This study investigates whether the incidence of metabolic syndrome (MetS), and its components, differs by occupational group among older workers (45-65 years) and whether health behaviors (smoking, leisure-time physical activity, diet quality) can explain these differences. We analyzed data from older workers (N=23,051) from two comprehensive measurement waves of the Lifelines Cohort Study and Biobank. MetS components were determined by physical measurements, blood markers, medication use, and self-reports. Occupational group and health behaviors were assessed by questionnaires. The association between occupational groups and MetS incidence was examined using Cox regression analysis. Health behaviors were subsequently added to the model to examine whether they can explain differences in MetS incidence between occupational groups. Low skilled white-collar (HR: 1.25, 95% CI: 1.13, 1.39) and low skilled blue-collar (HR: 1.45, 95% CI: 1.25, 1.69) workers had a significantly higher MetS incidence risk during 36.5 years follow-up than high skilled white-collar workers. Health behaviors reduced the strength of the association between occupational group and MetS incidence most among low skilled blue-collar workers (i.e. 10.3% reduction) as unhealthy behaviors were more prevalent in this occupational group. Similar occupational differences were observed on MetS component level. To conclude, MetS incidence in older workers differs between occupational groups and health behaviors only explain a small part of these differences. Health promotion tailored to occupational groups may be beneficial specifically among older low skilled blue-collar workers. Research into other factors that contribute to occupational differences is needed, as well as studies spanning the entire working life course.

REMOTE MONITORING ACTIVITY TRAJECTORY-ASSOCIATED WEIGHT LOSS AND FUNCTIONAL ABILITY IN OBESE OLDER ADULTS

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Functional decline in older adults can often be mitigated by physical activity. As older adults increasingly adopt wearable technology, an understanding of how remotely monitored activity is associated with clinical outcomes is needed. Data was analyzed from two cohorts of older adults with obesity (≥65 years, BMI (≥30 kg/m²)) who completed weekly dietary and exercise-based weight loss interventions (n=93). Follow-up time varied between cohorts (n=37: 12-weeks; n=56: 16 weeks). All participants were provided a Fitbit to monitor physical activity. Baseline and follow-up weight, 6-minute walk distance, grip strength, and late life function and disability instrument (LLFDI) were collected. We used k-means clustering for longitudinal data to identify physical activity trajectories from Fitbit steps at the daily level. Linear regression models tested for differences in each outcome between trajectories, adjusting for age and sex. Baseline characteristics did not vary across cohorts: mean age 72.7±4.5 years, 76.5% were female, and mean BMI was 36.4±5.1 kg/m². Two physical activity trajectories were identified, termed high and low activity based on differences in mean daily steps (7,476±4,117 vs. 2,960±2,453, p<0.001). Participants in the high activity group experienced a 2.4% reduction in weight (p<0.001) and a 4.74% increase in LLFDI score (p=0.007) relative to the low activity cluster. Other outcomes were not significantly different between trajectories. These results demonstrate the potential for remote monitoring data to elucidate longitudinal trends in weight and functional ability. As such, older adults’ use of wearable technology may facilitate improvements in weight and functional ability in the community.

THE ASSOCIATION OF MEAL TIMING WITH BODY COMPOSITION AND CARDIOMETABOLIC HEALTH IN OBESE OLDER ADULTS

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Objectives: To determine the association between eating window and time of last calorie intake with body composition and cardiometabolic health in obese older adults. Methods: We performed a cross-sectional analysis on 36 community-dwelling, overweight-to-obese (BMI 28.0-39.9 kg/m²) older adults, recruited to participate in a weight loss and exercise trial. Time of food intake were extracted from three 24-hour food recalls. Eating window was calculated as the time elapsed between the first and last food intake. We recorded the time of last calorie intake either from food or drink. Blood glucose, triglycerides, high-density (HDL) & low-density (LDL) lipoprotein cholesterol were measured as markers of cardiometabolic health. Total fat and lean mass were assessed by DEXA. Partial correlation was used to determine the relationships between eating window and last calorie intake with body composition and cardiometabolic markers, while controlling for sex, age, and total calorie intake. Results: On average, participants’ eating window was 12.0±1.1 hours. Time of last calorie intake in 86% of participants was between 6:00-8:00 PM. After controlling for potential confounders, longer eating windows were associated with higher triglyceride levels (P=0.032) and lower HDL (P=0.035), while no association was observed with the other cardiometabolic markers. We observed negative trends, though not statistically significant, between longer eating windows and greater weight, BMI, and fat mass. No association was observed between time of last calorie intake, body composition and cardiometabolic markers. Conclusions: Our results suggest that timing of food intake may influence cardiometabolic risk and obesity in older adults.

TRAJECTORIES OF BODY MASS INDEX AND MULTIMORBIDITY IN OLD AGE: 12-YEAR RESULTS FROM A POPULATION-BASED STUDY

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We aimed to study the association of long-term trajectories of body mass index (BMI) with contemporaneous
changes in multimorbidity development in older adults. Twelve-year BMI trajectories (2001–2013) were identified in subjects aged 60+ years from the Swedish National Study on Aging and Care-Kungsholmen (SNAC-K) using growth mixture models (N=2,189). Information on chronic diseases and multimorbidity was ascertained based on clinical examinations, lab tests, medications, and inpatient and outpatient medical records. Linear mixed models were used to study the association between BMI trajectories and the speed of chronic diseases accumulation, in general and by groups of cardiovascular and neuropsychiatric diseases. Eighty percent of the study population was included in a stable BMI trajectory, 18% in a slow-decline trajectory with an accelerated BMI decline from age 78 onwards, and 2% in a fast-decline trajectory that reached underweight values before age 85. A significantly higher yearly rate of chronic disease accumulation was observed in the fast-decline versus stable trajectories (β=0.221, 95% CI 0.090-0.352) after adjusting for age, sex, education and time to death. Subjects in the slow-decline trajectory showed a significantly higher rate of cardiovascular diseases accumulation (β=0.016, 95% CI 0.000-0.031); those in the fast-decline trajectory showed a faster accumulation of both cardiovascular (β=0.020, 95% CI -0.025, 0.064) and neuropsychiatric diseases (β=0.102, 95% CI 0.064-0.139), even if the former association did not reach statistical significance. Carefully monitoring older adults with sustained weight loss seems relevant given their likelihood to develop a phenotype of rapidly accumulating chronic -especially neuropsychiatric- diseases.

Session 1205 (Symposium)

BUILDING CAREGIVER RESILIENCE: PITFALLS AND POTENTIAL FOR INTERVENTIONS

Chair: Jeongeun Lee
Co-Chair: Natasha Peterson
Discussant: Steven Zarit

Informal caregivers provide substantial practical and emotional support for individuals with chronic and acute conditions. Consequently, many experience caregiver burden and are at high-risk for psychological morbidity and associated breakdown in the provision of care for care recipients. Many psychosocial interventions have been designed to help caregivers. However, more work is needed to identify which, or what kind of, interventions are optimal for identifying suitable strategies and care management. The main objectives of this symposium are to (1) address psychosocial and demographic factors contributing to caregiver resilience, (2) understand the role of cognitive and behavioral factors that have implications for caregivers’ psychological well-being, and (3) specify different caregiving styles and adaptive outcomes. This symposium assembles a panel of experts and brings together empirical research on various challenges that need to be addressed and potential opportunities for creating effective psychosocial intervention targets for caregivers. The first session will discuss several psychosocial and demographic factors associated with resilience among caregivers. The second session will share how caregiving appraisals are closely related to positive and negative affect and whether the level and changes in caregivers’ activity participation moderate this linkage. The third session will identify caregiving styles and strategies utilizing k-modes machine learning analysis and share how caregivers adapt to care situations. The final session will present caregivers’ stress experiences related to dementia patients’ behavior and psychosocial symptoms in dementia during the day. The session will conclude with Dr. Zarit, who will integrate the four papers and offer insight on implications across studies.

CAREGIVING APPRAISALS AND EMOTIONAL VALENCE: BUFFERING EFFECT OF ACTIVITY PARTICIPATION

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Caregiving activities often lead to positive and negative appraisal for caregivers. Caregivers may limit social participation due to caregiving activities. Changes in level of activity participation could have profound consequences for caregiver’s valence. However, little is known about how activity participation could moderate the association between these caregiving appraisals and emotional valence. Data came from the National Study of Caregiving (Round 1 and 2), a nationally representative study of caregivers. Referencing Lawton’s two-factor model (1990), we examined both the level and changes in activity restriction interacting with positive and negative caregiving appraisals to predict both valence across two waves. Consistent with two factor models, findings revealed level and changes in activity restriction moderated the relationship between caregiving appraisal and outcomes for both valences. These findings highlight the role of activity restriction as a target to reduce negative valence and improve positive valence for caregivers.

TEMPORAL PATTERNS OF DAILY BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA THROUGHOUT THE DAY

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Behavioral and psychological symptoms of dementia (BPSPD) are taxing for both the person with dementia (PWD) and their family caregivers. Yet, little is known about how BPSPD fluctuates throughout the day (i.e., morning, daytime, evening, and night; e.g., sundowning) and how caregivers perceive BPSPD at different times of the day. Using 8-day daily diary data from 173 family caregivers whose relatives were using Adult Day Services (ADS), this study investigated temporal patterns of BPSPD and caregivers’ stress responses to BPSPD throughout the day. Overall, the number of BPSPD was highest in the evening, and caregivers’ stress reactivity to BPSPD increased throughout the phases of the day (i.e., most stressful at night). However, caregivers showed lower reactivity to BPSPD in the mornings and at night on days when the PWD used ADS. Our findings about fluctuations of (caregiver reactions to) BPSPD throughout the day suggest target windows for just-in-time adaptive intervention.