria Longitudinal Study. Participants contributed (a) baseline data for 30 frailty-related items representing deficits across 7 domains (e.g., instrumental and cardiovascular health) and (b) longitudinal data for latent variables of executive function, speed, and memory. For each participant, we calculated the proportion of deficits present in each frailty-related domain and submitted these data to a latent profile analysis (LPA; Mplus 7.0). We used latent growth modeling (LGM) to test these frailty phenotypes for prediction of cognitive performance and decline. LPA results revealed three profiles, one large normal low-frailty profile and two emerging frailty phenotypes. Whereas the latter represented profiles of individuals with respiratory-type frailty (i.e., marked impairment in respiratory function; 7%) and mobility-type frailty (i.e., marked impairment in mobility function; 9%), the former featured limited impairment across frailty domains (83%). Findings from LGM indicated that these profiles were differentially related to cognitive performance and decline. Data-driven approaches can help detect early differentiation of frailty profiles and contribute to personalized intervention.

SOCIAL ISOLATION AND FALLS RISK AMONG COMMUNITY DWELLING OLDER ADULTS: THE MEDIATING ROLE OF DEPRESSION
Jeffrey Burr,1 and Lien Quach2. 1. University of Massachusetts Boston, Boston, Massachusetts, United States, 2. Veterans Administration, Boston, Massachusetts, United States

Relatively little is known about the relationship between social isolation and the risk of falls among older adults. Yet, a considerable amount of research demonstrates that lack of sufficient social relationships, broadly defined, represents a modifiable risk factor for many indicators of well-being in later life. This study examines the association between two types of social isolation and the risk of falls. The study also examines whether depression mediates the association between social isolation and risk of falls. Longitudinal data from the Health and Retirement Study (2006-2012) were collected from community-dwelling participants aged 65 and older (N=8,464). The outcome variable was number of falls self-reported over the observation period. Independent variables included perceived isolation (feeling lonely, perceptions of social support), social disconnectedness (e.g., having no friends or relatives living nearby, living alone), and number of depressive symptoms. Results from regression models indicated that social disconnectedness was associated with a 5% increase in the risk of falls (IRR=1.05, 95% CI=1.01-1.09). Perceived social support was associated with a 21% increase in the risk of falls; when taken together, perceived social support and loneliness were associated with a combined 37% increase in falls risk. Depression was associated with a 47% increase in falls risk. Depression mediated the association between perceived isolation and falls. Further, perceived isolation mediated the association between social disconnectedness and falls. Reducing perceived social isolation and social disconnectedness may be an avenue for designing interventions to reduce the risk of falls, especially for older adults with depression.

FEASIBILITY OF A LOW-DOSE FRAILTY PREVENTION INTERVENTION AMONG OLDER AFRICAN AMERICANS
Heather A. Fritz,1 Wassim Tarraf,1 and Pragnesh Patel1.
1. Wayne State University, Detroit, Michigan, United States

Older African Americans (OAA) are at high risk for becoming frail in later life. Interventions can reverse or delay frailty, yet OAA have largely been excluded from frailty intervention research. Many interventions are also time and resource intensive, making them inaccessible to socially disadvantaged OAA. We present results of a feasibility trial of a low dose frailty prevention intervention among 60 community-dwelling, pre-frail OAA aged 55+ recruited from a primary care clinic between June 1st and October 31st 2018. Using a 2-arm RCT, participants were assigned to the intervention, which was delivered by an occupational therapist (OT) and comprised of four sessions over four months (an OT evaluation, and sessions on healthy dietary practices, increasing physical activity, and maintaining a healthy lifestyle), or enhanced usual care (publicly available information about healthy lifestyle, home safety, and local elder services). Feasibility criteria were set a priori at 75% for participant retention (including attrition due to death/hospitalization), 80% for session engagement, 2 participants/week for mean participant accrual, and 90% for program satisfaction. Participants were 65% female with an average age of 76.58 years, 51.67% of which lived alone and 51.67% lived off of less than 15K per year. Feasibility metrics were met. The study recruited 2.5 participants per week and retained 75% of participants who attended 95% of scheduled sessions. Mean satisfaction scores were 93%. The intervention was feasible to deliver. Qualitative findings from exit interviews suggested changes to the program dose, structure, and content that could improve it for future use.

AM I FRAIL, LOVE? YES, I SUPPOSE I AM: WHAT 10 OLDER PEOPLE CAN TELL US ABOUT LIVING WITH FRAILTY
Oliver M. Todd,1 Andrew Clegg,1 and Mary Godfrey1.
1. University of Leeds, Bradford, Yorkshire, United Kingdom

We sought to explore what matters in later life with frailty from an older persons perspective. Between March and May 2018, we recruited ten people, purposively sampled from the CARE75+ ageing cohort study. Interviews took place at the participant’s own home in two settings, each 45 minutes long. Interviews were semi-structured, used narrative techniques based on a topic guide developed with a patient representative. We used systematic analysis of the narrative experience to identify meaning in the context of an individual’s time, space and history. Participants had a mean age of 84 years (range 77 to 93), half were women, and three were interviewed with their care-givers. All had moderate or severe frailty: mean frailty index 0.36 (range 0.25 to 0.47); mean Fried score 4 (range 3-5). Half knew hunger as children; most grew up in large families and left school early; two survived TB in early life; all lived through or were affected by war. The term frailty was: never voluntarily used; described negatively and in value laden terms; seen better in others.