PROBLEM SOLVING SKILLS AND CANCER SCREENING BEHAVIORS IN MIDDLE-AGED AND OLDER MEN IN THE U.S.

Shalini Sahoo,[1] Roberto J. Millar,[1] Takashi Yamashita,[1] and Phyllis Cummins[2], *1. University of Maryland, Baltimore County, Baltimore, Maryland, United States, 2. Scripps Gerontology Center, Miami University, Oxford, Ohio, United States*

Routine cancer screening is widely recognized as an effective strategy for reducing cancer mortality – the second leading cause of death in the U.S. Research shows cancer screening rates need to be improved, and men are less likely to uptake recommended screening than women. Cancer screening requires an array of tasks such as seeking up-to-date guidelines, making appointments, planning a hospital visit, and communicating with health care professionals in the complex health care systems. Importantly, modern health care systems are rapidly adopting technology such as web-based applications for information dissemination and communication with patients. This current study is designed to better understand the roles of problem-solving skills in the technology-rich environment (PSTRE) in two selected cancer screening behaviors among middle-aged and older men. We obtained nationally representative data with a sophisticated PSTRE assessment from the 2012/2014 Program for the International Assessment of Adult Competencies (PIAAC). Binary logistic regression models with survey weights were used to estimate the association between PSTRE scores (1 – 500 points) and two cancer screening behaviors of men who meet the recommended guideline of age between 45 to 74 years old (n = 1,168). Results showed that greater PSTRE scores were positively associated with prostate cancer screening (OR = 1.005, p < 0.05). Improvement in PSTRE may promote the specific cancer screening behaviors. Our findings also inform future interventions that seek to improve cancer screening among a vulnerable section of older populations.

CALL A TEENAGER . . . THAT'S WHAT I DO!: GRANDCHILDREN HELP OLDER ADULTS USE NEW TECHNOLOGIES

Jennifer D. Portz,[1] Christine Fruhauf,[2] Sheana Bull,[1] Rebecca S. Boxer,[3] David Bekelman,[1] Alejandra Casillas,[4] Kathy Gleason,[5] and Elizabeth Bayliss[6], *1. University of Colorado, Aurora, Colorado, United States, 2. Colorado State University, Fort Collins, Colorado, United States, 3. Kaiser Permanente Institute for Health Research, Aurora, Colorado, United States, 4. UCLA, LA, California, United States, 5. Kaiser Permanente, Aurora, Colorado, United States, 6. Kaiser Permanente Colorado, Aurora, Colorado, United States*

As older adults increasingly show interest in technology for their well-being, families will play an important role in promoting the adoption and use of beneficial health technologies. The purpose of this study was to conduct a sub-analysis of data collected from a large-scale qualitative project regarding older adults' experiences using health information technology. Specifically, the sub-analysis explored older adults' experiences with technology support from family members to inform strategies for promoting older adult engagement with new health technologies. While the primary analysis of the original study was theoretically driven, this paper reports results from the inductive, open-coding analysis. Twenty-four older patients (≥65 years) with multiple chronic conditions (Charlson Comorbidity Index > 2) participated in a focus group conducted at patients' primary clinic. While conducting the primary theoretically-driven analysis, coders also utilized an open-coding approach to ensure important ideas not reflected in the theoretical code-book were captured. Open-coding resulted in a primary theme, "family support", that was furthered categorized by who and how the tech-support was provided. Participants were not specifically asked about family support, yet family assistance and encouragement for technology emerged from every focus group. Participants repeatedly mentioned that they called their grandchildren and adult children for help with technology. Participants also reported that family members experienced difficulty when teaching technology use. Family members struggled to explain simple technology tasks and were frustrated by the slow teaching process. Family support, specifically via grandchildren, may have a key role in the successful adoption and use of emerging health technologies.

IT'S MY BUDDY: EXPLORING THE PERCEPTIONS OF PEOPLE WITH DEMENTIA ABOUT THE SOCIAL ROBOT PARO IN A HOSPITAL SETTING

Lillian Hung,[1] and Habib Chaudhury[2], *1. Simon Fraser University, Vancouver, British Columbia, Canada, 2. Simon Fraser University, Vancouver, Canada*

New technology such as social robots opens up new opportunities in hospital settings. PARO, a robotic pet seal, was designed to provide emotional and social support for older people with dementia. This project aims to explore the perceptions of persons with dementia about PARO's role in a hospital setting. Video-ethnographic methods were applied. We had conversational interviews with and video observations of 10 older people with dementia in the geriatric unit of a large Canadian hospital. Also, semi-structured interviews and two focus groups were conducted with 10 staff members in the local unit to gain contextual information. Thematic analysis yielded three substantive themes: (a) "it's like a buddy"—the robot helps people with dementia uphold a sense of self in the world; (b) "it's a conversation piece"—the baby seal facilitates social connection; and (c) "it's all about love"—PARO transforms and humanizes the clinical setting. Our findings help provide a better understanding of the direct perspectives of patients with dementia on the use of social robots. Instead of substituting human contact, the social robot complements emotional care and supports our fundamental human need for love.

TECHNOLOGY

TRANSLATING THE RELATIONSHIP BETWEEN QUALITY OF LIFE AND MEMORY USING A NOVEL EEG TECHNOLOGY

Mitchell Roberts,[1] Orli Kehat,[2] Michaela Gross,[1] Nethanel Lasri,[2] Gil Issachar,[2] Erica Sappington VandeWeerd,[1] Ziv Peremen,[2] and Amir Geva[2], *1. University of South Florida, Tampa, Florida, United States, 2. elminda, Hertsliya, Israel*

Existing research has postulated a relationship between cognition and quality of life (QoL). Components of QoL such as satisfaction with social support may be particularly influential in memory for those with comorbidities. Additional research is needed to characterize the relationship between memory and QoL domains. Findings are presented from a clinical trial using BNA memory scores to assess brain health. BNA uses EEG technology and machine learning to map networks of brain functioning including working memory. Participants were older adults living in The Villages, an active lifestyle community in Florida, between the ages of 55-85, from 8/30/2017-3/11/2019. Participants were stratified into 2 groups: healthy (no CNS/psychiatric conditions; n=158) and multi-morbid (>1 CNS and/or psychiatric conditions; n=106) and compared across memory and QoL indicators. Subjective QoL was measured by the WHOQOL-BREF across 4 domains (physical, psychological, social, environmental). Scores on QoL domains were divided into 3 levels (high-medium-low) and tested for their relationship to BNA memory scores using ANOVA. Results indicate a relationship between health status, subjective QoL and BNA memory scores. Healthy subjects who scored high in the psychological QoL domain had significantly higher memory scores [$F(2,152)=4.30,p=.02$)]. In healthy subjects, satisfaction with social support (p=.001) had the strongest impact on memory for social QoL, while body image (p=.06) and concentration (p=.06) were the most salient predictors of psychological QoL and approached significance. Multi-morbid subjects who indicated high social ratings had higher memory scores ($F(2,100)=3.75,p=.03$) which relied heavily on satisfaction with social support (p=.003). Implications for policy and practice are discussed.

AN INNOVATIVE DATA-DRIVEN FALL PREVENTION COMMUNICATION TOOL FOR ADMINISTRATORS, NURSE MANAGERS, AND STAFF NURSES

Ragnhildur Bjarnadottir,[1] and Robert Lucero,[1] *1. University of Florida, Gainesville, Florida, United States*

Falls are the leading cause of injury among older adults, resulting in 3 million emergency department visits and 800,000 hospitalizations each year in the United States alone. In the hospital setting, falls are among the most common adverse events, causing longer stays and higher costs of care. Substantial efforts have been made to reduce falls in the past decade but with limited sustained effect. This may in part be due to limitations of existing tools for fall-risk assessment and evidence-based fall prevention. Therefore, there is a need to strengthen the evidence on risk factors for hospital-acquired falls and address barriers to translating the best available evidence into practice. To this end, we undertook the development of an innovative dissemination tool to implement fall-related evidence generated through state-of-the-art data science and information visualization approaches. Through a multidisciplinary academic-clinical partnership, we have developed an infographic to disseminate empirical evidence to nurses and administrators in the hospital setting. The infographic was developed based on principles of user-centered design and persuasive communication, and focuses on providing clear and accessible information about factors contributing to a patients' risk of falling in the hospital. This innovative dissemination approach is intended to foster dialogue between administrators, mid-level nursing management and staff nurses as well as evidence-based practice at the bedside. Future use and evaluation of this fall prevention tool will focus on adapting the infographic as an interactive digital tool for education and engagement of patients and families in the hospital setting.

A MAGIC GATHERING: PILOTING AN AUGMENTED REALITY ENGINE TO PROMOTE MENTAL HEALTH AND WELL-BEING

Thomas Chan,[1] Daniel Matook,[1] Isaac Argueta,[1] Jonathan Kennedy,[1] Jeremy Argueta,[1] and Thomas Chan[1], *1. California State University Northridge, Northridge, California, United States*

Augmented reality (AR), superimposing digital assets onto the real-world (i.e., holograms)—offers a paradigm shift in delivering immersive interventions for aging adults. Reminiscence and life review are robust intervention techniques that have decades of empirical support to boost mood and meaning in older adults. In this presentation, we demonstrate the applied research and technology development process to create an AR reminiscence and life review engine for aging adults and their caretakers. We conducted 25 needs assessment interviews with community-dwelling older adults, and assisted living facility directors, nurses, and residents. Initial analyses revealed the need for: (1) finding scalable and cost-effective solutions to alleviate time burden for caregivers; (2) increasing variety of activities that do not need much instruction; (3) producing activities that grab and maintain attention; and, (4) generating more personalized activities that do not divert too much time from caretakers. We integrated the findings to develop a working prototype AR engine called "Project Phonado." From preliminary user testing, Project Phonado aids in boosting mental health and meaning in aging adults—at least temporarily (immediate and one day follow-up). We will show clips of some pilot user testing of the engine and discuss the next evaluation and development steps.

WRIST-WORN TRI-AXIAL ACCELEROMETER VALIDATION IN YOUNG, MIDDLE-AGED, AND OLDER ADULTS

Todd M. Manini,[1] Santiago Saldana,[2] Duane Corbett,[1] Amal A. Wanigatunga,[3] Eduardo Navarro,[1] Mamoun M. Mardini,[1] and Ramon Casanova[2], *1. University of Florida, Gainesville, Florida, United States, 2. Wake Forest University, Winston-Salem, North Carolina, United States, 3. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States*

Purpose: This study evaluated wrist-worn accelerometers for estimating metabolic intensity and classifying activity types across a wide age spectrum. Methods: Participants (n=141, 67% women, aged 20-89 yrs) performed a battery of 31 common daily activities (e.g. washing dishes, walking) in a standardized laboratory setting. A tri-axial accelerometer was worn on the right wrist during each activity whiel a portable metabolic unit was used to measure oxygen consumption (ml/kg/min), which was converted into metabolic equivalents (METs). Random forest analyses estimated metabolic intensity and classified activity type based on seven data features.