



A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE ON ARTIFICIAL INTELLEGEANCE AMONG NURSES WORKING IN GOVERNMENT HOSPITAL CHITTOOR, ANDHRA PRADESH.

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ABSTRACT:

OBJECTIVES:

- To assess the knowledge on artificial intelligence among nurses working in government hospital Chittoor Andhra Pradesh.
- To evaluate the attitude on artificial intelligence among nurses working in government hospital Chittoor Andhra Pradesh.
- To determine the association between selected demographic variables such as age, gender, educational qualification, year of experience, current working area, type of employment, source of information.

METHODOLOGY:

Research methodology is a systemic way of doing research to solve a problem. It compromises of problems the objectives of study hypothesis that have been formulated the variable under study the method needs for the data collection and statistical method used for analyzing data and used for data collection and logic behind it. And the whole, it gives a general pattern of gathering and processing of research data.

RESULTS:

- The findings of study regarding level of knowledge and attitude on artificial intelligence among nurses revealed that.
- 60% of the study population are at the age group between 26 - 35 years.
- 90% of the population are female
- 45% of the population are B.sc undergraduate nurses.
- 45% of the population have 6 to 10 years of experience
- 42% of the study population are permanent staff nurses
- 88% of the population have heard about artificial intelligence
- 63% of the population source of information about artificial intelligence through internet and social media.
- 78% of the study population attended artificial intelligence related training and workshop.
- 63% of the population are using electronic health records.
- 43% of the study population are interested in learning about artificial intelligence in health care.
- Among the participants 7% of people have adequate knowledge, 60% of people have moderate knowledge, 33% of people were having inadequate knowledge.
- Among the participants 55% have negative attitude, 28% have moderate attitude and 17% have high attitude.

CONCLUSION:

The findings of the study concluded that among the participants, the level of knowledge on Artificial Intelligence was 60%, and the level of attitude towards Artificial Intelligence was 55% among nurses working in Government Hospital, Chittoor, Andhra Pradesh. Hence, continuous CNE programmers are essential to enhance awareness regarding Artificial Intelligence among nurses.

KEYWORDS: knowledge and attitude, Artificial intelligence among nurses

INTRODUCTION:

Artificial intelligence (AI) is defined as a general term for techniques used to train computers to imitate human cognitive functions such as reasoning, communicating, learning, and decision-making Artificial intelligence is growing rapidly and penetrating many aspects of people's daily lives, both in personal and professional environments. The use of artificial intelligence for healthcare purposes has been explored for decades. However, it has recently been more widely used in the medical field due to improvements in algorithms, computing power, and the rapid increase in data available for each patient. AI technologies are expected to enhance healthcare efficiency and significantly reduce costs.

Artificial intelligence (AI) is a branch of computer science. It is an intelligent system that uses computer technology to simulate, extend, expand, and realize the human mind to carry out thinking activities, learn knowledge, etc., and to help human beings solve problems. With the rapid development of the Internet and AI, the combination of AI and medicine has had far-reaching effects on healthcare systems and nursing. AI plays a significant role in clinical care, nursing education, nursing management, etc.

Artificial Intelligence (AI) is rapidly transforming healthcare and is emerging as a practical tool in nursing practice for tasks ranging from clinical decision support and early risk detection to documentation automation and patient education. Nurses already interact with AI-enabled tools such as predictive risk models, natural language processing for charting, and chatbots that support patient triage and education; these tools can reduce administrative burden and help nurses focus more on direct patient care. However, adoption raises important issues usability, trust, data quality, bias, and the need for AI literacy among nurses which must be addressed to ensure safe and ethical integration.

Exploring AI in nursing practice is timely because evidence is accumulating both clinical and operational impacts, and nurses' perceptions and readiness will shape how these technologies are implemented on the floor. A focused literature search (2020–2025) will identify current applications, measured benefits, adoption barriers, and educational needs that can inform nursing practice, policy.

NEED FOR THE STUDY:

Artificial Intelligence (AI), introduced in 1956 at the Dartmouth Conference in the United States, has evolved into one of the fastest-growing technologies in healthcare. Over the decades, AI applications have expanded from early clinical decision-support systems such as MYCIN in the 1970s to today's advanced tools used in diagnostics, predictive monitoring, electronic health records, early warning systems, triage, and robotic surgery.

Globally, more than 80% of developed countries have integrated AI-based tools into healthcare, whereas low and middle-income countries continue to face barriers such as limited awareness, inadequate technical skills, and lack of structured training. Despite rapid digitalization, many nurses remain underprepared to use AI safely and effectively in clinical practice.

International studies from Germany, Egypt, China, and India report that although nurses have a positive attitude toward AI, 60-75% lack adequate knowledge about AI functions, ethical considerations, data privacy, and clinical applications.

STATEMENT OF THE PROBLEM:

A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE ON ARTIFICIAL INTELLIGENCE AMONG NURSES WORKING IN GOVERNMENT HOSPITAL CHITTOOR, ANDHRA PRADESH.

OBJECTIVES OF THE STUDY:

- To assess the knowledge on artificial intelligence among nurses working in government hospital Chittoor Andhra Pradesh.
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ASSUMPTION:

Nurses working in government hospital Chittoor, Andhra Pradesh may have inadequate knowledge and attitude on Artificial Intelligence.

OPERATIONAL DEFINITIONS:

1. **Assess:**

Assessing artificial intelligence among nurses refers to evaluating nurses' knowledge, awareness, attitudes, skills, and use of artificial intelligence in clinical practice. It also includes identifying how AI influences nursing care, decision-making, workload, and patient outcomes.

2. **Knowledge:**

Knowledge refers to the understanding and awareness that nurses have about AI, including its meaning, applications, benefits, risks, and limitations.

3. **Attitude:**

Attitude refers to the nurses' feelings, beliefs, perceptions, and readiness toward the adoption and use of AI in nursing practice. It includes their acceptance, trust, and willingness to integrate AI into their clinical work.

4. **Artificial Intelligence (AI):**

In this study, AI refers to computer-based systems or technologies designed to mimic human intelligence to assist in healthcare decision-making, diagnostics, monitoring, and administrative tasks within clinical settings.

5. **Nurses:**

Nurses' awareness of artificial intelligence refers to the level of knowledge, understanding, and familiarity nurses have regarding artificial intelligence technologies and their applications in healthcare and nursing practice.

6. **Government hospital:**

Artificial intelligence among nurses in government hospitals refers to how nurses in public (government-run) healthcare settings are aware of, interact with, use, and perceive AI technologies to support patient care, clinical decisions, documentation, monitoring, and workflow improvement.

The research design selected for the present study was a cross-sectional descriptive research design.

VARIABLES OF THE STUDY:

The variables of this study include dependent variables and independent variables.

Dependent variables:

Knowledge and attitude on artificial intelligence, among nurses working in Government Hospital Chittoor, Andhra Pradesh.

Independent variables:

Selected demographic variables of nurses.

Extraneous variables:

Extraneous variables are factors other than the independent variables that may influence the knowledge and attitude regarding artificial intelligence among nurses working in government hospital Chittoor Andhra Pradesh.

SETTING:

The setting of the study was conducted at Government Hospital, Chittoor, Andhra Pradesh. The setting was selected based on the investigator's feasibility in terms of sample and availability of sample. The data collection was carried out during the month of September 2024.

POPULATION:

The population of this study includes the nurses who are working in Government Hospital, Chittoor, Andhra Pradesh.

SAMPLE:

The sample consists of nurses working in Government Hospital, Chittoor, Andhra Pradesh, who fulfilled the inclusion criteria.

SAMPLE SIZE:

The sample size for the present study was 60 nurses.

SAMPLE TECHNIQUE:

Nonprobability convenient sampling technique was adopted to select the sample as the selection of participant dependent on the availability of nurses working in government hospital Chittoor Andhra Pradesh, and those who met the inclusion criteria.

CRITERIA FOR SAMPLE SELECTION:**Inclusion Criteria:**

Nurses working in Government Hospital, Chittoor, Andhra Pradesh.

Nurses who are willing to participate in the study.

Exclusion Criteria

Nurses who were on leave or absent during the period of data collection.

Nurses who were included in the pilot study.

Nurses who were not willing to participate in the study.

DEVELOPMENT AND DESCRIPTION OF THE TOOL:

Data collection tools are procedures or instruments used by the researchers to observe and measure the key variables in a research problem.

The tool for present study was developed based on extensive reviews of the relevant literature from textbooks, journals, websites, and under the guidance of experts to assess knowledge and attitude on artificial intelligence among nurses working in Government Hospital, Chittoor.

The tool comprised of two sections

Section 1:

Demographic variables:

This section included items related to demographic variables such as age in years, gender, educational qualification, years of experience, type of employment, awareness regarding artificial intelligence, source of information on artificial intelligence, attend once at artificial intelligence related training or workshop, use electronic records (EHRS) in the hospital, interest in learning about artificial intelligence in health care.

Section II:

A. This section consisted of a self-structured questionnaire with 20 items to assess the knowledge of nurses regarding Artificial Intelligence in healthcare.

B. This section consisted of a structured attitude scale to assess the attitude of nurses towards artificial intelligence in health care.

Scoring key:

Scoring key prepared for the assessment of knowledge and attitude regarding artificial among nurses.

Section I:

Demographic variables were coded and analyzed using frequency and percentage.

Section II:

A. Consists of a 20 self-structured checklist to assess the knowledge of nurses regarding Artificial Intelligence in healthcare.

B. Attitude Towards Artificial Intelligence Among Nurses. It consists of a 5-point Likert scale to assess the attitude regarding Artificial Intelligence among nurses. Each question carries 1mark; wrong answer carries 0 mark.

The Likert Scale: 5-Strongly Agree (SA), 4-Agree (A), 3-Neutral (N), 2-Disagree (D), 1Strongly Disagree (SD)

The scoring is categorized as follows:

Adequate Knowledge > 75%

Moderate Knowledge > 51-75% Inadequate knowledge < 50

OBJECTIVE-1

To assess the knowledge on artificial intelligence among nurses working in government hospital Chittoor Andhra Pradesh.

Table 4.2: Frequency and Percentage distribution of level of knowledge on Artificial Intelligence among nurses working in government hospital, Chittoor, Andhra Pradesh.

Level of Knowledge	Frequency (f)	Percentage (%)	MEAN	STANDARD DEVIATION
Inadequate	20	33%	0.54	0.06
Moderate	36	60%		
Adequate	4	7%		

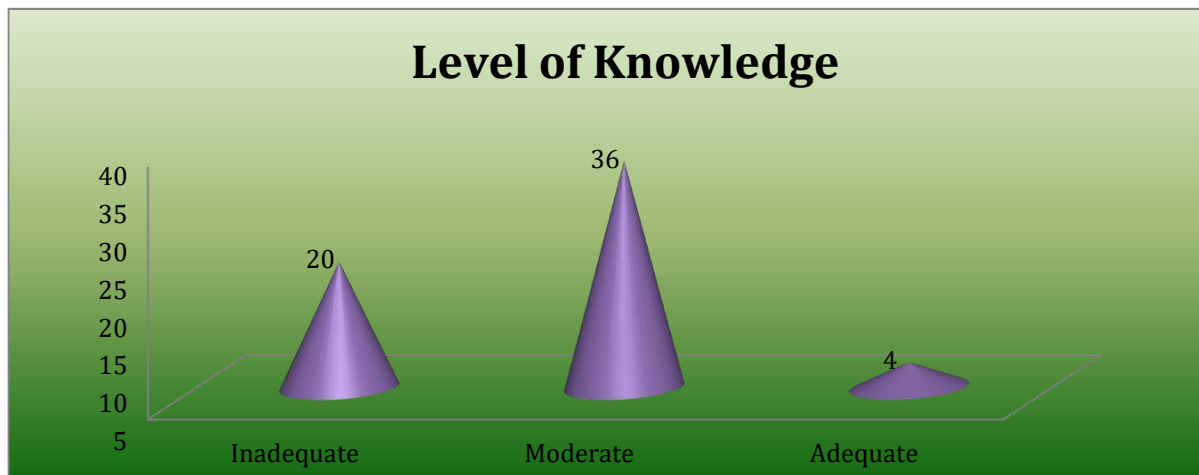


Figure 4.2: Frequency and percentage distribution of level of knowledge on artificial intelligence among nurses working in a government hospital, Chittoor, Andhra Pradesh.

This represents the distribution of nurses based on their level of knowledge regarding Artificial Intelligence. Most nurses, 60%, demonstrated a moderate level of knowledge, indicating basic understanding without advanced proficiency. About 33% of nurses had inadequate knowledge, reflecting limited awareness and exposure to AI concepts. Only 7% of nurses exhibited adequate knowledge, highlighting a significant gap in advanced AI competency. The mean knowledge score of 0.54 ± 0.06 suggests an overall average level of knowledge with minimal variation. These findings indicate that although awareness exists, comprehensive knowledge of AI among nurses remains limited, emphasizing the need for structured educational interventions.

OBJECTIVE-2

To assess the Attitude on artificial intelligence among nurses working in government hospital Chittoor. Andhra Pradesh.

TABLE 4.4: Frequency and Percentage distribution of level of attitude on artificial intelligence among nurses working in government hospital, Chittoor, Andhra Pradesh.

Level of Attitude	Frequency (f)	Percentage (%)	MEAN	STANDARD DEVIATION
HIGH	10	17	1.64	0.005
MODERATE	17	28		
LOW	33	55		

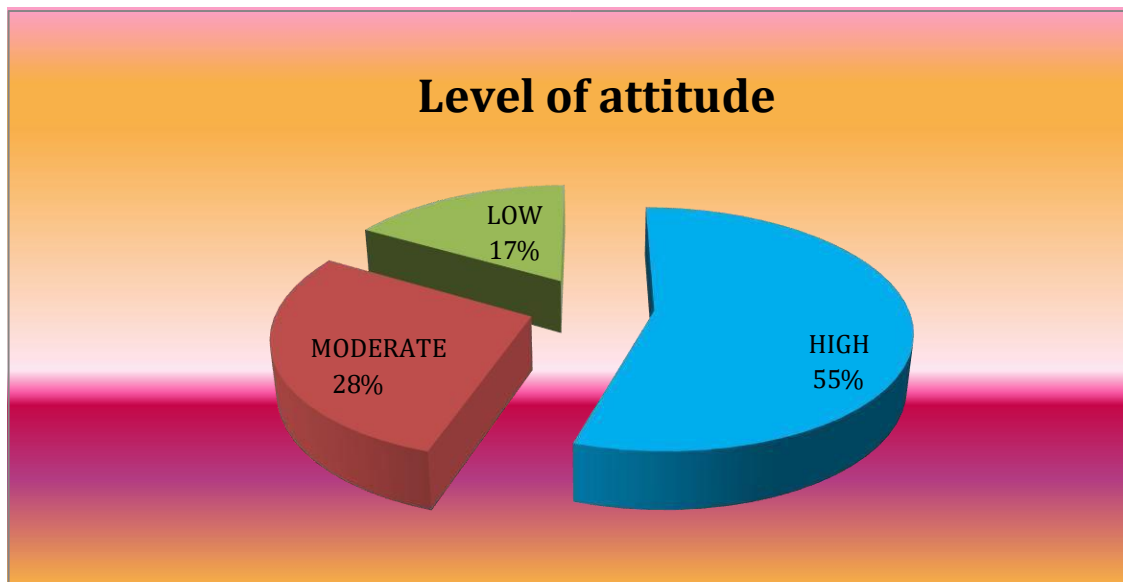


Table 4.4: Shows the frequency and percentage distribution of the level of attitude towards artificial intelligence among nurses working in a government hospital, Chittoor, Andhra Pradesh.

The findings reveal that most nurses, 33 (55%), had a low level of attitude towards artificial intelligence. About 17 (28%) of the nurses showed a moderate level of attitude, while only 10 (17%) of the nurses had a high level of attitude towards artificial intelligence. The mean attitude score was 1.64 with a standard deviation of 0.005, indicating that overall attitude of nurses towards artificial intelligence was low. This suggests that most nurses have limited acceptance and confidence regarding the use of artificial intelligence in healthcare.

OBJECTIVE-3

To find out the association between knowledge on artificial intelligence among nurses with their selected demographic variables.

Table 4.1: Frequency and percentage distribution of demographic variables among nurses working in government hospital Chittoor, Andhra Pradesh.

(N= 60)

S.No	Demographic Variables	Frequency	Percentage %
1.	Age in years		
	a. > 25 years	7	12
	b. 26– 35 years	36	60
	c. 36– 45 years	16	27
	d. Above 45 years	1	2
2.	Gender		

	a. Female	59	98
	b. Male	1	2
3.	Educational qualification		
	a. GNM	17	28
	b. B.Sc. Nursing	27	45
	c. Post basic B.Sc. Nursing	15	25
	d. MSc Nursing	1	2

4.	Years of experience		
	a. > 5years	14	23
	b. 6-10years	29	48
	c. 11-15 years	14	23
	d. <15years	3	5
5.	Type of employment		
	a. Permanent	25	42
	b. Temporary	25	42
	c. Contract	10	17
6.	Have you heard of artificial intelligence (AI)?		
	a. Yes	53	88
	b. No	7	12
7.	If yes, Source of information about Artificial Intelligence		
	a. Formal education	4	7
	b. Workshop / training	10	17
	c. Internet / social media	38	63

	d. Colleagues	2	3
	e. Others	6	10
8	Have you attended any AI– related training/workshop?		
	a. Yes	13	22
	b. No	47	78
9	Do you use Electronic Health Records (EHRs) in your hospital?		
	a. Yes	38	63
	b. No	5	9
	c. Not sure	17	28
10	Are you interested in learning about Artificial Intelligence (AI) in healthcare?		
	a. Yes	26	43
	b. No	8	13
	c. may be	26	43

The above table describes the socio-demographic characteristics and Artificial Intelligence (AI)– related profile of 60 nurses. Female nurses constituted the majority 59 (98%), reflecting the gender distribution of the nursing profession. Regarding education, 27 (45%) were B.Sc. Nursing graduates, 17 (28%) were GNM, 15 (25%) had Post Basic B.Sc. Nursing, and only 1 (2%) had M.Sc. Nursing qualification. Nearly half of the nurses 29 (48%) had 6–10 years of experience, while 23% each had more than 5 years and 11– 15 years of experience. Permanent and temporary nurses were equally represented (42% each), with 17% working on a contract basis. A large majority, 53 (88%) had heard about AI, mainly through the internet and social media (63%), while only 22% had attended AI-related training. Most nurses, 38 (63%), reported using Electronic Health Records, though 28% were unsure. Regarding interest in AI, 43% expressed willingness to learn, 43% were uncertain, and 13% were not interested, indicating overall awareness of AI with limited formal training but a favorable inclination toward future learning.

CONCLUSION:

The findings of the study concluded that most nurses working in Government Hospital, Chittoor, Andhra Pradesh had a moderate level of knowledge regarding Artificial Intelligence. Among the participants, 60% had moderate knowledge, 33% had inadequate knowledge, and only 7% had adequate knowledge regarding Artificial Intelligence.

Regarding attitude towards Artificial Intelligence, the study revealed that 55% of the nurses had a negative attitude, 28% had a moderate attitude, and 17% had a positive attitude. Therefore, the study highlights the need for continuous CNE programmers, workshops, and training sessions to improve nurses' knowledge, develop a positive attitude, and enhance their preparedness for the effective and ethical implementation of Artificial Intelligence in nursing practice.

IMPLICATIONS:

NURSING IMPLICATIONS:

- Faculty development programs are needed to train nurse educators on AI-related content.
- Simulation-based AI training should be introduced to enhance experiential learning.

NURSING PRACTICE:

- Nurses should be trained to work with AI tools like clinical decision support systems, automated monitoring, and virtual nursing assistants.
- Promote a collaborative environment where nurses can report and discuss AI-related experiences.
- Develop hospital protocols for safe, ethical, and effective use of AI in patient care.

NURSING RECOMMENDATIONS:

- Nurses should be encouraged to participate in AI-related research and innovation activities.
- Research funding should be allocated for studying AI's impact on nursing care and outcomes.
- Government and healthcare institutions should organize training sessions on AI for nurses.

LIMITATION:

- The study is limited to Government hospital Chittoor

RECOMMENDATIONS:

Artificial Intelligence is about making computers think and learn like humans, enabling them to perform tasks that normally need human intelligence, such as understanding in language, solving problems, recognizing patterns, and making decisions, by processing vast amounts of data.

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