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Exploring Nurse Managers' Perception and Attitudes Towards Artificial Intelligence Integration in Healthcare Settings

Amna Jabeen*[1], Sana Maryam[1], Bushra Habib[1], Sahar Jamal[1], Areeba Nawaz[1], Sidra Ishaq[1], Aqib Dil Awaiz[2]

[1] Post R/N New Life Institute of Nursing / UHS, Lahore Pakistan. Email: sqiamna445@gmail.com, sanamaryum0@gmail.com, Bushrahabib788@gmail.com, saharjamalsahar973@gmail.com, minsaf945@gmail.com, sidraishaq031@gmail.com

[2] Associate Professor, Managing Director, New life institute of nursing Multan, aqibdilawaiz101@gmail.com

Corresponding author: Amna Jabeen, saqiamna445@gmail.com

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Abstract

The integration of Artificial intelligence in healthcare setting has the potential to transform the delivery of patient care. However, the success of AI adoption depends on the perception and attitudes of nurse managers, who play a crucial role in implementing and managing healthcare technologies. Such developments will only serve to strengthen the place of AI in the provision of health care services, as well as in the management of patients The healthcare industry is experiencing a significant shift towards digital transformation, with AI being a key driver of this change. This study employed a cross-sectional design, using convenience sampling and questionnaire was designed on Likert scale. Data collected was systematically organized and analyzed using SPSS and Excel. As a result, this research supportss the alternate hypothesis and reject the null hypothesis. AI is recognized as having the potential to revolutionaries' healthcare, by enhancing the quality of care delivered to patients, streamlining many backend tasks, as well as supporting medical decisions. Establish elaborate training programs tailored towards teaching nurse managers all that they need to know about the AI systems to use and how to use them to their advantage. Skills training should involve demonstration and ethics, agendas and cases on success stories of Artificial Intelligence tools.

Key Words: Artificial intelligence, nurse, healthcare setting, adoption.

Introduction

Background

Artificial intelligence systems are changing the world and its different industries, and healthcare is one of the sectors that has been affected most. AI technologies are now being applied in healthcare facilities to support patient care, reduce workload in clinical practice, and generally improve the delivery of healthcare services (Davenport & Kalakota, 2019). They have the capacity to revolutionize the way healthcare practitioners inclusive of nurse managers, perceive and use data, reason, and provide quality care. AI uses in healthcare include diagnosis support, analytic predictions, patient tracking, and even robotic support in surgeries. Nurse managers, the administrative personnel directly responsible for nursing staff and the management of patient care services, are central to this technological process. They are important because they determine the effective implementation of such technologies in health care practices (Elsayed & Sleem, 2021).

In the 1980s and 1990s, the AI in healthcare systems moved to the next levels such as NLP and machine learning. Such technologies helped in the processing of the big data, handling of administrative work, and in the planning of surgery (Reddy et al., 2019). For sure, AI is one of the most revolutionary technologies of the 21st century which has been improved by such factors as the rate in computing power, big data, and cloud computing. Now, AI is applied in several healthcare niches, risk assessment and precision medicine, surgical robots, e-health and etc. For instance, Watson was applied in the healthcare section in cancer diagnosis and in the development of treatment strategies (Esteva et al., 2019).

Problem statement

The responsibilities of the nurse managers have changed over the course of several years due to the integration of AI tools in the healthcare sector. Nurse managers are now engaged in the implementation of sophisticated integrated AI systems in healthcare routine procedures, which were not part of their roles in supervising administrative tasks (Erguzel & Oz ekes, 2019). However, there have been some barriers to the implementation of AI, such as doubts regarding the stability of the technology, its ethical consequences, and the fact that the use of technology may lead to the disruption of current processes (Moorhead et al., 2021). These challenges emphasize the need to assess the perceptions and attitudes of the nurse managers toward the use of AI since their endorsement is essential for the success of its use (Risling and Low 2019).

AI in healthcare has the potential to improve patients' outcomes, optimize processes in healthcare organizations, and increase organizational effectiveness. However, the ability to implement and integrate AI technology effectively is highly contingent upon the willingness and, therefore, perception of healthcare professionals especially the nurse managers. However, there is a gap in the current literature regarding nurse managers' knowledge, attitudes, and perception towards AI, which may result in resistance, lack of utilization, or improper use of such technologies.

Significance:

It is therefore important to identify how nurse managers perceive and think about AI in order to identify and surmount barriers that may hinder its adoption. Areas of interest are: what are the main issues and advantages of AI; how the participants perceive its effects on their work and patients; and what shapes their attitude to the use of AI. Answering these questions may assist healthcare organizations in designing effective intervention plans aimed at increasing the acceptance and practical use of AI and, thus, improve patients' outcomes, minimize mistakes, and increase the efficiency of the provided care (Elsayed & Sleem, 2021). Significance of Study The primary aim of this study is to explore and understand nurse managers' perceptions and attitudes toward the use of AI technology in healthcare settings. The specific objectives are:

- In order to identify the current state of knowledge among the nurse managers about the AI technologies in healthcare, as well the benefits and risks of implementing AI in healthcare organizations.

The purpose of this study is to identify the factors that determine the level of acceptance and use of AI among nurse managers and suggest ways to enhance its adoption in healthcare organizations

Objectives:

The present research is important because it has explored a research question that has not been well answered in the past concerning the involvement of nurse managers in implementing AI in healthcare. Knowledge of the current perception and attitude that the nurse managers have for AI can help in designing an implementation plan that can make the use of AI technologies easier to implement in the clinical setting. Since the nurse managers play a central role in the adoption and implementation of new technologies in nursing, it is equally important that they support the use of AI systems in healthcare facilities (Reddy et al., 2019). As such, this research can guide policy and practice to understand which factors affect the acceptance of AI among healthcare professionals and patients so that the integration of AI technologies is aligned with the norms and preferences of the users.

Hypothesis

The study is guided by the following hypothesis:

- **Null Hypothesis (H_0):**
- There is no significant relationship between nurse managers' awareness of AI technology and their attitudes toward its adoption in healthcare settings.
- **Alternative Hypothesis (H_a):**

Nurse managers with higher levels of awareness and understanding of AI technology have more positive attitudes toward its adoption in healthcare settings

Limitations:

The sample was restricted to 30 nurse managers, and this may not represent the cross-sectional view of the whole population.

The study mainly relied on questionnaires hence the results obtained could have been influenced by respondents' bias.

- Limitations include the fact that findings may vary depending with the healthcare system thereby limiting the generalization of results.

Literature Review

The integration of AI into the sphere of healthcare can be considered one of the most revolutionary advancements of the contemporary world. In this paper, the authors present the growing significance of AI technologies in the extended healthcare systems and in the context of the nurse manager's work. This chapter presents a systematic literature review of the existing information available regarding the perceptions and attitudes of nurse managers to the use of AI in healthcare organizations. Chapter II is designed to outline the development of AI in the context of healthcare, AI applications, the position of the nurse manager in the adoption process, as well as the enablers and inhibitors of the process. The review seeks to establish the literature gaps and to lay the background for the present research (Raparthi et al., 2020)

AI can be traced back to mid twentieth century when the notion of developing machines with the ability to reason like human beings was conceived. The first AI applications in the field of medicine were directed on creating of the so-called 'expert' systems which would embody the decision-making abilities of medical doctors. One of the first examples of such systems was MYCIN designed in the 1970s that was used for diagnosing bacterial infections and suggesting the treatment. Despite the fact that MYCIN was never used extensively in clinical settings, it has laid the foundation for future advance of AI in the healthcare domain (Raparthi et al., 2020)

Since the development of MYCIN, AI has evolved tremendously with the emergence of technologies such as, machine learning, natural language processing, and big data processing. The deployment of these technologies has made it possible to enhance better AI systems that are complex to perform tasks such as image recognition, analysis, and even diagnosis of diseases (Yu et al., 2018). In early 2000, the use of AI broadened to e-Health records and clinical decision support systems that are widely used in contemporary healthcare settings (Reddy et al., 2019).

Nowadays, AI is playing an important role in the development of medicine, and it can be used in such areas as robotic surgery, virtual health assistants. The growth in healthcare data requires that AI is used in handling information and making changes that will benefit the customers. Possible future trends for AI in healthcare are further expansion of the concept of the precision medicine, where the plans of treatment are made with the help of AI algorithms, based on the data of a particular patient and the use of AI in combination with other rapidly developing technologies, for instance and block chain. Such developments will only serve to strengthen the place of AI in the provision of health care services, as well as in the management of patients (Ahmad et al., 2021)

Diagnostic practices have been enhanced by AI in terms of speed and accuracy when it comes to interpretation of medical images, genetic information and other diagnostics. Thus, machine learning algorithms are capable of finding patterns in data which even experienced clinicians may not notice, and, therefore, of providing accurate diagnosis much earlier (Esteva et al., 2019). For instance, the AI systems have been applied in identifying cancer features in radiology images, identify patients' prognosis using historical data, and also in evaluating the likelihood of acute and chronic diseases such as diabetes and heart diseases. These are some of the predictive analytics tools that are very useful in preventive healthcare since care givers are able to step in early before the conditions get out of hand (Yu et al., 2018).

Not only can it be used for diagnostics, but also patient monitoring and management is becoming a part of AI-focused healthcare. The use of AI in monitoring patient's condition can therefore be used to monitor vital signs, medication compliance, and all other indices in real time without interruption. These systems are most applicable in ICUs and remote patient monitoring settings, where it is possible to identify deviations from the normal and alert the healthcare provider to the developing problem (Reddy et al., 2019). AI can also help in the treatment of chronic disease by useful tips and recommendations of the care plan, and timely notification to take the necessary actions (Ahmad et al., 2021)

In addition to clinical roles, AI is also reshaping administrative work done within health care organizations. AI solutions are being utilized to automate process including scheduling, billing, and inventory management so that the healthcare professionals can spend more time and efforts on patient care. In the current healthcare, decision support systems which offer evidence-based solutions are used by clinicians to aid in reaching a decision about the patient's care. These systems assimilate huge amount of data to provide suggestions that may contribute to better patient care or rational use of resources (Erguzel & Ozekes, 2019).

Robotic surgery is perhaps one of the most complex uses of artificial intelligence in the healthcare delivery system. Robotic systems that are assisted by artificial intelligence enable surgeons to deliver great accuracy during operations that are less invasive because they cut less on the body, therefore, the time that patients take to recover is short and the results are very good. Substitute systems improve human surgeons' efficiency by offering real-time data analysis and a decreased amount of error, as well as precise control during operations (Topol, 2019). It is for this reason that as development in AI progresses, the application of AI in surgery is predicted to progress to a degree of being a completely autonomous robotic surgeon in the future.

The application of AI in the health care system has produced diverse reactions from the health care practitioners. In one hand, many understand that the application of AI in health care will produce a positive impact on patients' treatment and on the organization's functioning. On the other hand, there are issues that are raised concerning the dependability of the AI systems, the issue of unemployment due to the increased use of these systems, and the issue of fairness in allowing machines to make decisions. Such mixed perceptions are therefore dependent on user's encounter with technology, the perceived consequences of AI on working profiles, and the overall confidence in the AI systems (Moorhead et al., 2021).

Several factors determine the degree of acceptance of AI in the healthcare organization or complete rejection of the same. Some of the most important of these are: the degree of

perceived ease of use, the degree of perceived usefulness and the level of support as provided by the organization in question. Some papers reveal that if the perceptions about the role of AI in HCWs' work are positive, then the workers will embrace the innovation if it means making their work easier and if it will improve the quality of services delivered to patients. On the other hand, resistance can be attributed to the following reasons; The users do not understand the technology, they do not understand the implication of the technology, and self-interest such as fear of losing their jobs, and ethical issues regarding implementation of AI. Another factor is organizational culture that also plays part in these attitudes as are more accepting of AI in organizations (Reddy et al., 2019).

The culture of the organization determines the perception of the employees towards AI and its adoption in healthcare organizations. This means that, the organization, with culture that embraces innovation, learning, and cooperation is likely to gain higher results of AI implementation. In such environment, the healthcare professionals are allowed to experiment with new technologies, to share their experiences and to provide their feedback on how they think the AI can be improved (Moorhead et al., 2021). At the same time, there are some challenges that are unique to the organizational culture, for instance, because the cultures do not encourage taking chances and going against the grain, organizations with a closed culture or those with a top-down hierarchy will find it challenging to adopt AI. In fact, it can be stated that ethical and legal concerns are among the major concerns that hinder the use of AI solutions in healthcare organizations. Among them some of the concerns include patient's privacy, security of data and prejudice decision making by the algorithms are often used as rationale for precaution. There is also worry that with the use of AI, patient-nurse interactions could be reduced to a click of a button and therefore the patient is dehumanized. Mitigating these ethical issues is crucial in developing the public's confidence in the application of AI systems and ensuring that the systems' application does not take a negative toll on patient care (Erguzel & Oz ekes, 2019).

Nurse managers have thus been expected to coordinate the daily functioning of nursing units such as staff management, patient care, and safety, and quality assurance. However, with the increase in the new AI technologies, their roles have also increased in monitoring the implementation of these systems in the clinical environment (Reddy et al., 2019). There is a constant transformation of the healthcare industry and thus, the nurse managers should be in a position to comprehend and implement technological advancements like the AI. Nurse managers, as other major purchasers, are to assess new technologies, including AI, and decide about their applicability to their units. This includes evaluating the advantages that may arise from the application of AI like the patients' health to be enhanced by the solutions that AI offers, as well as the disadvantages of AI to be implemented. Nurse managers also have the responsibility of guaranteeing their employees are trained properly on how to use AI systems, to address any grievances from the employees and to continually evaluate the effects of AI on patient care and the workers' productivity (Moorhead et al., 2021).

One of the areas that have been greatly influenced by the roles and responsibilities of nurse managers due to AI integration in healthcare delivery is as follows: Aside from their formal responsibilities, they are now expected to be in charge of the management of the deployment of complicated AI systems, their staff's training in AI, and the overall effective incorporation of AI in the enhancement of the efficiency of patient care (Erguzel & Oz ekes, 2019). This shift has put more pressure on the nurse managers especially given the fact that they have to learn new skills and skills in order to fit in this new and dynamic healthcare setting (Moorhead et al., 2021).

Some of the issues that arise when implementing AI technologies include the following; Some of the challenges that companies face when implementing AI systems are; resistance to change among the staff, high implementation costs, and training and education needs. Furthermore, the ever changing technology advancement makes it quite challenging for the nurse managers to keep abreast with the new technologies and the most appropriate strategies. It is, therefore,

important to point out that dealing with all these challenges calls for effective leadership, communication and embracing organizational culture that supports change and innovation (Moorhead et al., 2021).

For this reason, there is a need for theoretical framework, which will help to analyses the factors, influencing the acceptance of the technologies among HCPC stakeholders. Of all the models applied in this regard, two most commonly applied are the Technology Acceptance Model or TAM and the Unified Theory of Acceptance and Use of Technology or UTAUT. TAM posits that perceived usefulness and perceived ease of use are the only factors that affect technology acceptance, while UTAUT builds on the two while adding social influence, facilitating conditions, and behavioral intention. These models have been used in the case of adoption of AI in healthcare to assess the attitude that health care professionals have towards AI technologies. For instance, the perceived usefulness is one of the strong antecedents of the use of AI by the nurse managers particularly when they consider the AI as an enabler that would help them provide excellent care. The other is perceived ease of use because the nurse managers are more likely to adopt the AI technologies where the application is not difficult and can easily be incorporated in the existing systems (Moorhead et al., 2021).

Therefore, TAM and UTAUT can be of assistance to understand why some nurse managers are more accepting of AI technologies than others. Variables like organizational support, ability to access training and perceived benefits of AI hold a lot of influence in forming their attitude. For example, the nurse managers if they have a positive attitude towards AI as a tool that helps them in their work and has positive impacts to the patients then they are likely to accept it. On the other hand, people who feel that AI is complicated, revolutionary, or involves ethically unsound practices are likely to refrain from its use (Reddy et al., 2019).

There has been a rise in empirical research on the application of AI in nursing environments and most of them have focused on the perception of the nurse managers. These studies have also shown that the nurse managers are the primary end users of the AI technologies as they are the one expected to deploy such systems in the clinical practice (Yu et al., 2018). They have also highlighted the fact of the need to focus on the things that the nurse managers experience in their working process if only AI is to be realized.

Several examples of use cases of the AI technologies integration coming from various healthcare domains are described to present the examples of the best practice. The examples provided here indicate that AI can be easily implemented into the concept of the framework of nursing practice to improve patients' outcomes, the process of their organization, and decision making. For instance, the integration of AI of decision support system in hospitals has been effective in reducing the number of errors and enhancing the satisfaction level of the patients as well as the efficiency of the nurses (Esteva et al., 2019).

Analyzing the data from qualitative studies the findings demonstrate that, nurse managers occupy a critical position in the successful adoption of AI innovations. Their perception of the importance and simplicity of AI as well as the ethical implications of AI deployment has a significant bearing on the level of AI achievement in the health care organizations as reported by Reddy et al., (2019). Studies have also highlighted the need to involve the nurse managers because they are involved in the initial identification of the right AI system that would meet the nurses' and the patients' needs.

In spite of the steady growth of the number of publications on the use of AI in healthcare, there is a scarcity of knowledge of how these technologies influence specific categories of staff, of which nurse managers are a part. For example, future research needs to address more detailed questions about how the roles of the nurse managers have evolved and how the nurse managers can be supported and enhanced in order to fulfil their responsibilities (Moorhead et al., 2021). It is thus prudent to plug these gaps with a with a view of developing strategies in addressing implementation of AI in the practice of nurse managers (Ahmad et al., 2021).

Of the barriers that have been described in the literature concerning the adoption of AI, the following are some of the most common; lack of information about the technology, concern

over loss of employment, high costs of integrating the technology and resistance to change among the staff (Moorhead et al., 2021). These are some of the challenges that can pose a very big influence on the AI in the healthcare system and if not diagnosed early enough during the implementation process can lead to a lot of trouble. For example, AI may not be adopted by nurse managers because of the following fear on the implications of utilization of the technology on human resources.

Enablers are the strong support from the organization, availability of training and development, and the role clarity of advanced intelligent in improving the patient care and operational processes (Reddy et al., 2019). It is also important to nurture an organizational culture that supports innovation and collaboration. For instance, the adoption of AI by nurse managers will be high if they have the organizational support, resources, and training to use AI.

Lack of training and education is the main reason for non-adoption of AI, and thus it should be addressed. It is therefore possible to minimize resistance and enhance confidence in AI technologies by arming the nurse managers with knowledge and skills on how to use the technologies appropriately. This includes basic training of how to operate the AI systems as well as arguably more important, informing patients about the potential benefits of AI in their treatment as well as the moral implications of its use. If these issues are addressed, there will be a likelihood of building the capacity of nurse managers to lead AI implementation in their organizations (Erguzel & Oz ekes, 2019).

AI can enhance the quality of patient care since it is more precise in analyzing a patient's condition, recommending individual treatment regimes, and monitoring the state of patients. For instance, AI can help in sorting out a vast number of patients' records and recognize the patterns, which may not be easily visible to doctors and other healthcare practitioners, thus, the best prognosis can be initiated at an earlier stage (Yu et al., 2018). Furthermore, AI can help in clinical decision making by giving suggestions which can be used by the clinicians to arrive at a better decision.

AI should complement nursing practices in ways such as freeing up the nurses' time to engage in more important tasks, support decision-making, and optimize the use of resources. For instance, administrative work can be accomplished by AI systems including scheduling and documentation, in this way the duty of the nurse manager and the staff can be utilized to perform other important and complicated patient care duties. Moreover, AI can also help in patient surveillance and care since it can give real-time information that can be used by the nurses in decision making process.

On the one hand, the use of AI can be quite beneficial in the process of nursing; however, there is a fear that AI could eliminate the human qualities in nurses, including empathy and compassion as well as individualized approach. These issues are even more critical in nursing since the patient-nurse relationship is the focus of the nursing practice (Moorhead et al., 2021). To this effect, the following issues should be considered so as to avoid negative impacts of AI in healthcare since it should be used to supplement human touch: This includes calling attention to the fact that patient-centred care should be human-centered and focusing on how AI can strengthen the position of nurses, not undermine it (Esteva et al., 2019).

The present literature review has synthesized and summarized the existing literature on the current state of AI in the health care sector and the possible attitudes that nurse managers may have towards these technologies. AI is known to have great potential in enhancing the quality of the delivered healthcare services, especially in diagnosis, patient tracking and in the field of health administration. However, it is important to note that the implementation of AI is contingent on the endorsement from healthcare professionals most especially the nurse managers. The review has revealed the following factors that have been found to shape nurse managers' attitude towards AI: Organizational support; Ethical issues; and Training. Therefore, it is crucial to consider these aspects to enable the inclusion of AI into healthcare systems. The review also highlights the existing research gaps in capturing the enhancements and barriers that the nurse managers experience in implementing AI technologies. It is important to fill these

gaps to formulate effective approaches towards the management of the changing role of the nurse managers (Ahmad et al., 2021).

Research Methodology

The main objective of this chapter is to explain the various tools and techniques of research applied to collect data and information scientifically.

Operational definition

Nurse managers' perception and attitude towards artificial intelligence integration in healthcare settings refers to their beliefs, emotions and intentions regarding AI's potential impact on patient's care, nursing practice and healthcare organizations.

Proposed Place of Work and Facilities Available

The research was conducted at the tertiary care Hospital, selected for its diverse healthcare environment and the availability of relevant participants. The hospital's comprehensive infrastructure provides an ideal setting for studying workplace violence and its prevention.

Plan of Work and Methodology Adopted

The study employed a cross-sectional design, using convenience sampling due to time constraints. This method allowed for efficient data collection from the targeted participants.

Research layout plan

The research data was presented in both tabulated and pictorial formats to ensure clarity and accessibility. Tables were used to summarize numerical findings, while graphs and charts visually represented key trends and patterns. This dual approach facilitated a comprehensive understanding of the results for readers.

Variables:

Independent variable: Awareness of AI technology
Dependent variable: Adoption of AI

Data Collection

Data was collected through face-to-face interactions with nurses and head nurses at tertiary Medical Hospital. This approach ensured comprehensive and reliable responses.

Tools for Data Collection

A structured questionnaire was utilized to collect data. The questionnaire was designed on Likert scale, ensuring clarity and ease of understanding for all respondents. It aimed to gather detailed insights into the barriers to workplace violence prevention and the effectiveness of existing implementation strategies.

Sample Size

A sample size of 30 nurses and head nurses was selected. This size ensures sufficient data to analyze the barriers and strategies related to workplace violence prevention.
The formula for determining the sample size is:

$$n = \frac{N}{1 + N \cdot e^2}$$

Where:

- n = Sample size
- N = Population size
- e = Margin of error.

Demographic Profile

Participants were aged **20 to 40 years**, representing a range of professional experiences from junior nurses to senior head nurses. This diversity ensures a well-rounded perspective on the research topic.

Parameters

Inclusive Criteria:
Nurse managers 28 to 38 years old involved in patient care at tertiary care Hospital.
Exclsusive Criteria:
Nurse managers age above 38years age ,nurse manager who have no awareness of AI.

Data Analysis

The data collected was systematically organized and analyzed using SPSS and Excel. These tools facilitated thorough analysis, helping to identify key barriers and propose actionable recommendations for improving workplace violence prevention strategies.

Data Findings and Analysis

4.1 Do you believe AI can improve patient care in your practice?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	4	13.3	13.3	13.3
Disagree	7	23.3	23.3	36.7
Neutral	5	16.7	16.7	53.3
Agree	9	30.0	30.0	83.3
Strongly Agree	5	16.7	16.7	100.0
Total	30	100.0	100.0	

Data Findings

The participants' response regarding the response of 30 participants about the opinion about improvement of patient care by integrating AI in practice is presented in Table 4.1 In total, the negative responses amount to 36.6% with 13.3% who strongly disagreed, with an additional 23.3% agreed with the statement, though in a disagreed manner. Further, 5 respondents, which is 16.7% chose the middle option, implying that they were either unsure or did not care about such a policy. On the positive side, 30% of the respondents agreed and the 16.7% strongly agreed brings the positive responses to 46.7%. These results suggest that stakeholders have a bifurcated view of the role that AI can play to improve patients' care, where an important part is rather skeptical or indifferent.

Data Analysis and Discussion

The results reveal that 46.7% of respondents have positive attitude toward AI and understand that it can enhance diagnostic accuracy, decision making, administrative aspects. But 36.6% of the participants expressed negative attitudes, which are due to ethical question, job losses, and dependable. 16.7% neutrality means that the people are hardly familiar or involved with the real essence of what AI entails.

4.2 Do you feel confident in using AI technologies in your daily work?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	5	16.7	16.7	16.7
Disagree	6	20.0	20.0	36.7
Neutral	7	23.3	23.3	60.0
Agree	9	30.0	30.0	90.0
Strongly Agree	3	10.0	10.0	100.0
Total	30	100.0	100.0	

Data Findings

Table 4.2 consolidates the responses of 30 participants towards the level of confidence in using AI technologies in the daily work environment. From the results, we have 16.7% strongly disagreed = 5 respondents disagree =20.0 = 6 respondents making it a total of 36.7% negative responses. At the same time, neutral – 23.3% (7 respondents) chose middle ground, expressing ambiguity or lack of interest. On the positive side, 30.0% (9) respondent agreed the statement and 10.0% (3) strongly agreed giving 40.0% positive opinion on the statement. These results suggest moderate optimism, however, the significant portion of the participants' uncertainty or lack of optimism regarding their capabilities to navigate AI technologies.

Data Analysis and Discussion

The analysis of the results revealed that 40.0% of respondents are rather confident about the use of AI technologies, which may result from previous practice or education. Their positive outlook is the reality of AI in healthcare domain given it can be easily incorporated given the support.

However, 36.7% of the rspondents were not confident with it due to some perceived challenges such as complexity, lack of training or perceived shirking of roles. The 23.3% neutral response speaks of a lack of clarity, and it is therefore important that adequate training and structured support be provided to fill the knowledge gap and create trust in AI technologies for daily application.

4.3 AI integration will enhance nurse efficiency

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	4	13.3	13.3	13.3
Disagree	3	10.0	10.0	23.3
Neutral	5	16.7	16.7	40.0
Agree	12	40.0	40.0	80.0
Strongly Agree	6	20.0	20.0	100.0
Total	30	100.0	100.0	

Data Findings

The participants' responses on their perception of whether the integration of AI will improve nurse efficiency are presented in the following table. This means that 23.3% of the respondents have given negative responses; 13.3% of the respondents strongly disagree and 10.0% of the respondents disagree. On the other hand, 16.7% (5 respondents) were neutral; they were unsure and/or did not care about the outcome. On the positive side, 40. 0% of the respondents agree

and 20. 0% of the respondents strongly agree making it a total of 60. 0% in favor. Such findings indicate most of the participants find efficiency as an area where AI can make a difference though still a considerable number remains skeptical/indifferent.

Data Analysis and Discussion

The responses compiled revealed 60.0% of the participants in favor citing their belief that AI could improve the efficiency of a nurse. Those who probably belong to the 'agree' or 'strongly agree' camp may consider AI as a helpful tool in managing the loads and redundant tasks and help in pinpointing the right pathways for decision-making to let the nurses attend more to the patients and be generally more productive. On the other hand, the 23.3% negative response and 16.7% neutral responses depict participant's pessimism or ambivalence towards AI. Usability concerns, dependency, or role interference could be the reasons for skepticism, and lack of interaction with AI accounts for neutrality. By addressing these concerns through training, open discussion, and assurance that AI is already deployed in many healthcare organizations, the gaps can be closed and the full participation of nursing professionals be availed.

4.4 Do you trust AI systems to make accurate recommendations for patient care?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	6	20.0	20.0	20.0
Disagree	5	16.7	16.7	36.7
Neutral	7	23.3	23.3	60.0
Agree	6	20.0	20.0	80.0
Strongly Agree	6	20.0	20.0	100.0
Total	30	100.0	100.0	

Data Findings

The participants' responses about their level of trust in AI systems to provide right recommendations for patient care are presented in table 4.4. The results also show that 20.0% (6) strongly disagree and 16.7% (5) disagree, which gives a total of 36.7% negative responses. Also, 7 respondents, 23.3%, are in the middle – they are unsure or indifferent to the issue. On the positive side 20.0% (6 respondents) said yes and another 20.0% (6 respondent) strongly agreed therefore 40.0% had favorable opinion to the statement. These results indicate that the general public remains divided with a notable measure of skepticism and ambivalence prevailing alongside a substantial body of positive attitudes.

Data Analysis and Discussion

Based on the given data, it can be assumed that only 0% of those who believe that AI systems can provide accurate recommendations are aware of the advantages of using AI, including improved data analysis and assistance with decision-making at the clinic level. Such responses are positive, indicating there is increasing confidence regarding the effectiveness of AI when employed in healthcare systems. Despite this, 36.7% of the participants expressed their levels of distrust and this raises questions about the reliability, accuracy and ethicality of AI systems. The 23.3% neutrality also shows that more people should educate themselves about the real-life use of AI. By training the professionals in these issues and providing clear information and evidence of successful implementations, such concern can be eased among the healthcare facility employees.

4.5 AI can help reduce nurse workload.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	4	13.3	13.3	13.3
Disagree	4	13.3	13.3	26.7
Neutral	6	20.0	20.0	46.7
Agree	10	33.3	33.3	80.0
Strongly Agree	6	20.0	20.0	100.0
Total	30	100.0	100.0	

Data Findings

Participant's response on whether AI can assist in reducing nurse's workload is as follows: The following is a summary of the entire 30 participant's answer to whether they think AI can assist in reducing nurse's workload. This makes 26.7% which comprises of 13.3% (4 respondents) strongly disagree and 13.3% (4 respondents) disagree. Further, 20.0% (6 respondents) said they have a neutral attitude toward the issue as they are unsure. On the positive side 33.3% (10) agree while 20.0% (6) strongly agree thus 53.3% of the respondents gave favorable responses. These results show that workplaces believe in AI to reduce their workload and there is skepticism but there is neutrality as well.

Data Analysis and Discussion

The overall response was positive with 53.3% of the respondent's expressing optimism that AI could lessen the nurse workload through automation of tasks, intelligent scheduling, and aides in patient monitoring. Those who responded affirmatively or strongly affirm are probably aware of the efficiency benefits accruing from AI in freeing up time for other more important, patient-centric tasks. Nonetheless, the total of the declared 26.7% negative and 20.0% neutral responses point to some level of uncertainty among the participants. These perceptions may be due to concerns of reliability of the AI systems, fear of reliance on technology or lack of profound knowledge, amongst others. By providing training, assistance and giving examples of how it has been successful in practice, the difficulties above listed can be overcome and AI can be trusted to reduce the workload.

4.6 AI tools provide valuable insights that improve patient outcomes

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	5	16.7	16.7	16.7
Disagree	6	20.0	20.0	36.7
Neutral	4	13.3	13.3	50.0
Agree	9	30.0	30.0	80.0
Strongly Agree	6	20.0	20.0	100.0
Total	30	100.0	100.0	

Data Findings

The responses of 30 participants on the question asking whether the AI tools prove useful and offer insights that enhance patient care are presented in table 4.7. As it applies to the negative scale, 16.7% (5 respondents) strongly disagree, and 20.0% (6 respondents) disagree for a total of 36.7%. On the other hand, 13.3% (4 respondents) are in the middle not giving any concrete opinion. conversely, 30.0% (9 respondents) of the respondents agree and 20.0% (6 respondents)

strongly agree that gave 50.0% of those in the favorable side. This means there is a half-full and half-empty mentality, with a few participants still on the fence.

Data Analysis and Discussion

The total number of participants answered in favor of the statement is 50.0% Thus, participants find AI tools as useful for improving patient outcomes. Such participants perhaps understand that AI can enhance diagnosis, evidence-based decision making, and even detect patterns which would be quite challenging for humans while dealing with large databases. However, the negative responses got to 36.7% They could be due to doubts on the details generated by the AI, or being apprehensive of relying too much on the technological aspect in handling crucial patient care issues. The 13.3% neutrality Co may be attributed to some participants may not be conversant or even exposed to AI in the health care sector. In order to overcome these problems, organizations should deliver relevant information, practical exercises, and examples of previous successful experiences in implementing AI technologies for improvement of patient outcomes.

4.7 AI can assist in decision making processes in clinical settings

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	5	16.7	16.7	16.7
Disagree	3	10.0	10.0	26.7
Neutral	6	20.0	20.0	46.7
Agree	8	26.7	26.7	73.3
Strongly Agree	8	26.7	26.7	100.0
Total	30	100.0	100.0	

Data Findings

Table 4.8 presents the response of thirty participants on the following question: Can AI help in the decision-making at clinical level? The findings reveal that strongly disagree response stood at 16.7%, disagreed at 10.0 %; totaling the negative towards 26.7%. Further, 20.0% of the six respondents were undecided, that is, they were in the neutral zone. On the positive side, 26.7% (8) agreed, and 26.7% (8) strongly agreed, thus, 53.4% of the respondents gave favorable response. Such findings imply that most of the participants' respondents acknowledged that AI can help with clinical decision-making, albeit with some doubts.

Data Analysis and Discussion

This is clear from the 53.4% positive responses which show acknowledgement that AI can assist in clinical decisions, for instance through the analysis of the large amounts of data, derivation of recommendations from such data and assisting in correct diagnoses. This is still an indication that more people are coming to understand the role of AI in healthcare as a complementary tool that assists the professionals. However, the 26.7% negative responses and 20% neutrality to questions about AI in clinical decision-making show concerns about the technology. Some of the possibilities that can be important are the concern of reliance on a tool, the concern of mistakes, or the concern that an AI system does not look at the context. The responses that were mostly neutral pose calls for increased awareness and a compilation of the impact of AI in actual clinical practice. Demonstration of how hands-on the trainers are, examples, and positive use cases will go a long way in increasing acceptance of AI as a decision-making tool in clinical practice.

4.8 AI can help in managing patient records more effectively

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	6	20.0	20.0	20.0
Disagree	7	23.3	23.3	43.3
Neutral	4	13.3	13.3	56.7
Agree	5	16.7	16.7	73.3
Strongly Agree	8	26.7	26.7	100.0
Total	30	100.0	100.0	

Data Findings

Table 4.9 presents the results of 30 participants in terms of whether AI can be of any assistance in managing patient records. As indicated above, there are 20.0% (6 respondents) that strongly disagreed and 23.3% (7 respondents) that disagreed, indicating 43.3% negative response. Self-employed respondents' responses: 13.3% (4 respondents) are undecided/unsure. On the favorable end, 5 out of 30 or 16.7% agreed, 8 out of 30 or 26.7% strongly agreed, and therefore, 18 out of 30 or 43.4% have favorable response. Further, these results show a fairly balanced view of AI employment in patient records with both positive and negative attitudes expressed equally.

Data Analysis and Discussion

The percentage of participants who had a positive attitude toward AI was 43.4 % this shows that most of the participants understood the importance of using AI in the management of patient's records through saving time, reducing errors and organizing the records system. The Others who agreed or strongly agreed probably may consider AI as an effective solution in increasing administrative effectiveness as well as improving record keeping standards. However, the total percentage of 43.3% negations are an indication that people are rather skeptical, maybe due to data security or privacy issues or maybe due to the challenges involved in migrating to artificial intelligence systems. The 13.3% neutrality can be attributed to the fact that the respondents had no preference and this maybe because they have not engaged or come across AI in this capacity frequently enough.

4.9 AI can facilitate better communication among healthcare team members

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	7	23.3	23.3	23.3
Disagree	5	16.7	16.7	40.0
Neutral	5	16.7	16.7	56.7
Agree	8	26.7	26.7	83.3
Strongly Agree	5	16.7	16.7	100.0
Total	30	100.0	100.0	

Data Findings

Table 4.10 provides a list of 30 participants' answers about whether AI can help to improve communication between members of the healthcare team. 7 of the respondents strongly disagree and 5 of them disagree thus making 40% of the negative responses. Lastly, 16.7% (5 respondents) are neutral meaning they are in the 'I don't know'. On the positive side 26.7% (8 respondents) said they partly agreed while 16.7% (5 respondents) said they strongly agreed thus giving a total of 43.4% in the agreeable responses. The results presented in this research

show that the public holds both positive and negative attitudes towards advertising with a considerable number of ambivalent opinions.

Data Analysis and Discussion

The data reveals that 43.4% of the participants are aware that AI can help facilitate effective communication in the healthcare teams by organizing information and making it clear within the team. These respondents might consider AI as an opportunity to optimize the organization's work and minimize misunderstanding in a clinical setting. However, the 40.0% negative responses added to the 16.7% for the uncertain reaction means that a good portion of participants are rather guarded or unsure about the role AI is to play in communication. Potential concerns can be derived from such issues as isolation, technologically mediated interactions, or integration of AI applications into practice. In addressing these concerns, healthcare organizations should aim at showing how AI is not a threat to human interaction but rather an enhancement and provide relevant teachings to ensure that team members know how to use AI when in teams.

4.10 Are you concerned about the reliability of AI in patent care?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	8	26.7	26.7	26.7
Disagree	2	6.7	6.7	33.3
Neutral	6	20.0	20.0	53.3
Agree	9	30.0	30.0	83.3
Strongly Agree	5	16.7	16.7	100.0
Total	30	100.0	100.0	

Data Findings

Responses of 30 participants on issues on the reliability of AI in patient care are shown in table 4.11. The findings show that 26.7% (8 respondents) strongly disagreed, 6.7% (2 respondents) disagreed, and 33.4% overall for negative responses. Further, 20.0% (6 respondents) are on the middle ground of the continuum, suggesting ambivalence. On the positive side, 30.0% (9 respondents) agree, 16.7% (5 respondents) strongly agree, hence 46.7% positive response. These findings imply high concern by participants for the dependency on AI in patient care and treatment.

Data Analysis and Discussion

The responses that we saw were favorable for 46.7% thus evidence that more than a third of the participants are concerned with the reliability of the development in patient care. It is probable that this group perceives AI as a threat because of such matters as mistakes, algorithms' prejudice or the absence of contextual knowledge. These issues are typical of the healthcare workers as they practice new technologies in the high-risk areas.

On the other hand, 33.4 % of negative responses imply either in the participants rely on the reliability of AI system or they think that current measures do address risk factors potentially. From the 20.0% neutral answers we can see that this could be due to lack of knowledge or exposure to AI in clinical practice. Making the conflicts obvious by presenting actual-life use of AI and explaining the risks ahead of time can also assist in including trust and decrease the concern regarding the use of AI in treatment.

4.11 Do you worry that AI might replace your job as a nurse?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	7	23.3	23.3	23.3
Disagree	5	16.7	16.7	40.0
Neutral	7	23.3	23.3	63.3
Agree	5	16.7	16.7	80.0
Strongly Agree	6	20.0	20.0	100.0
Total	30	100.0	100.0	

Data Findings

Table 4.12 provides an overview of 30 participants' answers to concerns that AI could replace the subject's job as a nurse. In fact, 23.3% (7 respondents) strongly disagree, and 16.7% (5 respondents) disagree, which makes up 40.0% negative responses. Besides, 23.3% (7 respondents) are in the middle state, meaning that they are unsure. On the other hand, 16.7% of the respondents agree, while 20.0% strongly agree; hence 36.7% positive responses. The positions highlighted in these findings are quite diverse, and concern and uncertainty are observed at a fairly high level.

The Data Analysis and Discussion

The 36.7% favorable responses mean that a large number of participants seems to be worried by the possibility that AI can replace the nurses' positions. These concerns may be due to the growth of automation in day-to-day activities to an extent that may make some people think that AI might reduce human interjection in some areas of health care.

On the other hand, the negative responses give a 40.0% indication that many participants feel safe in their jobs explaining that the human aspects of nursing cannot be duplicated by AI. The 23.3% neutrality will be attributed to this by imbalance of the number representing the understanding of AI and its scope and the competence nature of the board. In response to these concerns, the following ideas can be suggested: AI should be viewed as an assistant, not a competitor to human skills, which means that nurses will remain relevant and indispensable figure in the provision of health care services.

4.12 Do you feel that you lack adequate training to use AI systems effectively?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	6	20.0	20.0	20.0
Disagree	3	10.0	10.0	30.0
Neutral	6	20.0	20.0	50.0
Agree	7	23.3	23.3	73.3
Strongly Agree	8	26.7	26.7	100.0
Total	30	100.0	100.0	

Data Findings

Table 4.13 captures the narratives of 30 participants concerning their perception about whether or not they feel they are not well-trained enough to use AI systems. The analysis of the given results shows that 20.0% of the respondents, that is six, strongly disagree and 10.0%, that is three, disagree, which makes up to 30.0% of negative responses. Further, 6 respondents are still unsure, thus placing themselves in the neutral camp with 20.0%.) On the positive side, 7 (23.3%) respondents agreed while 8 (26.7%) strongly agreed making it 50.0% affirmative

response. These findings suggest that the participants' engagement in AI exposes them to a considerable problem of having inadequate training to operate AI systems.

Data Analysis and Discussion

The 50.0% in the favor column raises a significant issue of lack of training pointing out the fact that most of the participants lack adequate training to deal with AI systems. This also highlights the requirement for proper and well-organized training programs to ensure that healthcare workers are well trained and comfortable to incorporate AI to their operations.

On the other hand, the 30.0 % negative response shows that some participants feel well trained or do not consider training as having much of an impact. The 20.0% neutrality might be because of the impartiality with potential intentions and expectations from the AI technologies. To overcome such issues, it is recommended to enforce widespread educational programs that will help the staff, regardless of their experience level, succeed at using AI in the sphere of healthcare.

Data Findings

The participants' responses are summed up in table 4.14 which aims at identifying if the participants consider ethical issues concerning the application of AI in health care. The results show that 16.7% (5) strongly disagree and 13.3% (4) disagree, making the overall percentage of negative response to be 30.0%. Also, 20.0% of the respondents (6 respondents) are in the

4.13 Are there ethical concerns surrounding AI use in healthcare?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	5	16.7	16.7	16.7
Disagree	4	13.3	13.3	30.0
Neutral	6	20.0	20.0	50.0
Agree	8	26.7	26.7	76.7
Strongly Agree	7	23.3	23.3	100.0
Total	30	100.0	100.0	

middle hence are neutral. On the positive side 26.7% of the respondents agreed, and 23.3% strongly agreed, making it a 50.0% positive response

Data Analysis and Discussion

The 50.0% favorable responses show that many participants appreciate the ethical problems regarding the AI use in healthcare including privacy, machine learning bias, and tendencies toward depersonalization of the treatment process. These concerns are the result of a new understanding of AI's potential as a tool that can be applied in delicate and important healthcare settings. The remaining 30.0% negative responses suggest that there are participants who do not consider ethical issues as a significant concern, maybe because they have confidence in the current measures put in place or rarely encounter cases that present ethical concerns. The percent of 20.0% neutrality shows that the subjects are indifferent probably due to lack of awareness of specific ethical issues. To address these concerns, it is necessary to increase the transparency, establish proper ethical framework and hold continuous discussions on how to implement AI in health care in a non-harmful manner for all sides involved.

4.14 Is the implementation of AI in your workplace too complex?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	9s	30.0	30.0	30.0
Disagree	3	10.0	10.0	40.0
Neutral	5	16.7	16.7	56.7
Agree	8	26.7	26.7	83.3
Strongly Agree	5	16.7	16.7	100.0
Total	30	100.0	100.0	

Data Findings

The responses of 30 participants concerning the question asking if they think that the implementation of AI in their workplace is too complex are given in table 4.15. The results further reveal that 30.0% of the respondents strongly disagree while 10.0% of the respondents disagree, which gives 40.0% over all negative response. Further, 16.7% of the respondents are on the fence, in the middle, with 5 out of the 30 respondents being neutral. On the positive side, 26.7% (8 respondents) agree, 16.7% (5 respondents) strongly agree, making 43.4% percent of respondents who gave favorable responses. In light of these results these authority opinions mean that while there is a reasonable split of views and a significant portion of participants identifies complexity in the utilization of artificial intelligence.

Data Analysis and Discussion

The 43.4% favorable responses signal the fact that most of the participants view the implementation of AI as cumbersome because, among others, it is technically demanding, it may be challenging to integrate with other systems and there is usually a lack of friendly user interfaces. These perceptions may limit the wider application of the systems and point out the need for easier to use systems and more assistance during the process.

On the other hand, the 40.0% negative responses indicate that a number of participants does not feel that the implementation of AI is too complex. This group may have worked on other systems or have ready access to well-designed systems and hence the integration process may not be so complex. The 16.7% neutrality can be attributed to such a response as they do not hold any extreme views about AI and it may be due to lack of exposure to such systems or they may have had both positive and negative experiences with the systems. It also means that concerns can be addressed through extensive training and by ensuring that the design of the solutions is as user friendly as possible.

4.15 Are you excited about the potential of AI in healthcare?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	5	16.7	16.7	16.7
Disagree	5	16.7	16.7	33.3
Neutral	7	23.3	23.3	56.7
Agree	8	26.7	26.7	83.3
Strongly Agree	5	16.7	16.7	100.0
Total	30	100.0	100.0	

Data Findings

Table 4.5 shows the responses of 30 participants on a scale of 1-5 for their interest in the possibilities of AI in healthcare. The results show that 5 respondents strongly disagree and 5

respondents disagree giving a total of 10 negative responses which is 33.3%. Thirdly, there is the neutral category, where 7 respondents of the total constitute 23.3% hold no clear opinion or are unsure. On the positive side 26.7% (8 respondents) said 'I agree', and 16.7% (5 respondents) said 'Strongly agree'; thus making a total of 43.4% in the agreeable category. These outcomes show that people have rather ambiguous feelings concerning AI, as rather large shares of respondents are both interested and concerned with intellective technologies.

Data Analysis and Discussion

The positive response from the participants are 43.4% and the participants understand that AI has the capacity to revolutionize the health care industry through efficiency, better decision making and better patient outcomes. This group will most probably have a positive outlook on how AI can handle problems touching on health care delivery and making the process more efficient. Nevertheless, the 33,3% of negative responses in addition to the 23,3% of neutrality demonstrates a rather high level of suspicion or doubt. Lack of trust in technology, ethical concerns, and the time it takes to learn about AI technologies might cause such perceptions. To overcome these concerns, education, effective communication, and focusing on the practical impact AI can have in the healthcare sector should be useful in reducing concerns and increasing interest from healthcare professionals

Summary

The concept of using AI in healthcare is becoming one of the most revolutionary trends that affect diagnostic accuracy, patient supervision, and organizational management. Nurse managers who are at the center of healthcare organizational delivery are at the forefront of this technological change. AI's uses in fields such as robotic surgeries, electronic health records, and use of predicting analytic tools are drastically improving patient care delivery. But this change has its benefits and complexities that should be managed to maximize the use of AI in healthcare facilities Davenport, T., & Kolkata, R. (2019).

This study has found that nurse managers today have different perception towards AI, which include considering AI as useful tool that can help in reducing workloads, assist in organizing work and improving patients' outcomes. However, certain concerns are still valid, including ethical issues, data privacy, and the tendency of healthcare to become more mechanized. Some of the advanced nurse managers view AI as an enhancement to decision-making and operations as well as efficiency while others worry about their job losses and the integration of the systems. These mixed attitudes suggest that it is necessary to perform more specific efforts to change the perception of AI implementation positively.

It is as a result important for the success of AI in healthcare to have six fundamental enablers that include training, organizational support, ethical considerations. A clear finding is that one-third of the nurse managers are not adequately prepared to integrate AI into their practice; thus, education and intuitive systems are crucial. Furthermore, the doubts about the stability of AI and the change of focus from the person to the machine in nursing care stress the need to implement these technologies in a manner that complements human skills.

Conclusions

AI is recognized as having the potential to revolutionaries' healthcare, by enhancing the quality of care delivered to patients, streamlining many backend tasks, as well as supporting medical decisions. The incorporation of the technologies into health care systems presents a unique chance for nurse managers to spearhead the implementation of the technologies in a way that will be consistent with the advanced care objectives and system efficiency. Nevertheless, the achievement of these benefits comes with enormous challenges associated with lack of information, ethical issues, and system challenges. Hence

Therefore, the attitudes that the nurse managers possess largely shape AI implementation success. Such support and belief in these technologies by various health care organizations can propel wider usage of such technologies in health care settings. On the other hand, their doubts or reluctance which stems from the lack of training, or the threat of job losses could slow progress. Therefore, identifying and managing these attitudes is important in order to create a positive climate towards innovation and cooperation in healthcare organizations.

- The challenges of data privacy, algorithmic bias, and depersonalization of care have not gone away as we see in the following areas. These challenges might be dealt with effectively by developing policies that are clear regarding these issues, good and regular communication to all stakeholders, and even strict and well-defined ethical standards that everyone has to observe and follow to the letter; these will be vital in rebuilding trust among the nurse managers and other professionals in the health facilities. The implementation of AI must incorporate elements of principles that ensure patient's safety, privacy and recognizing the human touch in delivery of care. Hence alternate hypothesis which is nurse managers with higher levels of awareness and understanding of AI technology have more positive attitudes toward its adoption in healthcare settings is approved.

Recommendations

- Enhanced Training Programs: Establish elaborate training programs tailored towards teaching nurse managers all that they need to know about the AI systems to use and how to use them to their advantage. Skills training should involve demonstration and ethics, agendas and cases on success stories of Artificial Intelligence tools.
- Address Ethical Concerns: Develop clear ethical frameworks that would address the issues of data privacy and sensitive data, potentially prejudiced algorithms, and dehumanized care. This paper will recommend that there should be more transparency in communicating the ethical use of AI to nurse managers.
- Simplify AI Systems: Implement application friendly interfaces of an AI system so as to reduce the amount of interface development which in turn makes it easy to incorporate the AI system into existing workflows. The degree to which these AI tools mirror the actual requirements of medical workers will enhance usage.
- Promote Organizational Support: Encourage and foster health care organization innovation strategies. Ensure the availability of tools and AI solutions as well as – technical and organizational support for nurse managers and other representatives of the staff.
- Pilot Programs and Success Stories: Trial projects should be initiated to provide proof of concept that AI can be of significant value in enhancing the quality of patient care as along with reducing costs and increasing productivity. To minimize the negative attitude among the stakeholders about the project, positive experiences can be shared to boost confidence.
- Focus on Human-AI Collaboration: Stress AI to be used as an augmentation of human intelligence instead of a replacement. Emphasize on how it enhances decision-making, cuts on the number of repetitive activities and consequently creates time for patients.

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