

"The Degree of Using Artificial Intelligence "AI" in Saudi Hospitals as Seen by Workers in Nursing, Radiology and Respiratory"

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Abstract

This study aimed to identify the degree of Using Artificial intelligence in Saudi Hospitals as Seen by Workers in Nursing, Radiology and Respiratory; the study followed the descriptive approach. The study sample consisted of (48) workers in Nursing, Radiology and Respiratory, a questionnaire was used to collect data consisting of (16) items distributed among the artificial intelligence domains: (databases used, senior management support, users system, computerized health). Information systems used and performance improvement). Results of the study showed that the arithmetic averages of the study sample's responses to the degree of using artificial intelligence domains in health administration in Saudi hospitals between arranged between (3.40-3.12), with an average of using rate for all domains, the domain of databases using came in first rate, with a mean (3.40) and a moderate degree, followed by the domain of Support senior management, with a mean (3.36) and a moderate degree, the "Users of the system domain came in third rate, with an arithmetic mean (3.32) and a moderate degree, followed by domain of Computerized health information systems used, with a arithmetic mean (3.28) and a moderate degree, but the domain of Improve the Performance came in the last rate, with a arithmetic mean (3.12) and a moderate degree, the general average for all domains came in moderate degree of using.

Keywords: Artificial intelligence; Hospitals; Nursing; Radiology, Respiratory

INTRODUCTION

By enhancing clinical judgment, patient care, and healthcare quality, artificial intelligence (AI) has revolutionized the nursing and healthcare sectors. AI integration in nursing and healthcare systems has promise for enhancing quality, improving patient outcomes, and increasing healthcare efficiency. However, chronic diseases and an aging population are driving up healthcare expenses. Given the numerous challenges that healthcare systems around the world confront, it is imperative to find innovative ways to enhance healthcare's affordability, accessibility, and quality. AI is revolutionizing healthcare through data analysis, process automation, and practitioner insights. Through sophisticated analysis of computed tomography (CT), magnetic resonance imaging (MRI), and X-ray data, it is transforming imaging and diagnosis. It has been demonstrated that these systems can quickly identify outliers (Sharma & Savage, 2022). Early disease detection and alternative therapy are made possible by machine learning algorithms, which improve practitioners' skills, especially in medical picture analysis.

The Industrial Revolution has brought about tremendous and continuous progress in the field of artificial intelligence and the use of its technical applications in various service fields, including medical care services in hospitals and health care centers (Ali et al., 2022). With the introduction of artificial intelligence, many manual

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or human tasks have been replaced by technological progress in artificial intelligence innovations (Khatoon & Rehman, 2021). Artificial intelligence (AI) is a major technological advance that has enabled humans to replace manual labor with superior mental capabilities and intellectual levels in a variety of industries (Kumar et al., 2023).

AI has already digitally transformed the manual health system into an automated version in many areas, whereby in some applications, humans are now only required to perform more fundamental duties in medical practice to manage patients and medical resources, leaving complicated procedures to be handled by or dependent on AI components (Dharani & Krishnan, 2021). AI-based healthcare systems are rapidly evolving, particularly for early detection and diagnostic applications (Chen & Hwang, 2020). These developments enable AI to accomplish tasks that humans sometimes cannot perform with the pace, simplicity, reliability and diligence that AI can deliver at a lower cost (Sqalli & Al-Thani, 2019).

When Information Systems (IS) developers can effectively design AI systems to carry out specific tasks, the technological advancement from healthcare digitization can also overcome additional challenges, for example, AI can significantly enhance patient care while simultaneously lowering healthcare expenses (Tobore et al., 2019).

The growing human population is likely to increase the need for healthcare services to be delivered at a rapid pace; therefore, innovative AI solutions are needed in the healthcare sector to improve effectiveness and efficiency without increasing costs (Pee et al., 2019). This is one area where AI continues to play a pioneer role in providing innovative solutions. Rapid technological advancements, particularly in the realm of AI, have already supported the management of the healthcare industry's growth (Comito et al., 2020).

Recent AI technologies encompass Big Data, machine learning Applications, and robots that are utilized to monitor, detect, and measure risks and benefits in the healthcare industry (Tsang et al, 2020). To enhance procedures and facilitate the administration of medical services, the healthcare business relies heavily on medical data and analytics. In recent years, the amount of gathered medical data and its dimensions have exponentially expanded. For example, medical professionals, researchers, and patients generate massive amounts of data, such as electronic health records (EHRs), medical imaging data, and other data from various monitoring devices, including health tracking devices and apps, that people are increasingly using in normal circumstances beyond the need for medical attention (Antoniou et al., 2018).

In this environment, AI technology has the capacity to capture data, process it, perform dynamic analyses and produce results that can be effectively used for medical intervention (Anbarasi & Dhivya, 2017). This function is typically executed using machine learning algorithms supported by data storage and processing power (Charan et al., 2018). For example, patient behavior patterns may be able to establish reliable predictions via daily observation of medical data. As a result, AI may offer suggestions toward diagnosis, medical intervention, therapeutic insights and strategies for mitigating health deterioration and supporting proactive strategies to prevent patient conditions from worsening, thereby enhancing patient outcomes at various phases of diagnosis and illness, as well as medication prescription and use. Technologically advanced hospitals are now exploring the use of AI technologies to help improve the accuracy of practice and lower the cost of operations (& AlThani, 2019).

By presenting detailed information on a variety of treatment options, AI enables medical staff and patients to make informed decisions about treatment plans (Deng et al., 2019). Regardless of the AI challenges, one of the most important benefits of AI is its support in preventative care in the healthcare system that promotes all humans to become and remain healthy. For example, apps have been used to give patients more control over their health (Samuel et al., 2022), allowing them to make evidence-based decisions on the matters of preventative health issues, such as type 2 diabetes and high blood pressure. However, early detection and diagnostics of health information require many AI apps (Stamford et al., 2016).

These AI apps are used in a variety of settings to diagnose different types of illnesses for precise, rapid and reliable results, at the simplest level, AI performs a significant level of comparative analysis using Big Data so that information from a patient is compared with data and digital images from huge datasets

compiled from other patients in relevant and related settings (Charan et al., 2018). This type of self-learning mechanism recognizes patterns and provides information for medical practitioners to support their diagnosis and intervention strategies (Charan et al., 2018). While supporting this complex medical procedures, AI technologies can also improve the efficiency of medical care administration (Deng et al., 2019).

Furthermore, raw data acquired from patients and hospital are used by machine learning and expert systems, however while collecting these data, ethical considerations should be considered (Liu et al., 2020). The norms of technology development and health applications must be established to optimally use AI technology in medical care. To meet this objective, this review study presents the state-of-the-art of the application of AI in the healthcare sector and proposes a classification framework to determine the benefits, challenges, methodologies, and functionalities of the use of AI in health services. AI or machine intelligence is an area of computer science whereby machines are programmed with the ability to perform intelligent tasks that are usually undertaken by humans. Computers and machines use AI techniques to understand, analyze, and learn from data through specifically designed algorithms (Sasubilli et al., 2020).

Importance of AI in modern Healthcare Artificial intelligence is crucial to modern healthcare because it improves accessibility, efficiency, and accuracy in medical operations. One of AI's major achievements is its capacity to analyses and evaluates massive amounts of data at rates that humans simply cannot match. As a result, AI is able to produce more precise diagnoses and evidence-based treatment suggestions, when AI is still in its infancy; it often searches medical images, test results, and patient data for patterns that could indicate neurological disorders, cancer, or heart problems. Improving personalized medicine, artificial intelligence goes beyond diagnosis to tailor medications to individuals based on environmental, genetic, and lifestyle factors (Saxena et al, 2025).

By bridging the gap between patients and clinicians, AI-powered telemedicine solutions expand access to healthcare for low-income populations in resource-constrained contexts Hospital operations are substantially enhanced by artificial intelligence, which reduces costs and enhances service quality. AI helps with patient flow management and approximating equipment maintenance requirements. However, AI's worth goes beyond improving efficiency in the workplace; it can also help change patients' active participation. Chabot's and virtual health assistants powered by AI provide continuous monitoring, give patients more agencies in their health care, and offer real-time health advice. Ensuring algorithmic openness, maintaining patient confidence, and regulatory norm compliance are significant difficulties that must be addressed in order to incorporate technology into healthcare, despite the transformative potential of artificial intelligence (Nilsen et al, 2022).

Artificial Intelligence in Saudi Arabia Kingdom

The Vision 2030 plan, launched by the Saudi government in 2016, includes a comprehensive strategy to transform the healthcare system. The plan aims to create a more patient-centered healthcare system. It also emphasizes the importance of preventive healthcare, health education, and reducing healthcare costs, the program includes several objectives, such as increasing the number of healthcare providers, enhancing healthcare infrastructure, and implementing new healthcare technologies. It also aims to make the Kingdom one of the most efficient countries in the field of healthcare. AI in healthcare is an important part of Vision 2030. The Saudi Data and Artificial Intelligence Authority (SDAIA) was created for this purpose, along with other entities including the National Healthcare Command and Control Center (NHCCC).

According to the Stanford AI Index 2023 report The Kingdom of Saudi Arabia has the second highest level of knowledge and awareness of the benefits of artificial intelligence among countries. According to the results of this recent index, the Kingdom of Saudi Arabia ranked among the most "efficient" countries in the health sector. It ranks second directly after Singapore, scoring 44.17 points, and outperforming the overall average of the index in the group of 16 countries, by a difference of 17 points, as these points represent the rates of spending by countries on the health care sector versus the returns achieved in the

health sector. The Future Health Index report for the Kingdom reveals the efforts of healthcare leaders, as the Future Health Index measures the important features of healthcare systems, which will paint a realistic picture of future health, and integrate technologies into the healthcare services chain. This measurement helps in developing the infrastructure and healthcare systems, and moving away from volume-based measurement methods in the healthcare sector. It is worth noting that the Kingdom is witnessing a great development in the IT infrastructure and equipment of medical organizations.

Which will greatly assist in the comprehensive implementation of medical information systems. According to the Future Health Index 2022 report in the Kingdom, three priorities were highlighted for healthcare leaders in their quest to enhance access to care services and improve patient treatment outcomes, these include: expanding healthcare services through digital health technologies, enhancing efficiency through innovation and strategic partnerships, and investing in AI and predictive analytics to improve healthcare services. Key areas of investment in AI applications include predicting healthcare outcomes, integrating diagnostic procedures, and supporting clinical decision-making (Alijerin & Arfat, 2022).

The combination of rising technologies like artificial intelligence and healthcare is one of the hottest topics today, artificial Intelligence is defined as the ability of machines to mimic human intelligence and perform tasks that would normally require human cognition. Integrating artificial intelligence with healthcare has the potential to change the way healthcare is delivered and managed to become a comprehensive, effective and integrated health system, as artificial intelligence can help analyze large amounts of data, identify patterns, and even make predictions of future patient outcomes (Alhashmi & Salloum, 2019).

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In light of the development of global health systems, and with the acceleration and increase in the use of artificial intelligence in health care, and research and health organizations racing to adopt artificial intelligence technology to improve the patient experience and help address some of the pressing problems facing health care today, and in order to obtain a deeper understanding of the impact of these emerging technologies. To patients, healthcare professionals and wider society (Ministry of health Saudi Arabia, 2021).

To ensure the continued development of health care services in the Kingdom of Saudi Arabia and to focus efforts in this sector to face the challenges related to health services by raising their quality and efficiency, we can discuss the following topics: Excerpts from the current health care situation; A closer look at ways to use artificial intelligence technology in health care; potential future impact; Challenges in implementation and adoption of emerging technologies in health care (Abu Shanab, 2019).

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As part of the Kingdom Vision 2030 strategy, the first World Summit on Artificial Intelligence was held in September 2020 under the patronage of His Royal Highness Prince Mohammed bin Salman bin Abdulaziz, Crown Prince, Deputy Prime Minister and Minister of Defense. The summit included 30 sessions attended by 60 speakers, including ministers, leaders of global entities, academics, investors and businessmen from 20

countries (Alijerin & Arfat, 2022). Health institutions in the Kingdom of Saudi Arabia are witnessing tremendous technological changes, the most important of which are the applications of Artificial Intelligence, which have brought about radical developments in various health services, which requires the preparation of employees with advanced digital skills to achieve productivity and creativity and are able to fill jobs and professions and meet their requirements in the fields of Artificial intelligence, cryptography, cybersecurity, Internet of Things, mobile application development, etc.

Statement Problem

Various health institutions in the Kingdom of Saudi Arabia, especially hospitals, have witnessed progress in the field of artificial intelligence, and have worked to benefit from artificial intelligence in providing and managing health services and administrative work in hospitals. It has become available to medical and health cadres, regardless of their job titles, to program and implement their health and medical tasks and administrative work through the use of artificial intelligence technologies. By studying the reality of artificial intelligence and its applications in hospitals and health institutions in general, it is noted that they still suffer from some kind of difficulties in the field of artificial intelligence, which often appear in the technical or human aspects. Therefore, the study attempts to answer the following question: What is the degree of use of artificial intelligence "AI" in Saudi hospitals as seen by workers in nursing, radiology and respiratory system?

METHODOLOGY

The study followed the descriptive approach. The study sample consisted of (48) workers in nursing, Radiology and Respiratory, in Saudi hospitals, a questionnaire was used to collect data consisting of (18) items distributed among the domains of artificial intelligence: (databases used, senior management support, users system, computerized health). Information systems used and performance improvement. The following statistical tools were used: Frequencies & Percentages: to describe the sample of the study Arithmetic mean and relative arithmetic mean, Cronbach's Alpha test: to determine the persistence of the paragraphs of the questionnaire, Pearson Correlation Coefficient: to measure the degree of correlation: This test examines the relationship between two variables. It has been used to calculate internal consistency and structural honesty of the questionnaire, and the relationship between variables test in the case of a single sample: to determine whether the average response has reached the intermediate approval level (3) or increased or decreased. It has been used to ascertain the mean significance of each paragraph of the questionnaire.

RESULTS

To answer the study question, Arithmetic means and deviations were calculated for the study sample's responses on the domains of artificial intelligence in hospitals as Seen by workers in nursing, radiology and respiratory. Table (1) shows that.

Table (1): Arithmetic means and standard deviations of the study sample's responses on domains of artificial intelligence using

Domains	Arithmetic mean	standard deviation	Sig value
Databases used.	3.40	0.78	0.842
Support senior management.	3.36	0.82	0.878
Users of the system.	3.32	0.86	0.762
Computerized health information systems used.	3.28	0.92	0.872
Improve the performance.	3.12	0.96	0.980
All domains	3.29	0.87	0.866

Table (1) shows that the arithmetic averages of the study sample's responses to the reality of using artificial intelligence "AI" in Saudi hospitals as seen by workers in nursing, radiology and respiratory, the arithmetic

averages of the study sample's responses regarding the reality of using artificial intelligence domains in hospitals ranged between (3.40-3.12), and the domain of databases used came in first rate, the mean is (3.40) and a medium score, followed by the field of senior management support, with a mean (3.36) and a medium score. The field of "system users" came in third place with a mean of (3.32) and a moderate degree, followed by the field of computerized health information systems used, with a mean of (3.28) and a moderate degree. In last place came the field of performance improvement, with a mean of (3.12) and a moderate degree. The general arithmetic mean for the fields of artificial intelligence was (3.29), with a moderate degree of application.

CONCLUSION

The results of the study showed that the arithmetic averages of the study sample's responses to the degree of using artificial intelligence "AI" in Saudi hospitals as seen by workers in nursing, radiology and respiratory, the arithmetic averages of the study sample's responses regarding the degree of using artificial intelligence domains in hospitals ranged between (3.40-3.12), the domain of databases used came in first rate and in a medium score, followed by the domain of senior management support, with a mean (3.36) and a medium score. The domain of system users came in third rate with a mean of (3.32) and a moderate degree, followed by the domain of computerized health information systems used, with a mean of (3.28) and a moderate degree. In last rate came the domain of performance improvement, with a mean of (3.12) and a moderate degree. The general arithmetic mean for the fields of artificial intelligence was (3.29), with a moderate degree of using.

Researchers believe there is concern.anxiety about AI possibly replacing human roles, partly due to limited understanding of the technology. While many are hopeful about AI's use in things like diagnostics and personalized treatments, their lack of full knowledge creates some hesitation; this suggests a need for better education and support so nurses can feel more comfortable and confident about AI. Koo et al. demonstrated that AI in nursing and healthcare, with an emphasis on how it can affect clinical judgment, patient care delivery, and healthcare procedures. Legal and ethical issues are brought up by the ethical use of AI in healthcare.

In light of the results of the study, the researchers recommend establishing specialized department using artificial intelligence systems to provide medical services to patients, providing computerized health information in hospitals, in addition to encouraging medical staff to use artificial intelligence in carrying out their medical or administrative work.

REFERENCES

- Ali, O., Murray, p., Muhammed, S., Dwivedi, Y. K., & Rashiti, S (2022). Evaluating organi- zational level IT innovation adoption factors among global firms. *Journal of Innova- tion & Knowledge*, 7,(3) 100213. doi:10.1016/j.jik.2022.100213.
- Abu-Shanab, E. (2019). Predicting trust in e-government: two competing models. *Electronic Government an International Journal*, 15(2), 129-143. <https://doi.org/10.1504/EG.2019.098669>
- Alhashmi, A. & Salloum, S. (2019). Implementing artificial intelligence in the Saudi Arabia healthcare sector: An extended technology acceptance model. *International Journal of Information Technology and Language Studies*, 3(3), 27-42.
- Aljierin, N & Arfat, M, (2022). Artificial Intelligence in Health care and its application in Saudi Arabia, *International Journal of Innovative Research in Medical Science*, 7(11), pp, 666 - 670 | <https://doi.org/10.23958/ijirms/vol07-i11/1558>
- Anbarasi, M. S., & Dhivya, S. (2017). Fraud detection using outlier predictor in health insurance data. *The International Conference on Information Communication and Embedded Systems* (pp. 1–6).
- Antoniou, Z. C., Panayides, A. S., Pantzaris, M., Constantinides, A. G., Pattichis, C. S., & Pattichis, M. S. (2018). Real-Time adaptation to time-varying constraints for medi- cal video communications. *IEEE Journal of Biomedical and Health Informatics*, 22(4), 1177–1188.
- Charan, S., Khan, M. J., & Khurshid, K. (2018). Breast cancer detection in mammograms using convolutional neural network. *The International Conference on Computing, Mathematics and Engineering Technologies* (pp. 1–5).
- Comito, C., Falcone, D., & Forestiero, A. (2020). Current trends and practices. In smart health monitoring and clinical decision support. *IEEE International Conference on Bioinformatics and Biomedicine* (pp. 2577–2584).
- Chen, X., Xie, H., Zou, D., & Hwang, G. (2020). Application and theory gaps during the rise of Artificial Intelligence in Education. *Computers and Education: Artificial Intelli- gence*, 1, 100002.
- Chen, Z. (2018). An AI-Based heart failure treatment adviser system. *IEEE Journal of Translational Engineering in Health and Medicine*, 6, 1–10.
- Deng, Y. (2019). A new framework to reduce doctor's workload for medical image annotation. *IEEE Access*, 7, 107097–107104.
- Dharani, N., & Krishnan, G. (2021). ANN based COVID -19 prediction and symptoms rel- evance survey and analysis. *The 5th International Conference on Computing Method- ologies and Communication* (pp. 1805–1808).

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- Johnson, M., Albizri, A., Antoine Harfouche, A., & Fosso-Wamba, W. (2022). Integrating human knowledge into artificial intelligence for complex and ill-structured problems: Informed artificial intelligence. *International Journal of Information Management*, 64, 102479. doi:10.1016/j.ijinfomgt.2022.102479.
- Khatoun, S., & Rehman, V. (2021). Negative emotions in consumer brand relationship: A review and future research agenda. *The International Journal of Consumer Studies*, 45, 719–749.
- Kumar, P., Sharma, S. K., & Dutot, V. (2023). Artificial intelligence (AI)-enabled CRM capability in healthcare: The impact on service innovation. *International Journal of Information Management*, 69, 102598. doi:10.1016/j.ijinfomgt.2022.102598.
- Saxena, M, Tuteja, T. (2025). Artificial Intelligence in Health Science: Innovations in Diagnosis and Treatment, *Artificial Intelligence in Health Science:Innovations in Diagnosis and Treatment SEEJPH Volume XXVI, S2, 2025, ISSN: 2197-5248; Posted:03-02-2025.*
- Liu, J., Ma, J., Li, J., Huang, M., Sadiq, N., & Ai, Y. (2020). Robust watermarking algorithm for medical volume data in internet of medical things. *IEEE Access*, 8, 93939– 93966.
- Ministry of health Saudi Arabia. (2021). Available: <https://www.moh.gov.sa/en/ccc/about/Pages/default.aspx>
- Maduri, P. K., Dewangan, Y., Yadav, D., Chauhan, S., & Singh, K. (2020). IoT based patient health monitoring portable Kit. *The 2nd International Conference on Advances in Computing, Communication Control and Networking* (pp. 513–516).
- Nilsen, P, Reed, J., Nair, M., Savage, C. (2022). Realizing the potential of artificial intelligence in healthcare: Learning from intervention, innovation, implementation and improvement sciences. *Frontiers in Health Services*, 2, 961475. <https://doi.org/10.3389/frhs.2022.961475>
- Tobore, I, Li, J., Yuhang, L., Al-Handarish, Y., Kandwal, A., Nic, Z. & Wang, L. (2019). Deep learning intervention for health care challenges: Some biomedical domain considerations *JMIR M-health U-health*, 7(8), e11966, <https://mhealth.jmir.org/2019/8/e11966>.
- Tsang, K. C. H., Pinnock, H., Wilson, A. M., & Shah, S. A. (2020). Application of machine learning to support self-management of asthma with mHealth. *The 42nd Annual International Conference of the IEEE Engineering in Medicine & Biology Society* (pp. 5673–5677).
- Shaban, N, & Buckeridge, D. (2018). Health intelligence: How artificial intelligence transforms population and personalized health. *Npj Digital Medicine*, 1(1). <https://doi.org/10.1038/s41746-018-0058-9>
- Sqalli, M. T., & Al-Thani, D. (2019). AI-supported health coaching model for patients with chronic diseases. *The 16th International Symposium on Wireless Communication Systems* (pp. 452–456).
- Sharma M, & Savage C. (2022). Artificial intelligence applications in health care practice: scoping review. *J Med Internet Res*. 2022;24:e40238. Cresswell K, Callaghan M, Khan S, Sheikh Z, Mozaffar H, Sheikh A. Investigating the use of data-driven artificial intelligence in computerized decision support systems for health and social care: a systematic review. *Health Informatics J*. 2020;26:2138–2147
- Sasubilli, S. M., Kumar, A., & Dutt, V. (2020). Machine learning implementation on medical domain to identify disease insights using TMS. *The International Conference on Advances in Computing and Communication Engineering* (pp. 1–4).
- Samuel, J., Kashyap, R., Samuel, Y., & Pelaez, A. (2022). Adaptive cognitive fit: Artificial intelligence augmented management of information facets and representations. *International Journal of Information Management*, 65, 102505.
- Stamford, J., Kambhampati, C., Pauws, S., & Clark, A. L. (2016). Patients on home tele-health monitoring have more days alive and out of hospital. *The 2nd IET International Conference on Technologies for Active and Assisted Living* (pp. 1–7).