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Exploring Nurses' perceptions of Artificial Intelligence: A review of knowledge and attitudes among Registered and Student Nurses

9-13 June 2024


Background

 **AI in Healthcare:** Transforming how care is delivered.


 **Role of Nurses:** Central to successful implementation.


 **Why It Matters:** Understanding perceptions helps:


-  Support adoption
-  Reduce resistance
-  Improve outcomes


 **Purpose:** To explore the perceptions of AI among both registered and student nurses.


Methods

 **Search:** Rapid review conducted via PubMed and BNU search engine (Sept 2024).

 **Inclusion:** Original research, English language, published 2020–2024.

 **Focus:** Studies on registered nurses or student nurses only.

 **Exclusion:** Studies involving other healthcare professionals.

 **Analysis:** Data analysed using thematic analysis.

Findings

 **Studies Included:** 15 total

-  9 on registered nurses
-  6 on student nurses


 **Designs:**


-  13 cross-sectional surveys
-  1 descriptive phenomenology
-  1 mixed-methods


 **Themes Identified:**

-  AI competence and educational enhancement
-  Perceptions and attitudinal dynamics towards AI
-  Impact and transformation in nursing practice
-  Ethical, legal and organisational concerns


Conclusion


 **Positive Views:** Nurses see AI as improving care, diagnostics, and efficiency.


 **Scepticism Remain:** Anxiety around job loss and ethical issues persists.


 **Call for Education:** Strong support for AI training in nursing to meet future demands.




Recommendations

 **Skills Needed:** Nurses require strong digital and AI competencies





 **Curriculum Action:** AI education should be embedded in nursing programmes

 **Policy Priority:** Clear guidelines are essential for ethical AI use in practice

 **Future Research:** Should explore:

-  Role transformation
-  Education effectiveness
-  Ethical and socioeconomic impacts

Thematic Analysis Mapping

Overarching Theme	Categories	Keywords	Example Papers
 AI Competence and Educational Enhancement	Digital health literacy	digital literacy, AI skills, informatics, digital competence	Hashish (2024), Mekawy (2020), Morales-Garcia (2024)
	Curriculum reform and professional training	training, education, CPD, curriculum, learning needs	Salem (2024), Morales-Garcia (2024), Mekawy (2020)
	AI integration into nursing education	AI in education, integration, upskilling, teaching methods	Hashish (2024), Labrague (2023), Morales-Garcia (2024)
 Perceptions and Attitudinal Dynamics Towards AI	Positive perceptions and acceptance	acceptance, trust, openness, positive attitude, optimism	Lukić (2023), Labrague (2023), Amin (2024), Rony (2024)
	Concerns, anxiety and resistance	anxiety, fear, scepticism, resistance, job insecurity	Salem (2024), Alruwaili (2024), Özçevik Subaşı (2024), Amin (2024)
 Impact and Transformation in Nursing Practice	Changing nursing roles and automation	role change, automation, nursing transformation, workflow	Yigit (2024), Abuzaid (2022), Rony (2024), Tarsuslu (2024)
	AI tools and their clinical application	decision support, robotics, clinical AI tools, telehealth	Sommer (2024), Özçevik Subaşı (2024), Alruwaili (2024), Tarsuslu (2024)
 Ethical, Legal, and Organisational Concerns	Ethical and legal implications of AI use	ethics, privacy, bias, data security, patient consent	Atalla (2024), Alruwaili (2024), Özçevik Subaşı (2024), Tarsuslu (2024)
	Governance, policy, and regulation	regulation, policy, standards, legal framework, accountability	Morales-Garcia (2024), Atalla (2024), Rony (2024), Tarsuslu (2024)

References

Abuzaid et al. (2022) <https://doi.org/10.1007/s12553-022-00697-0>; Alruwaili et al. (2024) <https://doi.org/10.1177/20552076241271803>; Amin et al. (2025) <https://doi.org/10.1111/jan.16435>; Atalla et al. (2024) <https://doi.org/10.1186/s12912-024-02143-0>; Hashish et al. (2024) <https://doi.org/10.1186/s12909-024-05482-3>; Labrague et al. (2023) <https://doi.org/10.1016/j.nepr.2023.103815>; Lukić et al. (2023) <https://doi.org/10.1016/j.nepr.2023.103735>; Mekawy et al. (2020) <https://doi.org/10.21608/ejhc.2020.274757>; Morales-Garcia et al. (2024) <https://doi.org/10.3390/bs14060437>; Özçevik Subaşı et al. (2025) <https://doi.org/10.1111/jan.16335>; Rony et al. (2024) <https://doi.org/10.1002/hsr.270006>; Salem et al. (2024) <https://doi.org/10.1155/2024/6992824>; Sommer et al. (2024) <https://doi.org/10.1186/s12912-024-01884-2>; Tarsuslu et al. (2024) <https://doi.org/10.1111/jnu.13008>; Yigit et al. (2024) <https://doi.org/10.1111/jep.14062>

