

## **Redefining ‘relational nursing’: a study of the transformation of care relationships through the use of social robotics**

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The growing shortage of skilled healthcare workers exacerbated by demographic changes underlines the urgency of exploring innovative solutions. The integration of robotics into elderly care has emerged as a potential approach to addressing the impending care needs. However, societal concerns about such technological interventions remain. In this context, the E-cARE project (2022-2025, BMG 2521FSB008) aims to investigate the conditions under which care processes can and should be complemented by (social) robotics. This abstract presents a work package that aims to describe the actual changes in care processes through the practical application of social robotics from the perspective of healthcare professionals.

### Research Question:

This study focuses on the question: How do care interactions and care relationships change through the use of social robotics?

### Methodology:

As part of the research, we conduct semi-structured interviews with healthcare professionals (e.g., care or nursing assistants) in the field of elderly care who have experience with social robotics. The interviews are analyzed according to the principles of constructivist grounded theory by Charmaz (2014). Various robotic systems will be considered, including Paro, Pepper, and Lio. It is estimated that 15 interviews will have been conducted by the time of the presentation.

### Initial findings:

At the core of our investigation lies the central notion of triadic interaction between the caregiver, the care recipient, and the robotic system. Introducing an intricate layer of depth, the organizational framework serves as the contextual backdrop for this dynamic exchange. Within this triad, participants define their work mainly as relational which unfolds across several dimensions that often overlap: the physical, emotional, and communicative. The physical dimension includes activities such as basic stimulation, while the emotional dimension involves the transmission of positive feelings. An important facet is the communicative dimension, which includes techniques such as biography work.

In the interviews, the robotic system emerges as a powerful assistant, providing essential support and catalyzing the caregiver's relational nursing. Importantly, the integration of

technology is perceived as a synergistic enhancement to the care ecosystem, designed to augment rather than replace human-centered care. This research highlights a triadic framework in which robots serve as functional tools, seamlessly complemented by the critical role of human caregivers as connectors and cultivators of trust. Interestingly, the impact of these systems on the connection between caregiver and care recipient appears to be nuanced, with minimal disruption. Instead, these systems are valuable, albeit costly, instruments that enrich the caregiver's toolkit within existing structures, while reinforcing social activation efforts. However, it is important to emphasize that the other two relationships within the triad are undergoing a transformation that differs from conventional activation strategies. Caregivers and care recipients forge a unique relationship with the system that encompasses not only affective aspects but also practical dimensions including perspectives on hygiene.

By exploring the dynamic evolution within this triadic structure, our study reveals the complex and multifaceted nature of caregiving interactions in the context of social robot integration.