

# Digital patient experience: definition, evaluation, and improvement from a human-centered design perspective

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## 1 Background

New information and communication technologies have been introduced to transform healthcare into digitalization (Gopal et al., 2019). Digital health offers benefits but also risks (Perakslis et al., 2023). It must be clinically effective, safe, and meet the needs of the people that will use it and be treated by it to ensure high-quality healthcare delivery. An increasing number of healthcare organisations have invested in “human centred” methods from the field of design (Erwin & Krishnan, 2016a, 2016b). Design-led approaches are shaping future healthcare (Groeneveld et al., 2018; Tseklevs & Cooper, 2017) and have the potential to provide more effective care (Kolko, 2015). Nevertheless, designing and implementing these technology-involved care that focuses on the needs and values of the stakeholders require a holistic approach (Melles et al., 2021) and pose challenges to the human factors and ergonomics discipline (Carayon et al., 2020). Innovative approaches are needed for understanding, improving, and evaluating the digital patient experiences (Wang, Giunti, Melles, & Goossens, 2022; Wang, Giunti, Melles, Goossens, et al., 2022) and working at multiple interfaces in healthcare (Carayon et al., 2020).

## 2 Objectives

The related PhD research aims to improve the quality of care in digital health by defining, evaluating, and improving the digital patient experience.

## 3 Methods

This PhD research contains five studies: a literature review study, an interview study, two surveys, and one mixed-methods study. Figure 1 presents the progress of the related PhD research.





Figure 1. An overview of the planned thesis outline and research progress. Source: the author.

## 4 Results

The literature review and interview studies are almost finished. One journal paper is published, and two conference papers are accepted. Others are in progress; for example, the two survey studies are in the data collection stage, and the mixed methods study is in planning.

## 5 Conclusion

We identified detailed information, such as influencing factors, evaluation considerations, and design workflows, from our previous studies for designing digital health that improves the digital patient experience. To transform this information into explicit knowledge, the development of design and evaluation guidelines is the intended deliverable of this research.

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