

OPP: APPLICATION FIELDS & INNOVATIVE TECHNOLOGIES

"Navel is like a friend." - Acceptance of a social robot in long-term care

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Purpose Given the rapid development of new technologies, particularly AI (Artificial Intelligence), it is crucial to engage with this progress and explore potential applications of AI in institutional elderly care settings (Janowski et al., 2018). A pilot project involving the social robot "Navel" (Figure 1) is being conducted in two nursing homes of the Evangelische Heimstiftung, a diaconal and non-profit care company in Southern Germany, where Navel is in use since the end of 2023. The project, in collaboration with the developers, tests use cases and evaluates the acceptance and impact of Navel on residents and staff through the internal Institute for Care and Aging. The research questions focus on the extent to which Navel is accepted by individuals and how it can be integrated into resident care. Additionally, it investigates whether Navel can complement the care offerings and enhance positive emotions among residents. **Method** During the pilot phase, a total of 28 qualitative resident interviews were conducted using a simple, self-developed interview guide. The respondents were asked about their experiences and attitudes towards Navel. The interviews were transcribed and analysed using a content-structuring approach according to Kuckartz (Kuckartz et al., 2022). In addition to the interviews, respondents were asked to complete an illustrated scale depicting their perception of Navel (n = 22). These responses are presented in a polarity profile using average values. **Results and Discussion** Many residents are curious and fascinated by Navel and its appearance, with relatively few fears of contact. Those who agreed to interact with the robot generally desired communication, albeit typically requiring assistance from a daytime companion. The interactions had a positive impact on emotional well-being, as respondents reported feelings of fun, joy, and entertainment, perceiving Navel as a valuable addition to their daily life. In the polarity profile, residents, for example, had difficulty judging whether Navel was a human or a robot or whether he could experience emotions or not. Consequently, Navel is generally perceived as an inanimate figure, a partial anthropomorphization and emotional attachment occur, expressed through actions such as patting his head. Respondents also expressed a desire for technical improvements, such as autonomous mobility and unsupervised visits to residents. Moreover, the robot's speech capabilities need enhancement, as frequent interruptions and lengthy pauses disrupt conversations and confuse individuals. Additionally, the robot occasionally struggles with maintaining eye contact or targeting residents. Implementing these technical enhancements could increase Navel's acceptance among residents, potentially leading to more individuals consenting to interact with the robot.

References

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Figure 1: Navel robot with residents
(Source: Hannes Kohlmaier)