

OPP: APPLICATION FIELDS AND INNOVATIVE TECHNOLOGIES

Telepresence robots in mental health care to enable digital participation: A qualitative exploratory pilot study

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Purpose The rapid increase in technological development over the last years (Birkner 2021, 629) has highlighted the need for action to ensure equal digital participation for all individuals. This includes people with mental health disorder (clients), who can achieve a higher level of independence if the technologies are designed for their benefit (Garcia & Filatr 2022, 189). Therefore, the Distr@I research study 'EmpowermentAssistant' focused on identifying the conditions for the successful use of a telepresence robot for the target group. The primary objective was to enable the clients to acquire and strengthen their digital skills and to benefit from digital participation. Assisted living facilities in various settings were chosen as the deployment location. The telepresence robots were used in two one-person apartments and in an assisted living group with 15 clients. The medical diagnoses of the clients included endogenous psychoses, such as schizophrenia and affective disorders, such as depression or mania. The different support needs of the clients were addressed through individual support planning from a person-centered perspective (Schreiber 2010, 15). **Method** As part of an exploratory study, clients in shared and individual assisted living settings received a telepresence robot for eight months. In advance, the software of the telepresence robots was specifically programmed based on the results of a participatory requirement analysis. During the trial period, 28 qualitative semi-structured observations of the users were conducted with focus on technology use and acceptance (Döring & Bortz 2016). In addition, 11 qualitative interviews were conducted with a total of 15 participants. The interviews focused on human-robot interaction, usability, technology acceptance and the overall conditions. The data collected from the field observations and interviews was subjected to a qualitative content analysis (Kuckartz 2018). **Results and Discussion** During the trial period, the telepresence robots were regularly used by clients and professionals, especially for applications related to structuring everyday life for instance as daily reminders (medication intake, meal times), entertainment functions (music videos, individualized quizzes) as well as physical and cognitive health enhancement (relaxation and sports videos, brain jogging app). Functions that conveyed a feeling of safety, e. g. video telephony and emergency call function or entertainment options, for example to distract from symptoms of mental health disorder, were rated positively. Applications that were individually designed for the target group were perceived as beneficial. The main aspects that influenced user behavior were previous experience with digital devices, support provided by the professionals during the human robot interaction, overcoming fears regarding the use of the robot and the motivation of the clients. Potential for improvement can be identified in the screen display which does not fully meet the criteria of the Web Content Accessibility Guidelines, and the language model. Furthermore, the use of a telepresence robot with a vulnerable target group requires complex consideration of ethical and data protection aspects. Overall, our findings suggest that the use of telepresence robots in mental health care can improve the care situation for clients and professionals, create new digital opportunities and enable digital participation.

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Figure 1. Telepresence robot temi (picture: Vitos)

