Research Week 2020

Context and quality: A mixed-methods study of physical therapy managers' use of information systems to oversee clinical quality

Chris Hoekstra, D.P.T., M.B.I., NA
hoekstrc@ohsu.edu
OHSU

Keywords

Technology acceptance, Quality, Physical Therapy, Organizational Behavior

Abstract

Complex organizational problems require systematic approaches to understand root causes and effectively intervene. Quantitative approaches allow researchers to understand how factors impact organizational operations. However, qualitative approaches allow researchers to understand why certain factors exist and how those factors affect employees and other stakeholders. When healthcare stakeholders interact with information systems, a complex sociotechnical ecosystem is created. Thus, a mixed-methods approach is often necessary to understand the various stakeholders' perspectives and the poorly-understood interactions between various workflows and systems.

This study used physical therapy managers' adoption of clinical information systems to oversee clinical quality as a use case for a proposed mixed-methods research design to explore sociotechnical systems. Utilizing team-based Rapid Qualitative Inquiry, researchers explored the various aspects of the role of manager as an overseer of clinical quality and their use of information systems. From that phase of the research, the team identified several themes. Three of these themes were drawn forward to the next phase of the study.

In the quantitative phase of the research, questions were created to represent the factors identified in the qualitative phase. These questions were added to a previously developed survey representing the Unified Theory of Acceptance and Use of Technology (UTAUT). Utilizing structural equation modeling, the team preliminarily established psychometrics for survey questions. Next, they explored causal relationships between the various factors in an attempt to explain managers' intention to use their respective information systems to manage clinical quality.

Several qualitative themes coalesced into an over-arching framework describing the competitors for managers; attention and a framework describing the influencers of managers' use of technology. The final UTAUT model explained 64.9% of the variance in managers' intention to use their information systems. This study presents an efficient model for studying complex sociotechnical ecosystems.