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Ethical assessment in telemedicine: The case of “Optimal@NRW”

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BACKGROUND

Optimal@NRW is an innovative project that provides optimized acute care to nursing home residents (NHRs) by using an intersectoral telemedical cooperation network (Brücken et al. 2022).

The project has been implemented in 24 nursing homes (NHs) of the North Rhine-Westphalia region in Germany and involves, among other cooperation partners, the Institute of History, Theory and Ethics of Medicine (University Hospital of the RWTH Aachen University) to explore the ethical acceptability regarding this new telemedicine approach of care.

AIM

The study provides an insight about the use of tele-consultations (TC) among NHRs, focusing on the perspective of those who receive a TC, and contributes to the research on the tele-healthcare projects intended for the elderly. Here we summarize the methods and results of our ethical assessment within the project „Optimal@NRW“. Our findings present the perspective of the older adults and their perception of the TC and may be used for further e-health projects intended for the elderly.

METHODS

As part of the project, we investigate the acceptability of TCs among NHRs, taking into account the needs and wishes of the elderly population combined with the requirements of all other stakeholders involved. We apply a mixed methods approach that includes:

- secondary analysis,
- participatory observation, and
- face-to-face interviews to elicit ethical acceptability.

The investigation of the residents regarding tele-consultations is organized in two phases:

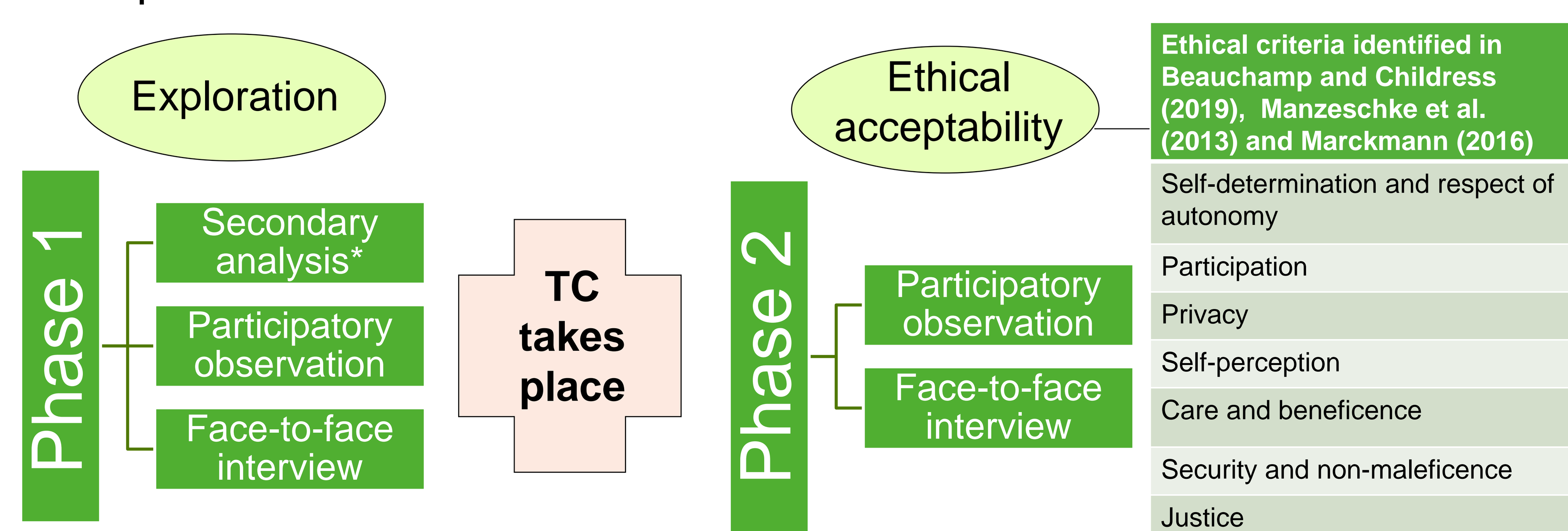

Figure 1. Study phases.
**Secondary analysis of existing data (Offermann et al. 2022) obtained from our cooperation partner Human Computer Interaction Center, RWTH Aachen University.*

While the first phase has an explorative character and aims to better understand the daily workflow in the different nursing homes as well as the specificities and needs of its residents, the second phase aims to define the ethical acceptability of the TCs regarding the NHRs.

All the interviews are recorded as audio files and transcribed manually. Consequently, a qualitative content analysis is applied (Mayring 2000). First, a deductive analysis of qualitative content takes place – the interview material, once transcribed, is examined with regard to specific pre-determined ethical issues. Second, the already examined text is additionally analyzed with an inductive methodological approach to identify further aspects that may be present in our samples.

REFERENCES

- Beauchamp, T. L., Childress, J. F. (2019). Principles of Biomedical Ethics. 8th edition. Oxford University Press, New York, Oxford.
- Brücken, D., Unterkofler, J., Pauge, S., Bienzeisler, J., Hübel, C., Zechbauer, S., ... & Brokmann, J. C. (2022). Optimal@ NRW: optimized acute care of nursing home residents using an intersectoral telemedical cooperation network—study protocol for a stepped-wedge trial. Trials, 23(1), 1-16
- Manzeschke, A., Weber K., Rother E., Fangerau, H. (2013). Ergebnisse der Studie „Ethische Fragen im Bereich Altersgerechter Assistenzsysteme“. VDI, Berlin.
- Marckmann, G. (2016). Ethische Aspekte von eHealth. In: Fischer, F., Krämer, A. (eds.). eHealth in Deutschland. Anforderungen und Potenziale innovativer Versorgungsstrukturen (pp. 83-99). Springer, Berlin, Heidelberg.
- Mayring, P. (2000). Qualitative Content Analysis. FQS. https://doi.org/10.17169/fqs-1.2.1089
- Offermann, J., Wilkowska, W., Schaar, A. K., Brokmann, J. C., & Ziefle, M. (2022). Needs, Requirements, and Technology Acceptance using Telemedical Consultations in Acute Medical Situations in Nursing Homes. In ICT4AWE (pp. 105-116).
- Small, G. W. (2002). What we need to know about age related memory loss. Bmj, 324(7352), 1502-1505.

RESULTS

Phase	Number of interview participants	Number of usable interviews*	Collected data
Phase 1 (before usage)	20	16	• Daily organization of the NH • Difficulties in replying to open-ended questions • Unawareness about the project & curiosity to learn • Awareness about the project & preparedness to discuss improvements • Contrasting ideas in regard to TCs and its utility
Phase 2 (during usage)	13	6	• Different perception of the TC: awareness about having received a TC not always present or the described TC does not correspond to the project TC; health issues limiting the ability to see and thus to report on the TC • Detailed description of the received TC is connected to the willingness to have it again • Previously identified ethical criteria presented in Methods have been verified deductively to apply in our sample, further aspects such as satisfaction, doctor availability and TC-utility have been identified. Detailed outcomes of all criteria are presented in Figures 3 and 4.

Figure 2. Collected data: two phases

** Number of usable interviews, after the dropouts have been scarted.*

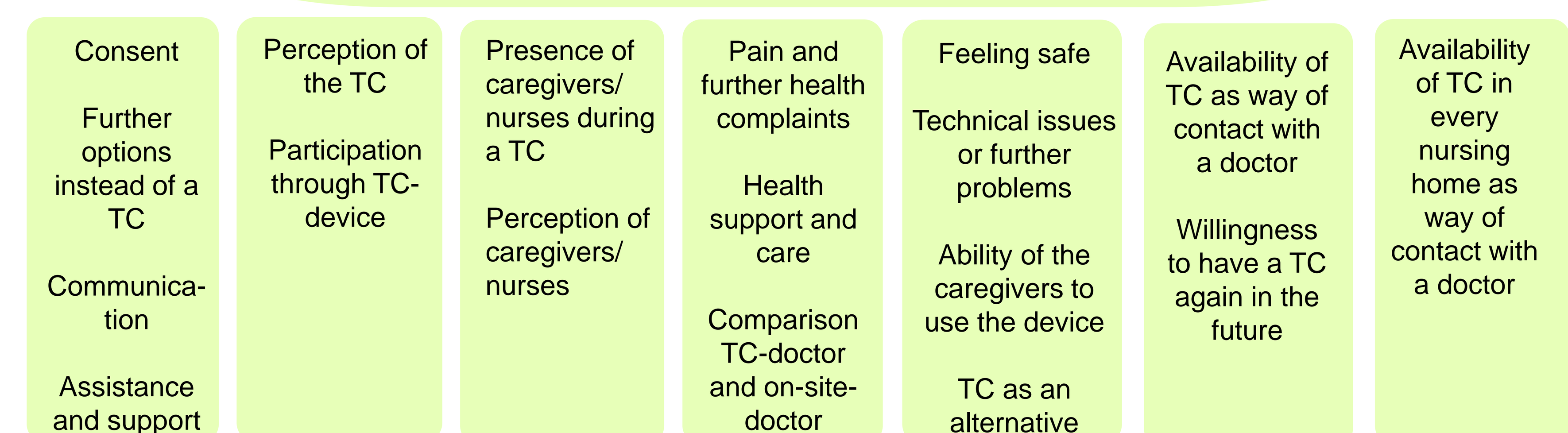

Figure 3. Ethical criteria with definition and the identified subcategories

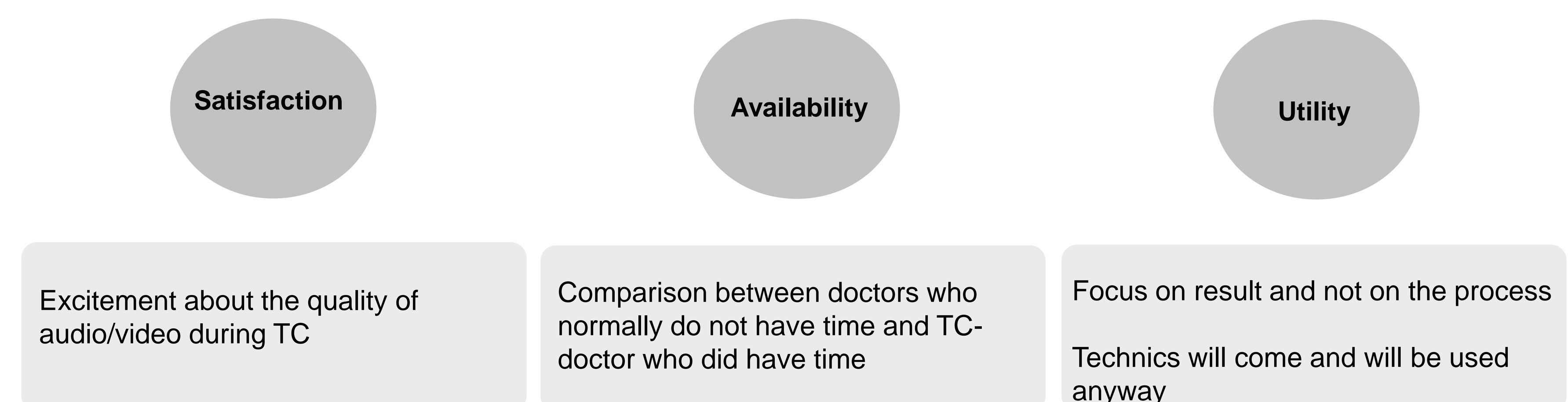

Figure 4. Further criteria and identified subcategories

CONCLUSIONS

- NHRs´ perspectives on TC are not uniform:
  - whereas some would prefer to have a visit in person, other say that there is no difference and the importance is that it was helpful.
- Most of the NHRs generally feel they are in good hands.
- NHRs´ autonomy, participation, and privacy during a TC may be altered.
- NHRs perspective on security, care, beneficence and self-perception related to the TC seems to be dependent on the contact with a doctor (was it a direct interaction, were questions asked, etc.).
- Some NHRs state they never had a TC in the past although they did; this may be seen as a limitation of our study as well as a further indication on alteration of perception, although a common age related memory change may also apply (Small 2002).

In future studies we will discuss these aspects and further points of our ethical assessment. The entire study regarding ethical assessment will be divulged in the near future.

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Disclosure Statement of Financial Interest: The authors declare to not have a financial interest or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.
Ethics Approval and Consent to Participate: The project Optimal@NRW was approved by the local ethics committee of the University Hospital RWTH Aachen (CTC-A Nr. 19-019; EK 463/20). Informed consent to participate was obtained from all participants.