change across weeks and years, indexing short-term retest and long-term developmental change, respectively. Individual slope estimates were extracted and utilized in multinomial logistic regression models contrasting short- vs. long-term RTI change as predictors of long-term cognitive status. Results from the three-level models indicated that retest and developmental slopes yielded non-redundant sources of variance, providing unique estimates of change that would otherwise be confounded. Further, short- and long-term RTI differentially predicted cognitive status at Years 4 and 8; failing to benefit from retest effects on the BRT task was associated with increased likelihood of cognitive impairment. This innovative approach to parameterizing retest effects can reduce systematic bias in estimates of long-term developmental change, as well as highlight the utility of retest effects as predictors of cognitive health.

STRATEGIES TO ENSURE AUTHENTIC PARTICIPANTS AND VALID DATA WITH ONLINE RECRUITMENT OF FAMILY CAREGIVERS
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Over the past years, recruitment of participants for behavioral and biomedical research through the internet has become more popular. Online has become an advantageous approach to recruitment, especially since the covid pandemic has posed a great challenge to most in-person research activities. Typically, internet-based recruitment strategies include website posting, emailing list of potential participants as well as using social media such as Facebook, Twitter, and Instagram to deliver recruitment information to groups who are often unrepresented in research. Although this mechanism has reduced barriers to participation, it has posed serious threats to data quality and validity. For example, some studies on data validity estimate that up to 90% of online survey responses are fraudulent when they rely on screening questions and CAPTCHA alone. Others have shown that vetted panel data such as Mechanical Turk (mTurk), has high rates of participant misrepresentation. Therefore, the aim of this paper is to highlight the challenges associated with internet-based recruitment of family caregivers and describe strategies for researchers to ensure data integrity. We discuss multi-faceted approaches to detect and prevent fraudulent and suspicious activities such as duplicate and automated enrollment by software applications known as bots as well by fraudulent human participants. We discuss data on several strategies that have proven effective in our previous and ongoing trails. We will also demonstrate the need to implement several strategies and a “fail-safe” to detect fraud after enrollment. It is imperative that researchers understand the need to address these challenges to preserve data integrity and replicability.

HAIR CORTISOL FEASIBILITY AND DEMOGRAPHIC CORRELATES IN A SAMPLE OF OLDER ADULTS FROM PUERTO RICO
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Hair cortisol is increasingly being used as a biomarker of chronic HPA-axis activation. Studies using older adults often exclude a substantial portion of participants due to insufficient hair or non-detectable cortisol levels, but do not provide details on correlates of these factors. We examined feasibility of hair measurement and cortisol detectability in an ongoing study of older adults in Puerto Rico. Among the first 537 participants in the current follow-up of the Puerto Rican Elder Health Conditions (PREHCO) study (now age 78-106 years old), approximately 11% of participants refused to give a hair sample and 20% did not have enough hair to sample. Women (13%) were significantly more likely than men (4%) to refuse hair collection. However, men (47.7%) were significantly more likely than women (48%) to not have enough hair. Of participants with enough hair to take a sample (n=372), 23% had non-detectable levels of cortisol. Black participants were the most likely to have non-detectable hair cortisol (43%), followed by multiracial mestizo (32%). The two most common racial categories in our sample, multiracial trigueño (23%), and white (17%) were the least likely to have non-detectable cortisol. In terms of hair products (including frequency of hair washing and use of conditioner, dye, or perm), only the use of chemical hair straighteners was associated with higher likelihood of non-detectable cortisol (38%). Findings underscore the importance of measuring hair products when examining hair cortisol in older adults and suggest that older black participants may be disproportionately excluded due to non-detectable cortisol levels.

TIME IS OF THE ESSENCE: RELIABLE MEASUREMENT OF HEART RATE VARIABILITY IN OLDER ADULTS
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Heart rate variability (HRV) decreases with age and is an important correlate of psychosocial and physical health. Recommendations for the minimum duration of EKG to accurately derive HRV vary from 1 minute to several minutes. However, the definition of “accuracy” or reliability depends on study design, including whether the focus of the study is on stable or momentary between-person differences or within-person changes in HRV. In a sample of 216 older adults (Mage = 72.7, 62.5% women), ECG was measured at 1000 Hz for 10 minutes every 6 months for up to 6.5 years. HRV was high-frequency power (0.15–0.40). A generalizability study determined the variance due to minute, occasion, person, and their interactions. The most variance was due to idiosyncratic occasion differences (46%), followed by stable person variance (18%). A decision study determined how accuracy in HRV measurement could be achieved. Between-person differences in HRV at a specific occasion could be reliably measured with 6 minutes of ECG (.80); within-person changes in HRV between occasions could be reliably measured with 3 minutes of ECG (.83). For stable individual differences, 10 or more occasions of 1-minute duration produced a more reliable estimate (.73) than increasing the length of a single ECG recording to 10 minutes (.25). The necessary
duration of ECG for measuring HRV reliably depends on the study design and research question. Ultra-short durations (1-2 minutes) are generally not recommended for older adults.

OPPORTUNITIES, FEASIBILITY, AND CHALLENGES OF USING IMMERSIVE VIRTUAL REALITY IN AGING RESEARCH
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Immersive virtual reality (iVR), that is, 3D-scenarios presented in head-mounted displays, is rarely used in aging research, although it gained much popularity recently in medical, educational, consumer, and gaming contexts and offers advantages such as real-life scenarios under experimental control. Still, iVR might be less suited for older adults, if they do not experience realism (i.e., presence) or feel strong cyber-sickness (e.g., nausea, headaches). The current preregistered project (osf.io/ryz2c) examined the opportunities, feasibility, and challenges of immersive Virtual Reality for studying age differences in socio-emotional processes. Up to now, 50 younger (age M = 23.5) and 50 older adults (age M = 67.9) saw different socio-emotional situations in iVR using a HTCvive headset, which included eye tracking, and then rated experiences of presence and cyber-sickness. Results showed that feelings of being present in the virtual reality were moderate to high, while cyber-sickness was generally low, and did not differ significantly between younger and older adults. Further analyses explore associations with technology acceptance, health, and personality. The findings suggest that using iVR with older adults is feasible, and creates similar levels of realism and low cyber-sickness as among young adults. The discussion highlights the opportunities and challenges of using iVR for studying age differences in cognitive, emotional, or social processes in experimentally controlled, real-life scenarios.

SESSION 6600 (POSTER)

SLEEP
THE EFFECTS OF SLEEP DEFICIENCY ON MULTIMORBIDITY AMONG OLDER ADULTS IN THE PHILIPPINES AND VIETNAM
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Multimorbidity increases the risks of disability and death and are prevalent among older adults. Evidence shows that sleep might play an important role in multimorbidity. However, previous research studies sleep quality and quantity in isolated manners, where in reality sleep quality and quantity are likely to affect each other. Besides, no study has been done to understand such relationship among older adults in low- and middle-income counties where the prevalence of multimorbidity increases rapidly. This study investigated the relationship between sleep deficiency (i.e., poor and insufficient sleep) and multimorbidity among community-dwelling older adults in the Philippines and Vietnam. Cross-sectional data were obtained from the Longitudinal Study of Ageing and Health in the Philippines (N = 3,562) and the Longitudinal Study of Ageing and Health in Vietnam (N = 3,936). Multimorbidity was defined by having two or more of chronic conditions (i.e., heart disease, heart attack, cardiovascular disease, hypertension, diabetes, lung diseases, renal diseases, liver diseases, and arthritis). Sleep deficiency was conceptualized as self-reported short sleep duration (< 6 hours), having trouble with falling asleep or maintaining sleep, and/or experiencing non-restorative sleep. Logistic regression was used to analyze the data adjusting for demographics, body mass index, sleep medications, naps, mental health, and lifestyle. The results showed that having deficient sleep was significantly related to increased odds of experiencing multimorbidity by about 81% in the Philippines and Vietnam. Our findings revealed that treating sleep deficiency among older adults in the Philippines and Vietnam can potentially reduce the risks of multimorbidity.

THE MEDIATING ROLE OF FATIGUE/SLEEPINESS BETWEEN STATE MINDFULNESS AND SUBJECTIVE COGNITION
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Previous studies have established a connection between higher mindfulness and cognitive abilities; however, few studies have considered the mechanism underlying this relationship. The cognitive benefit of mindfulness may be through reduced fatigue and daytime sleepiness. This study examined if higher, naturally occurring mindfulness is associated with higher subjective cognition and whether lower fatigue or sleepiness mediate this relationship. Two independent samples of nurses (N1=60 inpatient (IP); N2=84 outpatient (OP)) completed 14 days of ecological momentary assessment (EMA). Fatigue/sleepiness, mindfulness, and subjective cognition (mental speed, processing sharpness, memory) were assessed using EMA. The 5-item Mindful Attention Awareness Scale assessed state mindfulness. Multilevel mediations were conducted in Mplus to account for the nested data. At the within-person level, daily subjective cognition was higher than average on days when mindfulness was higher in both OP and IP samples. This association was mediated by lower levels of fatigue (IP indirect effect: B=2.08, p<.001; OP indirect effect: B=2.57, p<.001) and lower sleepiness (IP indirect effect: B=1.72, p=.001; OP indirect effect: B=0.92, p=.027). The daily indirect pathways were found after controlling for between-person differences; those with higher mindfulness reported higher subjective cognition through lower fatigue, and this effect was only significant in OP nurses (indirect effect: B=11.61, p=.001). Results highlight the importance of monitoring momentary mindfulness and intervening on daily fatigue and sleepiness as these may influence one’s subjective cognition and ultimately their objective performance. These findings may help identify modifiable factors to promote quality of care in nurses and their own well-being.