Factors that Influence Potential Success of eHealth Standards Adoption in a Low- and Middle-Income Country: a review

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Background: Assessing the potential success of adopted technology, innovation, or standard in a Low and Middle-Income Country like Uganda continues to focus on outcomes of adoption. This study aimed to investigate the potential success of eHealth standards adoption that may arise from the adoption process as well as outcomes of such adoption.

Methods: PubMed and Google Scholar were searched using alternate terms for "eHealth", "standards", "adoption" "success" and "theory". On screening and assessing the quality of publications, only nineteen peer-reviewed publications were included in the review. Both quantitative and qualitative analysis was used to synthesize evidence from the included literature. Thematic analysis was used to develop themes regarding the success of standards/technology adoption.

Results: Constructs from the theories of Diffusion of Innovation Theory (DOI), Unified Theory of Acceptance and Use of Technology (UTAUT), and Internet Standards Adoption (ISA) were used to extend the Success Model of Innovation Adoption. The Success Model for Innovation contributed to the foundational concepts aligned to categorical factors of the adoption process, organizational, environment, and user context that influence the potential success of eHealth standards adoption in healthcare systems. The study identified 13 factors that contribute to the successful adoption of standards for eHealth.

Conclusion: Since the review showed that success of standards adoption starts with assessing readiness to adopt the standards, followed by the standards adoption process and assessment of the lasting outcomes, the study proposes a model for assessing the potential success of eHealth standards adoption. The model has pre-adoption, actual adoption, and post-adoption phases. The proposed model and identified factors have not been evaluated and therefore may not in the current form support eHealth standards adoption processes. Future work is needed to evaluate/validate the model and factors of eHealth standards adoption success. Notwithstanding, the study believes any assessment of the success of standards adoption that uses the identified factors over all three phases of the model is comprehensive to present a true picture of any potential success of standards adoption.

Keywords: Adoption Success, Standards, eHealth standards, LMIC

1   Introduction

Low- and Middle-Income countries (LMICs) including Uganda have realized that the adoption of ICT in health (eHealth) can alleviate their healthcare resource challenges. To benefit from eHealth, it is essential to develop the right infrastructure [1]. Inappropriate infrastructure causes a reduction of speeds which is claimed to be the most important factor of adopting eHealth technologies [1]. But many countries continue to prioritize the allocation of their limited resources to other domains of healthcare interventions over the Information and Communication Technologies (ICT) domain [2], [3]. eHealth implementation in LMICs continues to be plagued by inadequate resources. Despite efforts by the World Health Organisation (WHO)