

Exploring Telemedicine Security Readiness: ICT Professionals' Experience and Perception of Secure Telemedicine Adoption

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Abstract

This study examines the security readiness of telemedicine from the perspectives of ICT professionals supporting telemedicine systems, using the extended Unified Theory of Acceptance and Use of Technology (UTAUT) model. A cross-sectional survey was conducted among ICT personnel in public hospitals in Malaysia as a case study, addressing a critical gap by examining professionals responsible for system security, data protection, infrastructure reliability, and operational continuity of the telemedicine platform. The model incorporates two additional constructs, Trust in Technology and Adaptability. Trust in Technology is to capture confidence in system security, data confidentiality, and reliability, as well as Adaptability, which reflects system-specific and user-related determinants of secure telemedicine adoption. The collected data were analyzed using SPSS Statistics Version 21, employing descriptive statistics, reliability testing, correlation analysis, and multiple regression. Results revealed that Facilitating Conditions, including secure infrastructure and technical safeguards, significantly predicted Performance Expectancy, while Trust and Adaptability demonstrated strong correlations but were not significant predictors in regression models. The findings underscore the importance of providing meaningful insights into telemedicine security readiness by identifying infrastructural support, trust in system security, and ICT professionals' adaptability as key enablers of secure telemedicine adoption. The valuable socio-technical and governance aspects are the key contributions of this study towards secure digital healthcare.

