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Titolo tesi: Embracing Digital and Technological Solutions in nursing: towards a comprehensive framework

ABSTRACT

BACKGROUND: The COVID-19 pandemic emphasized the critical role of public health and social services, which requires sustainable solutions in an era of growing digital technologies. The healthcare sector witnessed the emergence of digital health (eHealth) technologies that transformed patient care and healthcare systems. However, nurses, traditionally known for compassionate patient care, are now required to have digital and technological competencies. This doctoral research project aims to address the gaps in knowledge regarding the adoption of Digital and Technological Solutions (DTS) in nursing, focusing on self-efficacy as a crucial factor.

METHODS: This project utilized a structured approach, including scoping reviews and scale development, guided by the Digital and Technological Framework (Digitech-F). The project involved a systematic examination of the literature, development, and validation of the Digitech-S scale to measure DTS-related self-efficacy among nurses and nursing students.

RESULTS: The scoping review revealed that nurses' digital competence is essential for successful DTS adoption. Nurse attitudes, training quality, usability, and clinical utility of technology, and workplace experiences significantly influence their adoption of technology. However, there are gaps in the measurement of technology utilization and ethical considerations in nursing. The Digitech-S scale, a 10-item self-report instrument, was developed and validated, providing a valuable tool for assessing self-efficacy in performing technologically mediated tasks.

CONCLUSIONS: This doctoral project contributes to the field of nursing by introducing the Digital and Technological Framework (Digitech-F) and the Digitech-S scale. The framework encapsulates the multifaceted elements critical for DTS adoption, while the scale measures DTS-related self-efficacy. Future research should focus on cross-cultural validation, predictive and discriminant validity, interprofessional contexts, addressing external biases, comprehensive framework testing,

international validation, and longitudinal trajectories to advance our understanding of the role of technology in nursing. This research aligns with the evolving digital healthcare landscape, emphasizing the central role of technology in improving patient care and advancing nursing practice and public health.

KEYWORDS: *Attitudes; Behaviors; Competencies; Digital and Technological Solutions; Nursing; Nursing Informatics; Medical Informatics; Scoping review; Self-efficacy; Education; Reliability; Students; Validity*