

for improvements to adherence: a) reminders for scheduling and appointments, b) knowledge about tests and follow-up, c) convenience in location and scheduling, and d) financial and non-financial incentives. In a second session, participants referenced patient personas and sketched storyboards, a comic strip-like format showing steps in a journey, to describe different ways to help patients return for LDCTs. Through qualitative analysis, we identified ten elements to consider incorporating in multilevel interventions: versatility (e.g., multiple reminder options), social support (e.g., families, peers), individualization (e.g., tailoring to patient needs), feelings (e.g., fear, relief), knowledge (e.g., harms/benefits, expectations), responsibility (e.g., who is accountable for reminders), continuity (e.g., clear pathway to adherence), consistency (e.g., same messages), cadence (e.g., rhythm of messages), and acknowledgment (e.g., recognition of screening completion). Next steps are to incorporate feedback from clinical stakeholders and develop multi-level interventions for further testing.

BEING WOMEN AND BEING DEMENTIA CAREGIVERS: SELF-CONCEPTS IN THE MAKING OF VIETNAMESE FEMALE CAREGIVERS

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In Vietnam, the majority of dementia caregivers are women. They play multiple social roles, and confront role conflicts and caregiving burdens with insufficient social supports. Dementia caregiving alters their self-concepts, or who they think they are. This paper aims to explore self-concepts of Vietnamese female caregivers of older relatives with Alzheimer's Disease (AD). In total, 21 face-to-face, semi-structured interviews, including six follow-up interviews, with 13 Vietnamese female caregivers of older patients with AD were conducted. These 13 caregivers were from 44 to 71 years old, mostly spouses of the patients with AD ($n = 8$), and retired ($n = 9$). Thematic coding procedure and the program MaxQDA12 were used for data analysis. Results show that the self-concepts of female caregivers in dementia care were complex, contextualized, and manifested in different aspects. First, self-concepts of these female caregivers were the outcome of the interactions between the guided-self and the performed-self. Their guided-self was the self that their social norms and cultural traditions told them about who they should be, while their performed-self was the self they demonstrated to the outside world. The mismatch between these two types of self caused distress among caregivers. Second, caregivers' self-concept was the combination of the three key types of the self: the moral-self (a filial daughter or a responsible wife); the feminine-self (a patient and graceful woman); and the worthy-self (a devoted and helpful caregiver). Understanding Vietnamese women's self-concepts associated with their sociocultural context will better inform the development of support programs for them.

LOSS NEGATIVELY IMPACTS A HEALTHY LIFE IN US ADULTS: FINDINGS FROM THE HEALTH AND RETIREMENT STUDY

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Previous research reports that the loss of a loved one increases the risk of mortality and physical and mental health problems. Using data from the 2004 to 2014 waves of the Health and Retirement Study, we estimate the years of healthy life (YHL) from 2004 to death for each respondent. YHL is based on the combination of years lived between 2004 and 2014, a projection of years beyond 2014, and self-rated health. Regression models stratified by age and gender were developed with the loss of a parent or spouse as the primary exposure and YHL as the dependent variable. Annual estimates of the total YHL lost associated with bereavement were based on these regression analyses and US Census data. Models reveal a strong dose-relationship between YHL lost and the number of losses. In total, the annual YHL lost associated with loss in US adults between 50 and 84 years of age is estimated at 2.0 and 1.6 million for men and women, respectively. Nearly three-fourths of the annual YHL lost are associated with adults younger than 65. Interaction analyses suggest that increasing physical activity has the greatest impact on reducing YHL lost in those with the greatest number of losses, one to two YHL per person. Understanding the full impact of loss on the lives of adults is an important step toward framing loss as a public health issue, especially for middle-aged adults. Results suggest that physical activity should be an important aspect of bereavement interventions.

ASSESSMENT OF A MICROPLATE SYSTEM FOR MEASURING INDIVIDUAL REAL-TIME RESPIRATION IN SMALL MODEL ORGANISMS OF AGING

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The ability to measure oxygen consumption rates of a living organism in real-time provides an indirect method of monitoring dynamic changes in metabolism reflecting organismal level mitochondrial function. In this study, we assessed the Loligo Systems microplate system for measuring individual respiration in small organisms. This included adult nematodes (*Caenorhabditis elegans*, N2), zebrafish embryos (*Danio rerio*, AB), and adult fruit flies (*Drosophila melanogaster*, w1118). Organisms were placed inside 80 μ L glass chambers on a 24-well microplate atop a 24-channel optical fluorescence oxygen reading device. Adult nematodes and zebrafish embryos were in liquid culture, M9 buffer and egg water respectively, and the adult flies were in room air. The microplate and reader were placed inside an incubator for temperature control. A silicone gasket with a thin liner was used to seal the chambers. Reference standard oxygen consumption (respiration) of single and multiple adult nematodes ($n=1-4$ animals/well), zebrafish embryos ($n=1-4$ animals/well), and adult flies ($n=1-2$ animals/well) in the microplate system were achieved. Significant differences across numbers of animals/well and by sex were observed. Validation experiments of the oxygen consumption rates measured in *C. elegans* in parallel with Seahorse extracellular flux (XF) experiments are underway. The Loligo Systems microplate system offers a non-invasive, non-destructive

method to measure real-time respiration in smaller organisms. These data provide preliminary evidence for utility of the system for a variety of biomedical applications that relate to organismal and mitochondrial function/dysfunction, including research in the basic biology of aging in these highly-utilized, pre-clinical, genetic model organisms.

PERSONAL SELF-MONITORING DEVICES TO IMPROVE SLEEP AMONG OLDER PEOPLE: A FEASIBILITY STUDY

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Chronic sleep disturbances reduce physical and mental health and affect over 8 million people age 65 years and older in the United States. There is evidence that use of a wearable Personal Self-Monitoring Device (PSMD) may improve sleep self-management in young adult populations. Feasibility of PSMD use for older individuals has not been explored and was the goal of this study. Persons age 65 years and over with self-reported sleep disturbances were recruited in a local community and were asked to wear a commercial PSMD for a 4-week period. To assess whether such an intervention may be feasible, outcomes included consent rate, study completion rate, data download interpretation, identification of a sleep self-management goal, improved knowledge about sleep, and improved sleep. Twenty-six persons (12 males and 14 females) were recruited over 3 months, out of a total of 33 expressing interest. Mean age=72, SD=4.99. Ninety-two percent of participants completed the study and reported improved awareness of sleep patterns and identified a sleep goal. Total sleep time was M=7 hours 14 minutes, SD=40 minutes; total restful sleep time was M=4 hours 33 minutes, SD=1 hour 22 minutes. In conclusion, sleep self-management with the use of a PSMD is feasible and of interest among persons in the young-old age category (65-74 years). There is potential for the use of PSMD among older people with the goal of improved sleep self-management. Future studies for sleep health self-management and interventions using personal sleep monitoring are recommended.

EVERYDAY MEMORY IN OLDER AND YOUNGER ADULTS: OUTSOURCING, SOCIALLY-DISTRIBUTED REMEMBERING & CONCEPTUALIZATION

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Qualitative interview data about everyday remembering within the context of older adults ages 62-83, (N= 27, M=69.5, SD=5.72) and younger adults ages 18-24 (N=29, M=21.2, SD= 1.77) lives were collected and analyzed using constructivist grounded theory methods. This study sought to compare the processes used by these individuals in their pursuit of everyday memory-demanding goals and their conceptualization of these methods. Older adults typically reported importance beliefs that guided memory-supportive behaviors for things like social engagements or medical appointments, whereas younger adults reported important information as being primarily school-related. There were major differences

in the execution and conceptualization for remembering critical information. Younger adults engaged in a form of socially-distributed cognition, wherein they relied on and outsourced remembering to technology and other people via apps. Interestingly, younger adults relied on others to remind them about coursework, extra-curricular activities, and social obligations via social communication platforms (e.g. GroupMe), text messages, and shared calendar alerts. Very few of the younger adults sampled were responsible for reminding others, but relied on the social altruism of their peers who were responsible for disseminating mass reminders. Conversely, technological outsourcing was not as prevalent in the older adults interviewed and only a few shared that they received similar reminders via text or email. Of the few cases that did outsource, a small subset did, however, engage in these processes within small groups or pairs, wherein a friend or significant other reminded them about social gatherings or names but in a much smaller proportion, comparatively.

IMPACT OF SOCIAL SUPPORT AND STRAIN ON DEPRESSIVE SYMPTOMS: MARITAL STATUS AND GENDER DIFFERENCES

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Social relationships are a well-established correlate of late-life well-being. Extensive research finds social support is associated with fewer depressive symptoms, yet few studies distinguish fine-grained types of support from spouse, children, other family and friends, nor whether these linkages differ by gender and marital status. Studies exploring coarse associations between support and well-being may conceal gender and marital status differences. We use data from two waves of the Health and Retirement Study (HRS; 2006 and 2010) to study fine-grained linkages between diverse types of relationship strain and support and depressive symptoms (CESD) among adults aged 51+. The results show that the association between support/strain and depressive symptoms varies based on the source of support. For instance, among married/partnered older adults, spousal support is negatively associated with depressive symptoms whereas friend strain is positively associated with depressive symptoms. Among widowed respondents, friend support is negatively associated with depressive symptoms. These marital status patterns differed by gender however, such that the impact of friend strain on depressive symptoms was especially large for divorced men. Our results suggest that no single form of social support (or strain) is uniformly protective (or distressing), so services and interventions to enhance late-life mental health should more fully consider older adults' social location, including gender and marital status. For current cohorts of older adults, who have lower rates of marriage and child-bearing than their predecessors, it is critically important to understand both the levels and impacts of alternative sources of support from other kin and friends.

LONG-TERM EFFECT OF A MULTICOMPONENT INTERVENTION ON PHYSICAL PERFORMANCE AND FRAILTY IN OLDER ADULTS

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