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Abstract

Testing the Social Robot LOVOT's Interaction With Adults With Autism and Mental Impairment: Preliminary Findings

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Abstract

Background: Persons with autism and mental impairment face communicative, social, and behavioral challenges, and there is a need to establish effective interventions to improve the quality of daily life. Social robots working with children with autism have successfully improved their communication and social behavior and reduced stereotypic behavior. However, there is only limited evidence regarding the effectiveness of social robots.

Objective: This study aimed to investigate the interactions, effects on well-being, experiences from health care professionals, and ethical aspects of deploying the LOVOT social robot as a tool for adults with autism and mental impairment.

Methods: Two social robots have been deployed in 3 residences. A total of 12 adults with autism and mental impairment were recruited. Individual planned sessions on interaction with the social robots are being carried out twice a week for 20-30 minutes over a period of 6 months. Participant observations are carried out every second week during the 6 months on themes such as well-being, interaction with the robot, the level of arousal, eye contact, and communication. Observations have been documented through standardized observation protocols and by video recording. Experiences from health care professionals and ethical aspects have been explored using semistructured interviews.

Results: Preliminary results indicate that LOVOT has improved the well-being of participants. Although the participants' interest in LOVOT varies, the health care professionals report that some participants find great satisfaction interacting with LOVOT, describing LOVOT as a friend, and that LOVOT can provide comfort in stressed situations. Two LOVOTs were damaged by the participants during the study, indicating the importance of robust material in interventions with adults with autism and mental impairment.

Conclusions: Preliminary findings indicate that social robots can increase well-being among persons with autism and mental impairment. Future care of persons with autism and mental impairment might benefit from the use of social robots as part of their care and quality of life.

Conflicts of Interest: None declared.

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