

First Contact, First Learnings - Nursing Staff Approaching Robotics in Health Care

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Abstract. Systems for service and assistance robotics become relevant in nursing care. Workshops with target user groups can support the reflection and identification of scenarios for the use of robotic systems.

Keywords. Nursing care, Nursing Robotic, Participation

1. Introduction

The current discussion about technical support, especially robotic systems in nursing, requires a comprehensive exchange between all parties involved in introducing technical products. This exchange is needed to integrate these products in reasonable fields of activities in nursing [1].

The research project Centre of Implementing Nursing Care Innovations (PPZ Hannover) aims to integrate innovative technologies such as robotic systems to support nursing staff and to improve patient care. Emotional robotics - with systems such as the Paro seal, JustoCat or a UV disinfection robot - has already been tested or discussed as part of the project's participatory implementation concept [2]. Now service and assistance functions for support in everyday care are also coming into focus with robot systems such as "Lio" [3, 4]. This contribution presents initial results of a workshop for nurses on robotics for care delivery.

2. Methods

Together with the Robokind Foundation a workshop concept was developed that starts with a one-week e-learning phase before the workshop date. The workshop itself

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integrates a survey on participants' occupational backgrounds and experiences and in reflexive group phases:

- discusses questions about the participants' attitudes and perceptions towards robotic systems in care,
- introduces the current state of technical development of robots with different example systems and
- defines tasks for nursing robots and demands on the technical design on the basis of identified fields of application in everyday nursing care.

3. Results

Three workshop dates at the end of 2022 were filled to capacity with 12 participants each. The initial results of the discussion indicate that the participants predominantly recommend coexistent and cooperative fields of activity in which robots can provide support, for example, in service tasks such as serving meals. Less activities that are closer to the patient or the body are seen in robotic assistance with measurements of vital data.

Furthermore, the results show an ambivalent attitude of the participants with regard to the question whether robotic systems with reduced specific tasks and functions are more helpful than multifunctional, more complex systems whose development and operation is more complex.

4. Conclusion

The results of the workshop underline the suitability of participatory processes that involve relevant target groups in nursing in the reflection and design of scenarios for the use of robotic systems in nursing practice. The rather complex workshop concept is contrasted by results that can contribute to the identification of relief potentials and the technical development of practical robotic systems in nursing by means of constructive-critical expertise.

One requirement for achieving such results is an equal level of knowledge among all participants with regard to technical possibilities, actual needs, data protection regulations and ethical implications of the use of robotics. Therefore, further educational offers on the topic of robotics in nursing care are essential.

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