Application Fields and Innovative Technologies

The Role of Technology-Enabled Communication Interventions to Reduce Social Isolation in Hospitalized Older Adults S. Amirkhani-Ardeh,[1] A. Agboji,[1] T. Fyfe,[3] T. Klassen-Ross,[1] S. Freeman[2*]
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Purpose Social isolation during hospitalization is a growing concern, particularly for older adults in long-stay units (1). Prolonged hospital stays are associated with emotional distress, cognitive and functional decline, and decreased quality of life (2). Effective communication is essential to support emotional well-being and reduce isolation in these settings. Emerging technologies, including digital communication tools like video-calling platforms and bedside electronic messaging systems, may help mitigate social isolation by enabling connection with family, caregivers, and support networks during hospitalization (3,4). This scoping review describes the breadth of technology-based communication interventions and highlights the barriers and facilitators to maintaining communication and reducing feelings of social isolation among hospitalized patients, particularly older adults, while also addressing how such technologies are designed and implemented within hospital environments. **Methods** Guided by Arksey and O'Malley's framework, a systematic literature search was conducted across five databases (CINAHL (EBSCO), APA PsycINFO (EBSCO), ScienceDirect, and Web of Science, PUBMED). Thirty-five peer-reviewed studies published between 2015 and 2025 were included, focusing on technology interventions, hospital-based communication, long-stay hospitalization, and patient well-being and social isolation. **Results and Discussion** Across the review, 35 studies were analyzed. Only 13 examined behavioral or psychological symptoms related to different technology uses, and 19 assessed psychological well-being, with most reporting reductions in depression, loneliness, and anxiety when technology supported family or peer contact. 15 studies evaluated physical outcomes, showing benefits from interactive tools that encouraged mobility, but risks related to sedentary screen use. Communication technologies such as tablets, video calls, and smart devices were found to improve emotional well-being, cognitive function, and social connectedness. However, barriers such as low digital literacy, cognitive impairment, and institutional policies limited effectiveness. Furthermore, system-level issues such as delayed discharge and inadequate post-acute care services also contributed to long-stay designations and intensified social isolation among older adults. In addition, effectiveness was not uniform across different technologies; older adults with higher cognitive or functional capacity appear to benefit more from interactive or complex platforms, while those with cognitive impairment or reduced functional ability require simpler, guided, or caregiver-mediated technologies, emphasizing the need to match platform design with user capability. The limitations of this study were that only one study employed a randomized design, and not many studies examined the long-term effects of different technologies on older adults' patients' social isolation. Findings highlight the potential of technology-enabled communication solutions (e.g., tablets, video calls, smart devices) to enhance emotional well-being and communication levels among hospitalized older adults. They also underscore the need for age-friendly, co-designed technology interventions such as tablet-based virtual visiting programs or video-calling platforms and rigorous evaluation methods such as randomized controlled trials and longitudinal follow-up studies to address social isolation in long-stay hospital settings.

References
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