

Research Proposal

Topic Explore the physician's knowledge and attitudes towards digital health technologies and the transformation of the doctor-patient relationship.

Background:

The introduction of digital services to the healthcare industry has initiated a fundamental change in the delivery of healthcare. Digital health does not only constitute a technological transformation, it also fundamentally reshapes the structure of healthcare systems from the doctor-patient relationship to treatment process.

Several technical solutions aim to facilitate the daily business and improve patients' care experience, including the e-prescription [1] or the digital anamnesis [2].

The effectiveness of the digital transformation in health is influenced by doctors' attitudes, values, and ethics as well as their drive and openness to technological solutions. Studies show that patients assume a higher data privacy if they have experienced a good quality of medical care [3]. Thus, caregivers play a central role on the trust of patients in digital services.

Together with a startup from Nürnberg, the goal of this thesis is to investigate the role of physicians in the digitalization of the healthcare system and focus on how the doctor-patient relationship can empower patients in managing their own health data.

Research Questions (to be further defined and refined):

- To which extent do medical practice implement digital tools in their care?
- What are possible user profiles of physicians regarding digital tool utilization?
- Which role can physicians play to support the autonomy of patients in managing their own health data?

The proposed work consists of the following parts:

- Literature research: identify relevant studies to the digitalization of medical practice and doctor's attitudes towards digitalization in the medical sector
- Create a questionnaire covering key aspects from the literature review
- Pilot Study: distribute the questionnaire among healthcare professionals and analyze the results

German native-level language proficiency is required for conducting the Pilot study.

Supervisors:

Anastasiya Zakreuskaya (anastasiya.zakreuskaya@fau.de)

References:

[1] Parv L, Kruus P, Mötte K, Ross P. An evaluation of e-prescribing at a national level. *Inform Health Soc Care.* 2016;41(1):78-95. doi: 10.3109/17538157.2014.948170. Epub 2014 Aug 12. PMID: 25115948.

[2] Kopp M, Wetzl M, Geissler F, Roth JP, Wallner R, Hoefler D, Faby S, Allmendinger T, Amarteifio P, Wuest W, Cavallaro A, Uder M, May MS. Structured Digital Self-Assessment of Patient Anamnesis Prior to Computed Tomography: Performance Evaluation and Added Value. *J Med Syst.* 2021 Jan 28;45(3):30. doi: 10.1007/s10916-020-01690-8. PMID: 33511485; PMCID: PMC7843739.

[3] Shen N, Bernier T, Sequeira L, Strauss J, Silver MP, Carter-Langford A, Wiljer D. Understanding the patient privacy perspective on health information exchange: A systematic review. *Int J Med Inform.* 2019 May;125:1-12. doi: 10.1016/j.ijmedinf.2019.01.014. Epub 2019 Feb 1. PMID: 30914173.

Supervisors:

Anastasiya Zakreuskaya (anastasiya.zakreuskaya@fau.de)