

Evaluating Ease of Use, Usefulness, Satisfaction, and Perceived Value of PubMed GPT as a Mobile Point-of-Care Tool Among Medical-Surgical Nurses: A Literature Review

Angelli Krizka D. Bingcang, RN, LPT ^a, Joseph Michael Manlutac, PhD, RN^a

^a bingcang.angellikrizka@auf.edu.ph

^aGraduate School, Angeles University Foundation, Angeles City, Philippines

Abstract

Introduction: Artificial intelligence-enabled mobile point-of-care tools have gained increasing attention for their potential to support evidence-based practice and clinical decision-making in nursing. PubMed GPT is a generative AI tool designed to synthesize biomedical literature through natural language queries. However, evidence regarding its usability, perceived value, and acceptance among medical-surgical nurses remains limited.

Methods: This paper presents a narrative literature review synthesizing current research on artificial intelligence in nursing, mobile point-of-care technologies, and technology acceptance constructs relevant to PubMed GPT. Databases and recent peer-reviewed studies were examined to identify themes related to ease of use, perceived usefulness, interface satisfaction, perceived value, and attitudes toward AI.

Results: The literature consistently identifies perceived ease of use, perceived usefulness, interface satisfaction, and perceived value as key determinants of nurses' acceptance of AI technologies. When AI tools are intuitive, clinically relevant, and aligned with nursing workflows, nurses report greater trust, satisfaction, and intention to use. Persistent barriers include concerns regarding accuracy, ethical accountability, data privacy, and professional autonomy. Notably, empirical studies focusing specifically on medical-surgical nurses' real-world experiences with PubMed GPT are scarce.

Discussion: AI-enabled mobile point-of-care tools such as PubMed GPT show substantial promise for supporting evidence-based nursing practice. Addressing usability, trust, and ethical considerations while reinforcing professional judgment is essential for sustainable integration.

Keywords: Artificial intelligence; PubMed GPT; Mobile point-of-care tools; Medical-surgical nurses; Technology acceptance; Evidence-based nursing; Nursing informatics

Introduction

The rapid advancement of artificial intelligence has led to the development of mobile point-of-care tools designed to support healthcare professionals in clinical decision-making and evidence-based practice. In nursing, particularly within medical-surgical settings, clinicians are required to make timely and accurate decisions while managing complex patient conditions and high workloads. Mobile AI-enabled applications have been shown to enhance access to clinical evidence, improve workflow efficiency, and support clinical reasoning at the bedside (Hassanein et al., 2025; Almagharbeh, 2024).

PubMed GPT has emerged as an AI-driven tool capable of synthesizing biomedical literature and providing concise responses to natural language queries. Such tools offer potential benefits for nurses by facilitating rapid access to evidence-based information without the need for extensive manual literature searches (Phongwattana & Chan, 2023; Mudd et al., 2025). However, successful integration of AI tools in nursing practice depends largely on nurses' acceptance of the technology. Prior research consistently identifies perceived ease of use, perceived usefulness, interface satisfaction, and perceived value as critical determinants of technology adoption in healthcare settings (Kelly et al., 2022; Nezamdoust et al., 2022). Despite growing interest in generative AI, empirical evidence focusing on medical-surgical nurses' experiences with PubMed GPT as a mobile point-of-care tool remains limited.

This literature review synthesizes existing evidence on artificial intelligence in nursing, mobile point-of-care technologies, and technology acceptance constructs relevant to PubMed GPT. By examining usability, satisfaction, perceived usefulness, perceived value, and attitudes toward AI, the review aims to establish a conceptual foundation for understanding nurses' experiences with AI-enabled point-of-care tools and to identify gaps that warrant further investigation.

Artificial Intelligence and Mobile Point-of-Care Tools in Nursing Practice

Artificial intelligence (AI)-enabled mobile point-of-care tools are increasingly recognized for their potential to enhance nursing practice by improving access to evidence-based information, supporting clinical decision-making, and optimizing workflow efficiency. Mobile AI tools provide real-time access to large volumes of clinical knowledge, enabling nurses to respond promptly to patient needs and improve safety and care outcomes (Hassanein et al., 2025). By automating routine cognitive and administrative tasks, AI systems can reduce workload burden and allow nurses to focus more on direct patient care, thereby mitigating burnout and improving job satisfaction (Hassanein et al., 2025; Almagharbeh, 2024).

AI-powered mobile technologies have also demonstrated value in personalized care and chronic disease management by continuously analyzing patient data to support tailored interventions (Alzghaibi, 2025; Pillay et al., 2025). Their portability and accessibility make them particularly useful in fast-paced clinical environments such as medical-surgical units, where timely information retrieval is critical (Hassanein et al., 2025; Pillay et al., 2025). Despite these advantages, the adoption of AI tools among nurses remains uneven, with evidence suggesting that limited training, lack of institutional support, and concerns regarding accuracy, privacy, and ethical implications continue to hinder widespread use (O'Connor et al., 2022; Arab et al., 2025).

PubMed GPT as an AI-Enabled Clinical Information Tool

PubMed GPT was developed to address challenges associated with navigating and synthesizing the rapidly expanding biomedical literature (Phongwattana & Chan, 2023). As a web-based AI tool, it enables healthcare professionals to access summarized research evidence without requiring software installation, enhancing convenience and accessibility across clinical settings. For nurses, PubMed GPT shows promise in supporting

evidence-based practice by rapidly screening and synthesizing research abstracts, reducing time spent on manual literature searches while maintaining acceptable quality (Mudd et al., 2025).

Emerging evidence suggests that GPT-based tools can support nursing workflows by assisting with care planning, documentation standardization, patient education, and clinical communication (Scerri & Morin, 2023; Macieira et al., 2025). However, current studies emphasize that AI-generated outputs require human oversight, as accuracy levels are not yet sufficient for autonomous clinical decision-making (Macieira et al., 2025). Research specifically examining nurses' real-world experiences with PubMed GPT remains limited, particularly with respect to usability, satisfaction, perceived value, and usefulness in point-of-care contexts (Khalil et al., 2025).

Technology Acceptance of AI Tools in Nursing

Ease of use, perceived usefulness, interface satisfaction, and perceived value are consistently identified as critical determinants of healthcare professionals' acceptance of AI technologies. Studies grounded in technology acceptance frameworks indicate that ease of use reduces cognitive effort and enhances trust, indirectly increasing intention to use AI systems in high-stakes clinical environments (Choudhury et al., 2025; Namatovu & Kyambade, 2025; Chaibi et al., 2025). Facilitating conditions such as organizational support and training further strengthen nurses' confidence and reduce resistance to new technologies (Baraka et al., 2025; Nezamdoust et al., 2022).

Perceived usefulness is a particularly strong predictor of adoption, reflecting nurses' beliefs that AI tools improve clinical performance and decision-making (Kelly et al., 2022; Jusak et al., 2025; Song et al., 2025). In healthcare contexts, systems that provide accurate, relevant, and timely information are more likely to be integrated into clinical workflows (Esmailzadeh et al., 2025; Panagoulas et al., 2023). Ease of use has also been shown to positively influence perceived usefulness, suggesting that intuitive system design is essential for sustained adoption (Kim & Moon, 2025; Almogren et al., 2024).

Interface Satisfaction and Usability of mHealth Applications

Interface satisfaction plays a mediating role in the relationship between perceived usefulness and behavioral intention to use AI tools. Even highly functional systems may face resistance if users experience frustration due to poor interface design or navigation (Hui & Li, 2024; Liu, 2024). Usability studies in healthcare highlight the importance of clarity, responsiveness, and visual organization in enhancing satisfaction and trust in AI-supported systems (Ismatullaev & Kim, 2022; Zhou et al., 2023).

The mHealth App Usability Questionnaire (MAUQ) has been widely validated for evaluating ease of use, interface satisfaction, and usefulness of mobile health applications (Zhou et al., 2019; Mustafa et al., 2020; Moulaei et al., 2025). Its application in nursing research provides a structured and reliable approach to assessing user experience with mobile point-of-care tools such as PubMed GPT, generating actionable insights for design optimization and implementation strategies (Cely et al., 2024).

Perceived Value, Trust, and Attitudes Toward AI

Perceived value reflects the balance between benefits gained and effort required, shaping nurses' overall attitudes toward AI adoption. Studies indicate that when nurses recognize clear functional and emotional benefits—such as time savings, improved decision support, and enhanced patient care—they are more likely to accept and sustain AI use (Baraka et al., 2025; Chen et al., 2025). Trust emerges as a key mediating factor

linking perceived value, ease of use, and actual utilization, particularly in healthcare environments where ethical accountability and patient safety are paramount (Choudhury et al., 2025; Chen et al., 2024).

Attitudinal assessments using instruments such as the Attitudes towards Artificial Intelligence Scale (ATTARI-12) reveal that positive perceptions of AI correlate with greater confidence, readiness, and acceptance among healthcare professionals (Atalla et al., 2025; Amin et al., 2024). Conversely, concerns related to reliability, data security, and professional autonomy may hinder adoption if perceived value is low (Ramadan et al., 2024). These findings underscore the importance of addressing both technical performance and psychosocial factors when implementing AI tools in nursing practice.

Medical-Surgical Nurses and AI Adoption

Medical-surgical nurses are particularly well positioned to evaluate AI-enabled point-of-care tools due to their exposure to diverse and complex clinical scenarios requiring rapid, evidence-based decision-making. Studies suggest that generative AI tools can complement nurses' clinical knowledge by providing structured information, although professional judgment remains essential (Wang et al., 2024; Saban & Dubovi, 2024). Demographic factors such as education level, technological familiarity, and professional role have been shown to influence nurses' acceptance of AI tools, with higher education and greater digital literacy associated with more positive attitudes (Lin et al., 2024).

Despite growing interest in AI applications in nursing, research focusing specifically on medical-surgical nurses' experiences with PubMed GPT remains scarce. Existing literature highlights the need for empirical studies that examine usability, satisfaction, perceived value, and contextual barriers to adoption within real-world clinical environments (Khalil et al., 2025). Addressing these gaps is essential to inform evidence-based strategies for integrating AI tools into nursing workflows while preserving professional autonomy and patient-centred care.

Conclusion

The literature demonstrates that AI-enabled mobile point-of-care tools such as PubMed GPT hold significant potential to support medical-surgical nurses in evidence-based decision-making and clinical information management. Adoption and sustained use are strongly influenced by perceived ease of use, perceived usefulness, interface satisfaction, and perceived value, which together shape nurses' trust and attitudes toward AI technologies.

While the benefits of AI in nursing are increasingly recognized, persistent concerns regarding accuracy, ethical accountability, data privacy, and professional autonomy continue to limit widespread adoption. The literature also reveals a gap in empirical research focused specifically on medical-surgical nurses' real-world experiences with PubMed GPT. Addressing usability, trust, and contextual integration while reinforcing the role of clinical judgment is essential for the responsible and sustainable use of AI tools in nursing practice.

Recommendations

Healthcare institutions should implement AI-enabled point-of-care tools through structured integration strategies that prioritize usability, transparency, and alignment with nursing workflows. Clear guidelines emphasizing AI as a decision-support resource rather than a substitute for professional judgment are essential to maintain patient safety and nursing accountability.

Nursing education programs should incorporate AI literacy, including ethical considerations, critical

evaluation of AI-generated information, and practical training in AI-assisted clinical decision-making. Continuous professional development opportunities are recommended to strengthen nurses' confidence and competence in using AI technologies.

Future research should employ mixed-methods and longitudinal designs to examine the long-term impact of PubMed GPT on clinical decision-making, workflow efficiency, patient outcomes, and nurse empowerment. Qualitative studies exploring nurses' perceptions of trust, autonomy, and ethical responsibility are particularly needed to inform effective implementation strategies.

Practice Implications

AI-enabled mobile point-of-care tools such as PubMed GPT can be integrated into medical-surgical nursing practice to support timely access to evidence-based information and enhance clinical decision-making. Nurse leaders and managers may use these tools to promote consistent application of evidence-based care, reduce information-seeking time, and support clinical confidence at the bedside. Successful implementation requires structured orientation, ongoing technical support, and institutional policies that emphasize clinician oversight. When thoughtfully integrated, AI-supported point-of-care tools may enhance efficiency, strengthen clinical reasoning, and support patient-centered nursing practice without compromising professional judgment.

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