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A descriptive study to assess the knowledge and attitude regarding integration of Artificial Intelligence in healthcare settings among nursing students of Rayat Bahra College of Nursing, Mohali, Punjab

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Abstract

Background: One area of computer science is artificial intelligence (AI). It is a clever system that makes use of computer technology to mimic, grow, and realize the human mind in order to do cognitive tasks, acquire knowledge, and assist people in problem-solving. AI and medicine have had a significant impact on nursing and healthcare systems due to the Internet's and AI's rapid development. Clinical care, nursing education, nursing management, and other areas are all significantly impacted by AI.

Aim of the study: Aim of study to assess the knowledge and attitude regarding integration of Artificial Intelligence in healthcare settings among nursing students of Rayat Bahra College of Nursing, Mohali, Punjab.

Design and Methods: This study was conducted using a descriptive research design and a quantitative approach. Rayat Bahra College of Nursing in Mohali, Punjab, was the location chosen for this investigation. Using the Convenient Sampling approach, a 150 students from several B.Sc. Nursing classes were selected using a sociodemographic profile, a self-structured questionnaire, and an attitude scale about the use of AI in healthcare settings. Both descriptive and inferential statistics were used in the data analysis.

Results: The study's conclusions demonstrated nursing students' degree of understanding about the use of AI in healthcare settings. Just 2.7% of the 150 students had average knowledge, while the bulk, 97.3%, had good knowledge and understanding. The average knowledge score was 27.31. According to a study's findings, family type and knowledge score are significantly correlated (P=0.029). Other variables were shown to be non-significant. The study's conclusions showed that nursing students had an attitude about the use of AI in healthcare environments. Only 26% of the 150 had a good attitude, whereas the majority (74%), had a negative attitude. The average attitude score was 59.55. A study's findings indicate that there is no meaningful correlation between the variables.

Conclusion: Our study concluded that the majority of students have good knowledge and negative attitude regarding the integration of Artificial Intelligence in healthcare settings among nursing students. The results of a study shows that there is a significant association between family type with knowledge score (P=0.029). The findings of the study revealed that attitude with selected demographic variables found not significant.

Keywords: Assess, knowledge, attitude, artificial intelligence, nursing students

Introduction

One definition of artificial intelligence is a copy of a human brain that is capable of thought. John McCarthy, who is regarded as the father of artificial intelligence, first used the term "artificial intelligence", which he defined as "the science and engineering of making intelligent machines, especially intelligent computer programs" [1]. AI is a type of intelligence, a software technology, a topic of research, and a part of computer science that focuses on creating robots, computers, or just machines that think, act, and perform like human being [2]. A computerized system that demonstrates behavior generally regarded as guiding intelligence is said to possess artificial intelligence. The study of programming machines to perform tasks that would need human intelligence is known as artificial intelligence [3]. In the medical field, artificial intelligence is similar to having an extremely intelligent computer that aids in decision-making, productivity, and patient care for physicians, nurses, and other healthcare workers. A lot of data is used by artificial intelligence, such as medical records and test results, to help identify illnesses, find the best therapies, forecast patient outcomes, and automate repetitive chores. Better patient care, fewer errors, more time for physicians to spend with patients, and better health outcomes are all consequences of this. Among its many applications are the analysis of medical images, comprehension of patient data, and assistance to physicians in diagnosis and treatment. Enhancing patient experience, increasing healthcare quality

and efficiency, and eventually saving lives are the objectives [4]. The contributions of numerous scientists and researchers over many years are responsible for the discovery of artificial intelligence in healthcare. The Dartmouth Summer Research Project on Artificial Intelligence in 1956 marked the start of the journey by laying the foundation for research on artificial intelligence. Pioneers like Stanley Cohen, Peter Szolovits, and Edward Feigenbaum made important contributions in the 1970s and 1980s [5]. Cohen helped create Internist-1, an expert system for internal medicine, in 1980, while Feigenbaum created MYCIN, the first expert system for bacterial infection diagnosis, in 1976. Szolovits was employed on machine learning and knowledge-based systems in the medical field in the 1980s and 1990s [6]. Renowned Indian researcher Laishram Rosita is recognized for her ground-breaking contributions to artificial intelligence in healthcare in India. Rosita created an AI-powered system for cardiac disease prediction in the early 2000s, which signaled the uses of artificial intelligence in Indian healthcare are only getting started. Another well-known researcher is Dr. SK Goyal, who developed AI-powered diagnostic tools for illnesses including tuberculosis and cancer [7].

Need of the study

We must evaluate our understanding of integrating artificial intelligence in healthcare settings for a number of reasons. First off, the ability of artificial intelligence systems to evaluate enormous volumes of data, spot trends, and forecast outcomes allows people to make better-informed choices. Second, routine tasks can be automated by AI, allowing humans to concentrate on more strategic and creative work. Lastly, AI can aid in disease diagnosis, the creation of individualized treatment programs, and better patient outcomes [31]. Information technology and artificial intelligence (AI) are becoming more and more common in various businesses and societal sectors. The healthcare industry is one of these areas, where Azza El. M Khaled (2019) examines the degree of nursing students' understanding of artificial intelligence. In this study, a descriptive cross-sectional model was used. The study was conducted at Ain Shams University's nursing faculty. 222 nursing students were chosen for the study. 65.6% of the nursing students that were understudied had a moderate level overall (7 of total). We must evaluate the need for research because artificial intelligence knowledge technologies have the potential to revolutionize many facets of patient care [33]. The COVID-19 epidemic changed how patient care was provided, necessitating more remote data retrieval from patients in between clinic appointments. Sensor-based technologies and mobile health provide the potential to transform a nurse's the capacity to provide treatment and keep an eye on patients, especially when manpower and resources are scarce. Numerous healthcare technologies that use artificial intelligence (AI) are changing the duties of nurses and improving patient care [34].

Problem statement

A descriptive study to assess the knowledge and attitude regarding integration of Artificial Intelligence in healthcare settings among nursing students of Rayat Bahra College of Nursing, Mohali, Punjab.

Aim of the study: Aim of study to assess the knowledge and attitude regarding integration of Artificial Intelligence in healthcare settings among nursing students of Rayat Bahra College of Nursing, Mohali, and Punjab.

Objectives

- To gauge nursing students' understanding of artificial intelligence integration in healthcare settings at Rayat Bahra College of Nursing in Mohali, Punjab.
- To determine the nursing students' attitudes toward the use of AI in healthcare settings at Rayat Bahra College of Nursing in Mohali, Punjab.
- To determine how certain sociodemographic factors relate to attitudes and knowledge about integrating artificial intelligence.
- To distribute the results.

Operational definitions

- **Assess:** Assess means to carefully consider or judge. It entails examining the specifics, weighing the worth, significance, or quality, and coming to a conclusion or judgment.
- **Knowledg**e: Nursing students' comprehension and awareness of facts, data, and concepts pertaining to the use of AI in healthcare settings are referred to as knowledge.
- **Attitude:** Nursing students' sentiments, convictions, and ideals toward the use of AI in healthcare settings are referred to as their attitude.
- **Artificial Intelligence:** The creation of computer systems that can carry out tasks that call for human intelligence, like speech recognition, visual perception, decision-making, and problem-solving complexity, is known as artificial intelligence.
- **Nursing students:** These are the students enrolled in Rayat Bahra College of Nursing's B.Sc. and Post-Basic Nursing programs.

Assumptions

- Some nursing students might not be aware that artificial intelligence is being used in healthcare settings.
- Some nursing students might be aware of how artificial intelligence is being used in healthcare settings.

Methodology

- **Research Approach:** A research approach is described as plans and procedures for research that spans the steps from broad assumptions to detailed methods of data collection, analysis and interpretation. It is a strategy of inquiry. A quantitative research approach was considered to be appropriate for the present study used to assess the knowledge and attitude regarding integration of Artificial Intelligence in healthcare settings among nursing students of Rayat Bahra College of Nursing Mohali, Punjab.
- **Research Design:** Research design is the general framework and plan for carrying out a study that describes the techniques, steps, and tactics to successfully answer the research questions and goals.

Descriptive research methodology was employed to carry out the current study.

- **Research Setting:** The physical, social, or experimental context in which research is carried out is referred to as the research setting. The Rayat Bahra College of Nursing in Mohali, Punjab, is where the current study was carried out.

Population

- **Target Population:** The target population of the study was the nursing students who are studying in B.Sc. Nursing 1st Semester, 2nd Semester, 4th Semester, 6th Semester and 4th year of Rayat Bahra College of Nursing Mohali, Punjab.
- **Sample:** A sample is a limited portion or subset of individuals selected from the intended audience. Nursing students from Rayat Bahra College of Nursing in Mohali, Punjab, made up the study's sample.
- **Sample size:** In present study sample size was 150 students of Rayat Bahra College of Nursing Mohali, Punjab.
- **Sampling technique:** The process and procedures used to choose a subset of units from a population are referred to as case selection strategies in research sampling techniques. The sample for this study was chosen using a convenient sampling procedure.

Eligibility criteria

Inclusion criteria

- Students who were willing to participate in the study.
- Both male and female students of B.Sc. Nursing 1st Semester, 2nd Semester, 4th Semester, 6th Semester and 4th year.

Exclusion criteria

- Student who were not present at the time of data collection.
- Students who were not willing to participate.

Development of tool

The instruments that the researcher uses to gather the data required for the study are known as research tools. Choosing the right instrument is essential to any project's success. The instruments are required to gather data, which is then required to gather high-quality evidence for the study's goals.

Description of final tool

The tool consists of

- Section A-Socio Demographic Variables.
- Section B-Self-Structured Questionnaire.
- Section C-Attitude Scale.

Validity of tool

Expert opinion was used to determine the tool's validity. The language and nursing specialists were provided the instrument. The tool was modified in accordance with the expert's advice and recommendations.

Pilot study

A pilot study can be defined as a small study to test research protocols, data collection instruments, sample recruitment strategies, and other research techniques in preparation for a larger study. The pilot study was conducted on students of Post B.Sc.(N) on 24th September, 2024 of Rayat Bahra College of Nursing Mohali, Punjab. The sample size was 15 students.

Reliability of tool

One important factor in determining an instrument's quality and sufficiency is its reliability. It is the instrument's capacity to produce reliable outcomes. For this investigation, two standardized instruments were chosen. Karl Pearson's correlation coefficient calculation yielded r=0.709 for the Self-Structured Questionnaire and r=0.713 for the Attitude Scale. A tool's reliability is deemed satisfactory if its score is more than 0.70. Thus, it was discovered that the instruments were completely dependable.

Data collection procedure

The data was gathered on September 27, 2024. The director principal of Rayat Bahra College of Nursing in Mohali, Punjab, granted formal consent. The method of convenient sampling was employed. The researcher gave her introduction. To the participants, followed by an explanation of the nature of the study, its significance, and the goal of information collection. Data confidentiality was guaranteed, and written informed consent was obtained. First, a sociodemographic data form was given out, and respondents were requested to answer it correctly. The study participants were then given an attitude scale and self-structured questions. Each student needed fifteen to twenty minutes to complete the tool. In order to obtain pertinent answers from the participants, the researcher thoroughly explained the instrument to any subjects who could have had trouble comprehending it. Data was gathered from 150 students in total. Finally, the researchers expressed their gratitude to the study participants for cooperating and sharing their invaluable time.

Ethical consideration

- The director principal of Rayat Bahra College of Nursing in Mohali, Punjab, gave written consent.
- Each student provided written, informed consent. The study was conducted with the students' identities and confidentiality intact.

Plan for data analysis

The study's objectives served as the foundation for the data analysis and interpretation. The ANNOVA test and the t test were used as descriptive and inferential statistics in the analysis. The frequency, mean, and standard deviation were descriptive statistics.

Table 1: Frequency and percentage distribution of socio-demographic data

Variables	Opts	Percentage (%)	Frequency(f)
Age in years	Below 20 years	68.67%	103
	21-25 years	31.33%	47
	26-30 years	0.00%	0
	Above 30 years	0.00%	0
Educational Program	B.Sc. Nursing	100.00%	150
	Post Basic B.Sc. Nursing	0.00%	0
Year of study	1st Year	29.33%	44
	2nd Year	35.33%	53
	3rd Year	18.00%	27
	4th Year	17.33%	26
Marital Status	Unmarried	93.33%	140
	Married	6.67%	10
	Divorced	0.00%	0
	Widowed	0.00%	0
Living area of family	Rural area	51.33%	77
	Urban area	48.67%	73
	Semi urban	0.00%	0
Type of family	Nuclear	86.67%	130
	Joint	13.33%	20
	Extended	0.00%	0
Education of Father	No formal education	18.00%	27
	Primary	12.67%	19
	Secondary	19.33%	29
	Graduate or above	50.00%	75
Education of Mother	No formal education	38.00%	57
	Primary	24.00%	36
	Secondary	24.00%	36
	Graduate or above	14.00%	21
Occupation of Father	Government Employee	28.67%	43
	Private Employee	33.33%	50
	Self Employed	21.33%	32
	Other	16.67%	25
Socio-Economic Status	>10,000	44.00%	66
	11,000 to 20,000	22.67%	34
	above 20,000	33.33%	50
Frequency of internet uses	Daily	88.67%	133
	Weekly	10.00%	15
	Monthly	0.67%	1
	Rarely	0.67%	1
Source of information about AI	Social Media	84.00%	126
	Online articles	6.67%	10
	Books	0.00%	0
	Lectures	9.33%	14
Interest in AI	Very interested	24.67%	37
	Somewhat interested	67.33%	101
	Not very interested	6.67%	10
	Not at all interested	1.33%	2
Self-rated knowledge of AI	Good	80.00%	120
	Excellent	20.00%	30
	Fair	0.00%	0
	Poor	0.00%	0
Do you have attend any CNE	Yes	10.67%	16
	No	89.33%	134

Socio-demographic profile of selected students in Rayat Bahra College of Nursing, Mohali, Punjab depicts in table no.1 reveals the information regarding the distribution of subjects according to socio-demographic variables.

The majority of respondents (68.67%, N=103) are below 20 years of age, while 31.33% (N=47) fall between the ages of 21 and 25. No respondents are in the age brackets of 26-30 years or above 30 years, indicating a youthful cohort predominantly composed of individuals under 25.

All respondents (100%, N=150) are enrolled in the B.Sc. Nursing program. There are no participants from the Post Basic B.Sc. Nursing program, reflecting a homogeneous sample in terms of educational background.

Participants are spread across different years of their nursing program. The largest group is in the 2nd year (35.33%, N=53), followed by the 1st year (29.33%, N=44). The 3rd

year has 18% (N=27) of the sample, and the 4th year has 17.33% (N=26), indicating a relatively balanced distribution across the academic years.

Most participants are unmarried (93.33%, N=140), while a small proportion (6.67%, N=10) are married. There are no respondents who are divorced or widowed, suggesting that the majority of this nursing cohort is likely young and single.

Respondents are almost evenly split between rural and urban areas, with a slight majority coming from rural areas (51.33%, N=77), while 48.67% (N=73) live in urban areas. There are no participants from semi-urban areas, indicating that the respondents predominantly reside in either rural or urban settings.

Most respondents (86.67%, N=130) come from nuclear families, while 13.33% (N=20) belong to joint families. There are no participants from extended families, suggesting a trend toward smaller family units in this sample.

Half of the respondents' fathers (50%, N=75) have a graduate or above level of education, while 19.33% (N=29) have completed secondary education. A smaller proportion of fathers (12.67%, N=19) have primary education, and 18% (N=27) have no formal education.

Mothers of the participants have a more varied educational background. A significant proportion (38%, N=57) have no formal education. An equal proportion of 24% (N=36) have primary and secondary education, while 14% (N=21) have completed graduation or higher.

Fathers are employed in a variety of occupations. The largest group (33.33%, N=50) are private employees, followed by government employees (28.67%, N=43) and self-employed individuals (21.33%, N=32). A smaller proportion (16.67%, N=25) fall into other categories of employment. Respondents come from diverse socio-economic backgrounds. The highest proportion (44%, N=66) report a monthly family income of greater than 10,000, while 33.33% (N=50) have an income above 20,000. A smaller group (22.67%, N=34) falls within the 11,000 to 20,000 income bracket.

The majority of respondents (88.67%, N=133) use the internet daily, while 10% (N=15) use it weekly. Only 0.67% (N=1) report using the internet monthly or rarely, indicating that nearly all respondents are frequent internet users.

Social media is the primary source of information about AI for 84% (N=126) of respondents. Other sources include lectures (9.33%, N=14) and online articles (6.67%, N=10). No respondents report using books as a source of information about AI.

A majority of respondents (67.33%, N=101) are somewhat interested in AI, while 24.67% (N=37) are very interested. Only 6.67% (N=10) are not very interested, and 1.33% (N=2) report no interest at all, indicating overall positive interest levels in AI.

Most respondents rate their knowledge of AI as good (80%, N=120), and 20% (N=30) rate it as excellent. No respondents rated their knowledge as fair or poor, suggesting high confidence in their understanding of AI.

A large majority (89.33%, N=134) have not attended any Continuing Nursing Education programs, while 10.67% (N=16) have participated, indicating limited exposure to additional educational opportunities outside of the nursing curriculum.

This section deals with the findings related to the association between knowledge score and selected demographic variables. The chi-square test was used to determine the association between the score levels and selected demographic variables.

Table 2: Association between levels of knowledge of nursing students regarding integration of AI in healthcare settings

Demographic Data		Levels (N=150)			Association with knowledge score				
Variables	**Opts**	**Know**	**GE Know**	**Know**	**Chi Test**	**P-Value**	**DF**	**Table Value**	**Results**
Age in years	Below 20 years	102	1	0	3.642	0.056	1	3.841	Not Significant
	21-25 years	44	3	0					
	26-30 years	0	0	0					
	Above 30 years	0	0	0					
Educational Program	B.Sc. Nursing	146	4	0		N/A			
	Post Basic B.Sc. Nursing	0	0	0					
Year of study	1st Year	42	2	0	2.301	0.512	3	7.815	Not Significant
	2nd Year	51	2	0					
	3rd Year	27	0	0					
	4th Year	26	0	0					
Marital Status	Unmarried	137	3	0	2.220	0.136	1	3.841	Not Significant
	Married	9	1	0					
	Divorced	0	0	0					
	Widowed	0	0	0					
Living area of family	Rural area	76	1	0	1.141	0.286	1	3.841	Not Significant
	Urban area	70	3	0					
	Semi urban	0	0	0					
Type of family	Nuclear	128	2	0	4.781	0.029	1	3.841	Significant
	Joint	18	2	0					
	Extended	0	0	0					
Education of Father	No formal education	27	0	0	1.301	0.729	3	7.815	Not Significant
	Primary	18	1	0					
	Secondary	28	1	0					

	Graduate or above	73	2	0					
Education of Mother	No formal education	54	3	0	3.044	0.385	3	7.815	Not Significant
	Primary	36	0	0					
	Secondary	35	1	0					
	Graduate or above	21	0	0					
Occupation of Father	Government Employee	42	1	0	1.410	0.703		7.815	Not Significant
	Private Employee	48	2	0					
	Self Employed	32	0	0					
	Other	24	1	0					
Socio-Economic Status	>10,000	63	3	0	2.277	0.320	2	5.991	Not Significant
	11,000 to 20,000	33	1	0					
	above 20,000	50	0	0					
Frequency of internet uses	Daily	129	4	0	0.525	0.913	3	7.815	Not Significant
	Weekly	15	0	0					
	Monthly	1	0	0					
	Rarely	1	0	0					
Source of information about AI	Social Media	123	3	0	2.495	0.287	2	5.991	Not Significant
	Online articles	9	1	0					
	Books	0	0	0					
	Lectures	14	0	0					
Interest in AI	Very interested	37	0	0	3.176	0.365	3	7.815	Not Significant
	Somewhat interested	98	3	0					
	Not very interested	9	1	0					
	Not at all interested	2	0	0					
Self-rated knowledge of AI	Good	116	4	0	1.027	0.311	1	3.841	Not Significant
	Excellent	30	0	0					
	Fair	0	0	0					
	Poor	0	0	0					
Do you have attend any CNE	Yes	15	1	0	0.886	0.347	1	3.841	Not Significant
	No	131	3	0					

Age in Years
There is no significant association between age and knowledge score (χ^2=3.642, P=0.056), indicating that participants' knowledge scores do not differ significantly by age group.

Educational Program
All respondents are from the B.Sc. Nursing program, so no association could be tested.

Year of study
The association between the year of study and knowledge score is not significant (χ^2=2.301, P=0.512), suggesting that the year of study does not influence knowledge levels.

Marital Status
No significant association was found between marital status and knowledge score (χ^2=2.220, P=0.136), indicating that being unmarried or married does not impact knowledge levels.

Living Area of Family
Living area (rural or urban) is not significantly associated with knowledge score (χ^2=1.141, P=0.286), showing that location does not affect participants' knowledge.

Type of family
Table the results of a study shows that there is a significant association between family type and knowledge score (χ^2=4.781, P=0.029), suggesting that those from nuclear families tend to have better knowledge compared to those from joint families.

Education of father
No significant association was found between the father's education and knowledge score (χ^2=1.301, P=0.729), indicating that the father's education level does not influence knowledge.

Education of mother
The mother's education level is not significantly associated with knowledge score (χ^2=3.044, P=0.385), showing no influence on participants' knowledge.

Occupation of Father
The father's occupation does not show a significant association with knowledge score (χ^2=1.410, P=0.703), suggesting occupation has no impact on knowledge levels.

Socio-Economic Status
Socio-economic status is not significantly associated with knowledge score (χ^2=2.277, P=0.320), indicating that income levels do not significantly affect knowledge.

Frequency of internet use
No significant association is found between internet use frequency and knowledge score (χ^2=0.525, P=0.913), implying that internet use habits do not affect knowledge.

Source of Information about AI
There is no significant association between the source of AI information and knowledge score (χ^2=2.495, P=0.287), indicating the source does not influence knowledge levels.

Interest in AI

Interest in AI is not significantly associated with knowledge score (χ^2=3.176, P=0.365), showing no impact of interest level on knowledge.

Self-Rated Knowledge of AI

No significant association was found between self-rated AI knowledge and actual knowledge score (χ^2=1.027, P=0.311), suggesting self-perception of knowledge does not significantly align with actual scores.

Attendance at CNE

Attending CNE is not significantly associated with knowledge score (χ^2=0.886, P=0.347), indicating that attending CNE does not significantly affect knowledge levels.

This section deals with the findings related to the association between score and selected demographic variables. The chi-square test was used to determine the association between the score levels and selected demographic variables.

Table 3: Association between attitude of students regarding integration of artificial intelligence with selected socio-demographic variables

Demographic Data		Levels (N=150)		Association with attitude score				
Variables	**Opts**	**Ve Attitu**	**Ve Attitu**	**Chi Test**	**P-Value**	**DF**	**Table Value**	**Results**
Age in years	Below 20 years	24	79	1.245	0.265	1	3.841	Not Significant
	21-25 years	15	32					
	26-30 years	0	0					
	Above 30 years	0	0					
Educational Program	B.Sc. Nursing	39	111		N/A			
	Post Basic B.Sc. Nursing	0	0					
Year of study	1st Year	11	33	4.002	0.261	3	7.815	Not Significant
	2nd Year	12	41					
	3rd Year	11	16					
	4th Year	5	21					
Marital Status	Unmarried	36	104	0.089	0.765	1	3.841	Not Significant
	Married	3	7					
	Divorced	0	0					
	Widowed	0	0					
Living area of family	Rural area	18	59	0.566	0.452	1	3.841	Not Significant
	Urban area	21	52					
	Semi urban	0	0					
Type of family	Nuclear	31	99	2.351	0.125	1	3.841	Not Significant
	Joint	8	12					
	Extended	0	0					
Education of Father	No formal education	4	23	3.453	0.327	3	7.815	Not Significant
	Primary	4	15					
	Secondary	7	22					
	Graduate or above	24	51					
Education of Mother	No formal education	14	43	0.789	0.852	3	7.815	Not Significant
	Primary	11	25					
	Secondary	8	28					
	Graduate or above	6	15					
Occupation of Father	Government Employee	11	32	5.277	0.153	3	7.815	Not Significant
	Private Employee	11	39					
	Self Employed	13	19					
	Other	4	21					
Socio-Economic Status	>10,000	14	52	1.604	0.449	2	5.991	Not Significant
	11,000 to 20,000	11	23					
	above 20,000	14	36					
Frequency of internet uses	Daily	37	96	2.182	0.535	3	7.815	Not Significant
	Weekly	2	13					
	Monthly	0	1					
	Rarely	0	1					
Source of information about AI	Social Media	35	91	1.690	0.430	2	5.991	Not Significant
	Online articles	1	9					
	Books	0	0					
	Lectures	3	11					
Interest in AI	Very interested	9	28	0.868	0.833	3	7.815	Not Significant
	Somewhat interested	27	74					
	Not very interested	2	8					
	Not at all interested	1	1					
Self-rated Attitude of AI	Good	30	90	0.312	0.577	1	3.841	Not Significant
	Excellent	9	21					
	Fair	0	0					
	Poor	0	0					
Do you have attend any CNE	Yes	6	10	1.231	0.267	1	3.841	Not Significant
	No	33	101					

- **Age**: Participants below 20 years had a slightly higher number of positive attitudes
- (24) compared to those aged 21-25 (15), but the association was not significant (χ^2=1.245, P=0.265).
- **Year of study**: Although there were some variations in attitude across the years of study, with the 1st and 2nd years showing more positive attitudes, this was not statistically significant (χ^2=4.002, P=0.261).
- **Marital status**: Both unmarried and married participants showed similar distributions of attitudes, and the association was not significant (χ^2=0.089, P=0.765).
- **Living area of family**: Attitudes between rural and urban dwellers were similar, with no significant association (χ^2=0.566, P=0.452).
- **Type of family**: Nuclear and joint families had comparable attitude distributions, and this was not statistically significant (χ^2=2.351, P=0.125).
- **Education of father/mother**: The education level of both parents did not significantly impact attitude scores (father: χ^2=3.453, P=0.327; mother: χ^2=0.789, P=0.852). **Occupation of father**: There was no significant association between the father's occupation and attitude scores (χ^2=5.277, P=0.153).
- **Socio-economic status**: No significant relationship was found between socio-economic status and attitude (χ^2=1.604, P=0.449).
- **Internet usage**: Frequency of internet usage was not significantly related to attitude scores (χ^2=2.182, P=0.535).
- **Source of information about AI**: No significant association was observed between the source of AI information and attitudes (χ^2=1.690, P=0.430).
- **Interest in AI**: Participants' interest in AI did not show any significant effect on their attitude scores (χ^2=0.868, P=0.833).
- **Self-rated knowledge of AI**: The self-rated knowledge of AI did not significantly correlate with attitude scores (χ^2=0.312, P=0.577).
- **Attendance at CNE**: Whether participants had attended a CNE session or not did not significantly affect their attitudes (χ^2=1.231, P=0.267).

Discussion

Discussion focuses on the study's findings

The researcher connects all the study's loose ends throughout the conversation. In order to evaluate people's knowledge and attitudes toward integrating artificial intelligence in healthcare environments among Rayat Bahra College of Nursing nursing students in Mohali, Punjab. We used a straightforward sampling strategy for the study, and 150 Rayat Bahra College of Nursing students made up the sample size.

In 2024, Mona M. Abd El-Maksoud carried out a study to find out how much nursing students knew about artificial intelligence. The study's design was cross-sectional. 220 nursing students were included in the convenience sample chosen from King Khalid University's college. According to the study's findings, 68.2% of nursing students knew a lot about artificial intelligence, 40.8% knew a little, and 38.6% knew very little.

Three categories were created for the current study's knowledge assessment, and it was discovered that the majority of students 97.3% had strong knowledge, 2.7% had mediocre knowledge, and 0.0% had bad knowledge. The findings of a study demonstrates that family type and knowledge score are significantly correlated (χ^2=4.781, P=0.029). Other variables were shown to be non-significant.

In 2024, Xiaoyan Wang and Fangqin Fei carried out a study to find out how nursing students felt about artificial intelligence. In this study, a cross-sectional model was used. 1,243 nursing students were chosen for the study in China's seven regions. 57% of students had strong knowledge, 64.7% had ordinary knowledge, and 4.7% had low knowledge, according to the study's findings. A closer look at the current study showed that only 26% of students had a good opinion toward artificial intelligence, while the majority, 74.0%, had a negative perspective. A study's findings indicate that there is no meaningful correlation between the variables.

Conclusion

The following conclusion was reached based on the data analysis results:

- The majority of students had a good level of understanding and a negative attitude regarding the use of AI in healthcare settings among nursing students.
- The results pertaining to the correlation between nursing students' awareness of the integration of artificial intelligence in healthcare settings and specific demographic characteristics. A study's findings indicate a strong correlation between knowledge score and family type (χ^2=4.781, P=0.029). Other variables were shown to be non-significant.
- The results show that there is no significant correlation between nursing students' attitudes toward the use of AI in healthcare settings and certain demographic factors.

Recommendations

- To generalize the results, a similar study can be conducted again with a larger sample.
- There are various settings in which the study can be carried out.
- An exploratory investigation may be carried out in place of a descriptive one.
- A different professional group may be included.

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Conflict of Interest
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