ORAL PAPER PRESENTATION 3: PHYSICAL AND MENTAL HEALTH

A multifeatured mobile application to support paid and family caregivers

A. Miguel-Cruz, H. Perez, C. Daum, A. Comeau, E. Rutledge, S. King, L. Liu

Purpose Recently, there has been an increased availability of information and communication technologies to support healthy aging and caregivers' activities. While there is no substitute for the human touch, new technologies can help to support paid (e.g., health care aides in continuing care) and family caregivers or friends and neighbors. Technologies can also improve the quality of care, especially for residents of continuing care centers who might have complex health and social needs (Lindeman et al., 2020). Thus, technologies can facilitate caregiver responsibilities by enhancing communications and supporting person-centered care. Mobile technologies can offer some advantages for caregivers (Perez et al., 2022) and people living with chronic conditions such as dementia (Neubauer et al., 2021), as well as enhance quality of care. An understanding of the factors that influence the acceptance and usability of technologies is necessary to implement new tools in caregiving roles (Liu et al., 2015). **Methods** In collaboration with continuing care centers and industry, we developed and evaluated the SmartCare System, a multifeatured mobile application system intended to support paid caregivers' workflows and provide information and updates to encourage the engagement of family caregivers. We followed a sequential explanatory mixed-method approach to evaluate the usability of these technologies. Paid (n=60) and family (n=27) caregivers participated in this evaluation by trialing the SmartCare System for one month. Our study included pre- and post-paper-based questionnaires with no control group. In addition, we conducted four focus groups with a subsample of paid and family caregivers. We evaluated the acceptance and usability of the SmartCare System using the Unified Theory of Acceptance and Use of Technology Model (Venkatesh et al., 2003). With the quantitative data, we employed univariate, bivariate, and partial least squares analyses. With the qualitative data, we used content analysis. **Results and Discussion** The acceptance of the SmartCare System was high for both groups of caregivers. The SmartCare System was functional, portable, and simple due to its design and easy-to-follow layout interface. For paid caregivers, usefulness, was the only predictor of intention to use, and intention to use the technology predicted usage behavior. For family caregivers, ease of use and potential improvement in their ability to perform caregiver activities using the technology were related to the behavioral intention, while the existing organizational and technical infrastructure was related to user behavior. In addition, family caregivers reported that the SmartCare System was easy to use. Regular updates sent to family were described as a significant advantage of this technology. Family caregivers suggested that family interactions and involvement in care activities could increase by using the SmartCare System and the ease of use of this technology could incentivize technology adoption. Both participant groups suggested including more information and features, such as compatibility with multiple devices and visual indicators. In general, the participants recognized the benefits of this technology to enhance communications and interactions. In conclusion, this study confirms the value of mobile technologies to support the workflow of paid caregivers and social connections with family members of residents in continuing care centers.

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