

Summary of the PhD Dissertation

Name	Evelyn Huber, RN, PhD
University	Witten/Herdecke, D
Place	Witten, D
Name of supervisor	Prof. Rebecca Spirig, Prof. Christiane Kugler
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Contact	evelyn.huber@zhaw.ch

Curriculum Vitae

I started my career as a registered nurse working in various positions in internal medicine wards of two Swiss hospitals for ten years. In 2001, I received a bachelor's degree and in 2004 a master's degree in nursing science from the University of Basel. During another ten years, I was a scientific collaborator for gerontological nursing as part of an interprofessional team. In 2012, I started as a clinical nursing scientist at the University Hospital Zurich. There, I was working on my dissertation project on patient-related complexity of nursing care, which was part of the multicenter research programme „Monitoring the Impact of the DRG Payment System on Nursing Service Context Factors in Swiss Acute Care Hospitals“. I received my PhD from the University of Witten/Herdecke, Germany, in summer 2020. Currently, I am a lecturer for undergraduate students and a researcher for educational research at the Zurich University of Applied Sciences in Winterthur, Switzerland.



Description of the project

Patient-related Complexity of Nursing Care in Acute Care Hospitals

Background: Patient-related complexity of nursing care has increased in recent years due to shortening of length of stay and an increase in patient morbidity. This jeopardises patient safety and may overwhelm nursing staff. This dissertation thesis was part of the research programme „Monitoring the Impact of the DRG Payment System on Nursing Service Context Factors in Swiss Acute Care Hospitals“. Complexity of nursing care was recognised as one important nursing service context factor. However, there was no suitable questionnaire for its measurement available. In two mixed-methods studies, an instrument was developed, evaluated, revised, and reevaluated.

Aims and research question: The main aims of this thesis were to define the concept of patient-related complexity of nursing care and to validate the second version of the instrument „Complexity of Nursing Care“. The following research questions were investigated: (1) How is the concept of patient-related „complexity of nursing care“ in acute care hospitals to be defined according to theory and empiricism? (2) How is patient-related complexity of nursing care experienced and described

within the context of the introduction of SwissDRG? (3) Is there any evidence supporting the applicability, reliability, and validity of the measurement instrument „Complexity of Nursing Care“?

Methods: The validation of the instrument was performed using an embedded mixed-methods design. The leading quantitative study section incorporated a pilot and a cross-sectional study in five Swiss acute care hospitals. The psychometric properties were investigated by means of partial-least squares structural equation modelling. In the qualitative study section, twelve nursing care situations with varying extents of complexity were explored in a collective case study design. Quantitative and qualitative results were integrated in tables and in a discussion. The hybrid model for concept development was chosen for defining the concept by means of a synthesis of two narrative literature reviews and the findings of the case studies.

Results: The statistical analyses supported the instrument's psychometric properties, leading to a formula for the calculation of a complexity score. The case studies yielded twelve case narratives. Exemplar case narratives as well as the cross-case analysis of these case narratives confirmed the relational and dynamic understanding of the concept and added aspects such as ethical complexity, controllability of the nursing care situations or resources of patients and their relatives to existing definitions of the concept as found in the literature. By means of the case studies, the concept was able to be defined in a multifaceted way, the instrument was refined, and five categories of different levels of complexity were described.

Conclusions: It is our hope that this definition of the concept will contribute to a common understanding of the phenomenon in nursing practice, nursing management, nursing education as well as in government policy. We further hope that our instrument helps in future monitorings and in daily practice to recognise developments and critical situations promptly, and thus, when implementing appropriate interventions, ensuring patient safety and maintaining nurses motivation.

Publications

- Huber, E., Kleinknecht-Dolf, M., Kugler, C., & Spirig, R. (2020). „Man muss stets aufmerksam sein“: Kategorisierung patientenbezogener Komplexität der Pflege im Akutspital. *Pflege*, 33(3), 143-152. <https://doi.org/10.1024/1012-5302/a000738>
- Huber, E., Kleinknecht-Dolf, M., Kugler, C., & Spirig, R. (2020). Patient-related complexity of nursing care in acute care hospitals - an updated concept. *Scand J Caring Sci*. <https://doi.org/10.1111/scs.12833>
- Huber, E., Kleinknecht-Dolf, M., Kugler, C., Müller, M., & Spirig, R. (2020). Validation of the instrument "Complexity of Nursing Care"-A mixed-methods study. *Nurs Open*, 7(1), 212-224. <https://doi.org/10.1002/nop2.383>
- Gurtner, C., Spirig, R., Staudacher, D., & Huber, E. (2018). Patientenbezogene Komplexität in der Pflege - kollektive Case Studies im Akutspital. *Pflege*, 31(5), 237-244. <https://doi.org/10.1024/1012-5302/a000626>
- Kentischer, F., Kleinknecht-Dolf, M., Spirig, R., Frei, I. A., & Huber, E. (2018). Patient-related complexity of care: a challenge or overwhelming burden for nurses - a qualitative study. *Scand J Caring Sci*, 32, 204-212. <https://doi.org/10.1111/scs.12449>
- Huber, E., Kleinknecht-Dolf, M., Müller, M., Kugler, C., & Spirig, R. (2016). Mixed-method Research Protocol: Defining and Operationalizing Patient-related Complexity of Nursing Care in Acute Care Hospitals. *J Adv Nurs*, 73(6), 1491-1501. <https://doi.org/10.1111/jan.13218>