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## Intergenerational connections through technology: Insights from the Technology Use in Later Life multi-site study

### Journal Item

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a survey of 12 questions about the experiences they had with the Zenbo, at the beginning and the end of the study respectively. Results: Subjects with lower GDS-15 scores have more positive attitudes toward the robot before the intervention. 27% of older adults had an increase in positive attitudes toward the interaction with the Zenbo robot. With the aid of teleoperated mobile robotic systems at home, the innovative service model can be achieved through telecommunication between primary health professionals or caregivers at remote locations and psychiatrists at the medical center to make the seamless care environment real. Conclusion: The IoT technologies can be used to assist physicians in switching from a hospital-centered model of care to a home-based service for older people with dementia. It merits more future clinical trials and usability tests.

#### ACCEPTANCE COMMITMENT THERAPY INTERVENTION FOR CUSTODIAL GRANDFAMILIES

Manuela E. Faulhaber, Amie Zarling, and Jeongeun Lee,  
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Millions of American children under the age of 18 are being cared for by their grandparents and without the presence of the biological parents. The number of custodial grandfamilies has significantly increased over the last five years. Recent studies have shown that custodial grandparents (CPGs) are often facing specific challenges in life, such as lower emotional well-being, higher parenting burden and stress related to this unique situation. Despite these findings, few interventions take a strengths based approach to improve their mental health and resilience. We describe our efforts to address these issues by proposing intervention anchored in the Acceptance and Commitment Therapy (ACT), emphasizing the importance of acceptance of challenging circumstances outside of one's control and promoting resilience among participants. The program consists of a web based ACT program with online coaching meetings, six common core sessions and six separate sessions for each age group over a time period of six months. This program is unique in the sense that it utilizes both individual and group session techniques to facilitate the learning process. Main active ingredients of this program are to promote effective coping strategies, to reduce parenting stress among grandparents and to increase life skills (i.e., decision-making, proactivity) among grandchildren. We are hypothesizing that participating in the ACT program will help CGPs to improve self-efficacy, emotional well-being, higher self-confidence, social competence, lower depressive symptoms, and parenting distress, thereby leading to positive outcomes such as improved mental health and higher resilience.

#### BRIDGING THE DIGITAL DIVIDE FOR VULNERABLE PATIENT TELEHEALTH

Diab Ali,<sup>1</sup> Monica Gillie,<sup>1</sup> and Kathy Jo Carstarphen,<sup>2</sup>  
*1. University of Queensland - Ochsner Clinical School, New Orleans, Louisiana, United States, 2. Ochsner Health, New Orleans, Louisiana, United States*

In New Orleans, Louisiana, 61% of advanced age patients have low health literacy, 50% report financial insecurity, and more than one-third have high hospital readmission rates and medical complexity scores. This population has been disproportionately impacted by the COVID-19 pandemic and

the system-wide transition to remote, virtual visits. While COVID-19 has accelerated needs for impactful remote care and research, this has been impeded by low telehealth literacy and structural barriers, such as lack of internet and devices. There are major gaps in the literature regarding telemedicine services in geriatric and complex populations and efficacy rates are variable in these populations. There is currently no telehealth literacy screening tool designed for identifying patients with barriers requiring additional interventions to succeed, no uniform understanding of the factors affecting use or how to increase engagement, and telehealth models requiring fluent use of technology for older adults have been met with poor rates of completed visits and associated harm. Following a dedicated 358.5 hours to training 309 geriatric, complex patients in telemedicine using our pre-existing telehealth model, averaging 4.78 hours per patient, only 18.8% of these patients were subsequently able to connect to the provider virtually. Here we describe lessons learned and tools developed from the Ochsner MedVantage Network Innovation project, including the development of a telehealth literacy screening tool, the adaptation and provision of simplified, user-friendly tablets, and a randomized control trial to determine if increased accessibility to telehealth leads to improved healthcare outcomes, such as decreased hospital admissions and emergency department utilization.

#### INTERGENERATIONAL CONNECTIONS THROUGH TECHNOLOGY: INSIGHTS FROM THE TECHNOLOGY USE IN LATER LIFE MULTI-SITE STUDY

Shannon Freeman,<sup>1</sup> Hannah R. Marston,<sup>2</sup> Charles Musselwhite,<sup>3</sup> Janna Olynick,<sup>1</sup> Rebecca Genoe,<sup>4</sup> Cory Kulczycki,<sup>4</sup> and Beibei Xiong,<sup>1</sup> *1. University of Northern British Columbia, Prince George, British Columbia, Canada, 2. Open University UK, Milton Keynes, England, United Kingdom, 3. Swansea University, Swansea, Wales, United Kingdom, 4. University of Regina, Regina, Saskatchewan, Canada*

With enhanced challenges to maintain social connections especially during times of social distancing due to the COVID-19 pandemic, the need for technology solutions grow. Technologies have become interwoven into the daily lives for many older adults. The Technology Use in Later Life (TILL) study investigated how the perceptions and use of technology both can foster new and leverage existing intergenerational relationships. Through a mixed methods study engaging older adults aged 70 years of age and greater across rural and urban sites in Canada and the UK (N=37), participants described how the interconnection between technology and intergenerational relationships was an integral component to social connectedness with others. Through a qualitative descriptive approach, it was noted that older adults leveraged intergenerational relationships with family and friends to adjust to new technologies and to remain connected to adult children and grandchildren especially when there is high geographic separation between them. Especially during times of COVID-19, younger family members can play an important role to introduce and teach older adults how to use, technologies such as digital devices, computers, and social networking sites. Participants emphasized the benefits of intergenerational connections to adopt

and use technology in later life noting flexibility and willingness to overcome barriers to technology adoption and remain connected across the generations. The adoption and uptake of technologies may continue as viable options during times of social distancing to support older persons to remain independent, age in place, in both age-friendly cities and across rural geographies during and post COVID-19.

### SOCIAL ASSISTIVE ROBOTS FOR ASSISTING ACTIVITY PROFESSIONALS

Jason Zamer,<sup>1</sup> Anne Adams,<sup>1</sup> Jenay Beer,<sup>2</sup> Xian Wu,<sup>2</sup> and Jane Komsky<sup>1</sup>, 1. *SimpleC, LLC, Atlanta, Georgia, United States*, 2. *University of Georgia, Athens, Georgia, United States*

Activity Professionals have high expectations for creating engaging and active resident social programming. A socially assistive robot (SAR) specifically designed for community-based settings has the potential to improve social programming. A SAR is suitable for engagement during times with social contact is restricted, such as COVID-19, other infectious outbreaks, weak immune system, or inability to move. We conducted an online survey to determine how a SAR can best support the responsibilities of Activity Professionals. Activity Professionals (N=19) completed the online questionnaire. Respondents (aged M=48.00, SD=12.87; 95% female, 100% native English speakers, 68% White/Caucasian, 21% Black/African American) were highly educated/experienced: 68% had a Bachelor's degree or above, and 53% had 10-35 years of experience. Respondents worked in Independent Living (68%), Assisted Living (37%), Memory Care (26%), Skilled Nursing (21%), or Personal Care (11%). Respondents rated their job as very demanding (8 out of 10). Differences existed in terms of physical and temporal demands. Job satisfaction was high (average 8 out of 10; SD=2). Respondents reported enjoyment in preparing, personalizing, and running activities. Least preferred was gathering residents for activities. Respondents wanted more help, but it depended on the task. Qualitative data analysis showed that help was desired for motivating residents to join activities, group communication, and resident devices. A SAR, equipped with the ability to reach every resident's living quarter, has the potential to provide group communication, deliver engagement programs, and motivate residents to join events, providing Activity Professionals more time to engage with residents for more personal interaction.

### TRACING THE PAST: RENEWING LIFE NARRATIVES THROUGH ROBOTS

Anna Ueda,<sup>1</sup> and Hideyuki Takahashi,<sup>2</sup> 1. *St. Cloud State University, Minneapolis, Minnesota, United States*, 2. *Osaka University, Toyonaka, Osaka, Japan*

The study explores the effectiveness and efficacy of using robotics in clinical settings to facilitate Life Review. Life Review is a process in which subjects retrospectively analyze major life events with a conversation partner in order to find meaning and to synthesize a narrative. In this experiment, Life Review was conducted with 5 elderly subjects and two types of partners: a human and a robot. The partners utilized a set of trigger questions to review past events with their subjects. Two sequences of Life Review, each comprising four sessions, were completed. Four sessions involved a human

partner, and four involved a robot partner. The recorded correspondences in Life Review were transcribed, and the utterances of the participants with the two partners were compared and analyzed qualitatively. This preliminary study was the first attempt to explore the benefits of conducting Life Review with robotic conversation partners. The results showcased distinct differences between a human partner and a robotic partner. Specifically, subjects in sessions with a human partner showed stronger awareness of generational gaps between the human partner rather than the robotic partner. In contrast, sessions with a robotic partner included more universally transmissive values. The outcome suggests Life Review with robots can potentially provide elderly patients greater safety and comfort in telling their unique life narratives. The usage of robotic partners in Life Review provides a promising and novel research area into improving and re-imagining mental health access and outcomes for patients.

### USABILITY OF TELEMEDICINE IN RELATION TO ACCEPTABILITY, PSYCHOSOCIAL IMPACT, AND FUTURE USE

Katja Prevodnik, Simona Hvalič-Touzery, Vesna Dolničar, Maja Škafar, and Andraž Petrovčič, *University of Ljubljana, Ljubljana, Slovenia*

This poster presents the results of an intervention study exploring how engagement in telemedicine at home affects chronic patients' perceptions of usability and acceptability of the employed equipment, perceptions of its psychosocial impact, and intention of future use in the context of population aging. A purposively selected sample of 103 patients (mean age: 58 years) with chronic conditions (diabetes and/or hypertension) recruited in a community health center in Slovenia tested a home telemedicine system (TMS). After three months of utilization, an assessment of the relative importance of the usability and acceptance of TMS as factors influencing the patients' self-reported psychosocial perception of TMS and intention of future use was performed based on a proposed structural equation model explaining these interdependencies. The results confirmed four of eight tested hypotheses. Notably, the intensity of TMS use was found to affect the evaluation of its usability, the perception of its psychosocial impact, and the intent of future use. Usability was found to be the main factor directly influencing acceptability, perception of psychosocial impact and intent for future use, whereas acceptability did not significantly affect either the perception of the psychosocial impact of TMS or the intent of future use.

### SESSION 10400 (LATE BREAKING POSTER)

#### CROSS CULTURAL

#### ATTITUDES TOWARD OLDER ADULTS: A CROSS-CULTURAL APPROACH ACROSS RESIDENTIAL TOWNS IN SINGAPORE

Dylan Lien, Clara G.H. Chan, and W. Quin Yow, *Singapore University of Technology and Design, Singapore, Singapore*