

Assessing the Attitude and Uses of Artificial Intelligence (ChatGPT) among Female Nursing Students at a Public Sector Institution, Karachi, Pakistan

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ABSTRACT

Artificial intelligence (AI) tools like Chat GPT are becoming more and more common among those technologies. Students can now complete their tasks with little to no effort thanks to advancements in technology. Objective: The objective of the study is to assess the attitude of health sciences students and usage of AI (Chat gpt). Methods: A cross sectional study was conducted at a public sector hospital, Data was gathered by administering an adapted Technology Acceptance Model (TAM) tool, between May, 2025 to august, 2025, sample size was calculated via open epi, calculated sample was 193, all willing enrolled female nursing students was included and those who were not eligible and not available was excluded from the study. The data was analyzed by using social package of statistical software, version 27. Results: The overall attitude of study participants was positive however, 22.3% claimed having no prior knowledge of Chat GPT, whereas 77.7% (n=150) indicated having knowledge. 51.8% of respondents reported using Chat GPT, while 48.2%, did not. 41.5% of participants reported actively participating in extracurricular activities. Conclusion: Many female nursing students viewed Chat GPT as easy to access but questioned its reliability and educational value. Its effective use in learning requires proper guidance, training, and clear ethical guidelines.

Keywords: Attitudes, ChatGPT, Artificial Intelligence, Nursing Students

INTRODUCTION

A Chabot tool called ChatGPT, developed by Open Artificial Intelligence (AI), was made available in November 2022. It makes use of the procreative pre-trained transformer (GPT) design. Since its debut, Chat GPT has become incredibly popular online since it enables people to have discussions with an AI using prompts, using the linguistic model of Open AI. Chat GPT is a powerful tool for producing engaging material, including songs, compositions, poems, stories, and more. It is not without restrictions, though. Although users can ask the bot questions, it can only respond to inquiries about topics that are reasonable and pertinent (1). AI tools like Chat GPT are becoming more and more common among those technologies. Students can now complete their tasks with little to no effort thanks to advancements in technology (2, 3). Chat GPT responds to user-generated stimuli by using natural language processing algorithms (4). All undergraduate nursing students face a challenging curriculum, inflexible academic pressure and lengthy training schedules (5). However, some researchers believe that Chat GPT can enhance learning and reduce the effort for both teachers and students (6). While some of the scientists consider it as a danger to the intellectuality and integrity that promote cheating and pilgrims in academic process of the students in the results make the students dependent on the tool, make them unable to use their cognitive domains (7). A study, conducted in Pakistan, claimed that mostly, the personal responsibilities of nursing students alter the equilibrium between course work and clinical practice (8, 9). AI can play a very significant role in offering best guidance, assistance in study, and coping stress in this tough and tense academic and clinical setting.

Nurses could benefit from the use of Chat GPT, an Open AI language model. Chat GPT has the potential to assist people and communities in making educated decisions on their health because of its capacity to produce writing that appears human based on vast amounts of data (10). Workloads are increased by the intricacy of medical services and nursing shortages. Chat GPT improves nursing efficiency by quickly responding to medical inquiries, offering clinical recommendations, and helping with patient information management (11). For nurses to be competent in complex healthcare environments which are marked by significant medical and technological developments as well as nursing shortages self-directed, lifelong learning is crucial (12). According to earlier research, Chat GPT technology encourages users to interact with it, which promotes self-directed learning (13, 14). A study conducted in Turkey assessed the attitude of Nurses towards the uses of AI reported that 84.4% of the participants thought that nurses should be made aware of Chat GPT and artificial intelligence programs (15). Chat GPT is a powerful AI technology with potential applications in healthcare, including clinical decision support, medical documentation, patient education, virtual health assistants, and data analysis. While it offers many benefits, there are also limitations to consider, such as its lack of empathy, potential for bias and inaccuracies, limited contextual understanding of complex cases, challenges in integration with clinical workflows, and the need for human oversight. Despite these challenges, Chat GPT remains a valuable tool for healthcare professionals seeking to enhance patient care, streamline tasks, and support evidence-based practice(16). Kotamjani stated that the learning system in the field of

education is altered by educational technology. The Industrial Revolution 4.0 era's Artificial Intelligence was the cause of this. As a result, the education sector must take part in altering its educational framework in order to make graduates more competitive and give them the tools they need to think critically, creatively, and cooperatively (17). Chat-GPT is an example of a machine task that works with artificial intelligence. Some of the skills that students should learn, such as critical, creative, and collaborative thinking abilities, as well as creative writing abilities, may be diminished by using the Chabot system. The development of students' cognitive abilities and critical thinking skills is a concern for the educational community since, if left unattended, teacher-given duties could be completely supplanted by machine work (18). This study aimed to assess the attitude of nurses' students towards uses of AI (ChatGPT) at a public sector nursing institute in Karachi.

METHODS

A descriptive, cross-sectional study was conducted to assess the attitudes and awareness/usage of ChatGPT among female nursing students. Data was collected by using a self-administered questionnaire during regular class hours at a public sector college of nursing from May, 2025 to August, 2025. The data was gathered within 2 weeks, all enrolled female Nursing students in Bachelors of Science in Nursing (BSN) who were present on data-collection days and provide consent were included. Students on leave or who declined consent were excluded. Sample size was calculated by using Open Epi considering a previous study proportion 27.8 % (10). Data was analyzed by using SPSS version. 27. A total of 193 participants completed the survey (response rate 100 %). The tool was adapted from the **Technology Acceptance Model (TAM)** (19), framework to specifically evaluate acceptance and use of **ChatGPT** in education/health sciences. Items were grouped under TAM-aligned domains. Typical coverage was as followed.

Perceived Usefulness: Extent to which ChatGPT helps learning, efficiency, or academic performance

Perceived Ease of Use: Simplicity of learning/operating ChatGPT

Perceived Risks: Concerns about inaccuracy, misinformation, plagiarism, or privacy

Anxiety: Discomfort or apprehension when using AI tools

Social Influence: Perceived encouragement by peers/teachers/institution.

Behavioral Intention: Intention to continue use and self-reported usage patterns (users only). It is a **5-point Likert scale** consist of responses including 1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = strongly agree.

Data Collection Procedure

After institutional permissions, class representatives and faculty facilitated distribution of the paper questionnaire. Participants received study information and provided written informed consent. Average completion time was 15 minutes. Demographic information was also collected.

Ethical consideration

Before the data collection intuitional approval has been obtained from the internal research committee (IRC). Written informed consents were taken from the

participants as well as verbal consent and details of study was shared with the participants including study objective furthermore they were asked that they can withdraw from the study at any time without any penalty. Study tool utilization permission were also obtain from the original owner of the tool (19).

RESULTS

A total of 193 participants were included in the study. The majority of respondents were aged 18–22 years, being responsible for 62.2% (n=120), followed by people between the ages of 23 and 27 (24.9%), and people over 27 (11.9%). The survey found that 36.3% (n=70) were in their first year of the BSN program, 25.9% (n=50) were in their second year, 20.7% (n=40) were in their third year, and 17.1% (n=33) were in their fourth year. 11.9% (n=23) of individuals were married, whilst 88.1% (n=170) were unmarried. 22.3% (n=43) claimed having no prior knowledge of ChatGPT, whereas 77.7% (n=150) indicated having knowledge. 51.8% (n=100) of respondents reported using ChatGPT, while 48.2% (n=93) did not. 41.5% (n=80) of participants reported actively participating in extracurricular activities, whereas 58.5% (n=113) did not.

Table No 1: Demographic characteristics of the study participants

Variable	Frequency (%)
Age	
Age 18–22	120 (62.2%)
Age 23–27	50 (25.9%)
Age >27	23 (11.9%)
Year of the study	
1st year (BSN)	70 (36.3%)
2nd year (BSN)	50 (25.9%)
3rd year (BSN)	40 (20.7%)
4th year (BSN)	33 (17.1%)
Marital Status	
Single	170 (88.1%)
Married	23 (11.9%)
Awareness of ChatGPT	
Yes	150 (77.7%)
No	43 (22.3%)
Use of ChatGPT	
Yes	100 (51.8%)
No	93 (48.2%)
Extracurricular	
Yes	80 (41.5%)
No	113 (58.5%)

Table 2: Participants' Perceptions and Attitudes towards ChatGPT Use across Key

Constructs (n = 193)

Table 2 presents participants' perceptions and attitudes toward ChatGPT use across six constructs: perceived usefulness, perceived ease of use, perceived risk anxiety, social impact, and desire to behave. Regarding perceived usefulness, there was a generally mixed-to-negative opinion, with 33.7% (n=65) disagreeing that ChatGPT enhances their learning and academic achievement, 25.9% (n=50) being indifferent, and 20.7% (n=40) agreeing. Responses on perceived ease of use were generally neutral, with 41.5% (n=80) agreeing and just 13.0% (n=25) objecting, indicating a moderate level of acceptance of usability overall. There was a moderate amount of perceived risk regarding ChatGPT's accuracy, with 36.3% (n=70) agreeing and 19.7% (n=38) strongly agreeing that the tool may deliver false information. Anxiety levels were comparatively low, with only 18.1% (n=35) stating that using ChatGPT made them feel nervous and 33.7% (n=65) being indifferent. In terms of social influence, opinions were divided; 25.9% (n=50) disagreed with peer or instructor encouragement to use ChatGPT, while 36.3% (n=70) were neutral. Lastly, there was little enthusiasm for continuing adoption, as evidenced by the behavioral intention to continue using ChatGPT, which slanted negatively with 36.3% (n=70) disagreeing and only 18.1% (n=35) agreeing.

Item No.	Construct (Domain)	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)	Most Frequent Response	Interpretation
1	Perceived Usefulness: ChatGPT can improve my learning and academic performance.	15 (7.8%)	65 (33.7%)	50 (25.9%)	40 (20.7%)	23 (11.9%)	Disagree (33.7%)	Negative
2	Perceived Ease of Use: I find ChatGPT easy to use and interact with.	10 (5.2%)	25 (13.0%)	80 (41.5%)	55 (28.5%)	23 (11.9%)	Neutral (41.5%)	Mixed

3	Perceived Risks: I worry ChatGPT may provide inaccurate or misleading information .	15 (7.8%)	30 (15.5%)	40 (20.7%)	70 (36.3%)	38 (19.7%)	Agree (36.3%)	Positive
4	Anxiety: I feel anxious relying on ChatGPT for important academic tasks.	20 (10.4%)	60 (31.1%)	65 (33.7%)	35 (18.1%)	13 (6.7%)	Neutral (33.7%)	Moderate /Anxiety
5	Social Influence: My peers/teachers encourage the use of ChatGPT in studies.	12 (6.2%)	50 (25.9%)	70 (36.3%)	40 (20.7%)	21 (10.9%)	Neutral (36.3%)	Moderate / Mixed attitude
6	Behavioral Intention / Use: I intend to continue using ChatGPT in my learning process.	8 (4.1%)	70 (36.3%)	60 (31.1%)	35 (18.1%)	20 (10.4%)	Disagree (36.3%)	Negative

DISCUSSION

Research, development, and higher education can all benefit from ChatGPT' capacity to comprehend and react organically to a variety of language inputs, as prior studies indicated that ChatGPT in the classroom facilitates conversation, response to follow-up inquiries, error detection, and refusal of improper requests (20). According to the

demographic characteristics of the participants most of the participants were the age between 18 to 22 years and greater number of the participants was single (88.1%). Similarly another study conducted in 2025 where larger number of the participants (86.3%) was unmarried (21). In the current study the attitude of students nurses was assessed towards usage of ChatGPT, most of the participants (41.5%) reported mixed response when the asked about the ease of use of ChatGPT while (33.7%) have negative response towards the usefulness of ChatGPT surprisingly (11.9%) of the respondents were agree about the usefulness of ChatGPT. Similarly another researchers found that health students in Jordan who participated in a validation study using the TAME-ChatGPT instrument had high mean scores for perceived usefulness ($M = 24.2$ on a 6–30 scale) and ease of use ($M = 8.9$ on a 2–10 scale), both of which exceeded the neutral threshold and demonstrated strong acceptance of ChatGPT's usability and advantages (22). A moderate overall mean score ($M = 3.20$ on a 1–5 Likert scale) for perceived academic skill increase via ChatGPT was reported by students in a mixed-methods study of health professions. Convenience and inspiration were valued by the students, but they also voiced concerns about accuracy and citations, especially the absence of sourcing (23, 24). In contrary a cross-sectional study published in Heliyon, 89.5% of nursing students said ChatGPT improved their academic performance significantly, and women found it especially helpful for finishing assignments. According to a survey of nursing students at Palestinian universities, 50.7% of them doubted that ChatGPT would improve patient outcomes, 54.3% thought AI was easy to use, 57.9% believed that patients would not be open to ChatGPT, and 47.7% were unsure about its practical application (25). As per the similarity in concern this might be that the nursing and health sciences students around the world might still be in the "trial and error" stage of adoption(26). Although ChatGPT is simple for students to use, they are not entirely persuaded of its dependability or capacity to improve learning outcomes. This illustrates the early stages of invention diffusion, where skepticism and curiosity coexist (27). This discrepancy could result from variations in training and exposure. Students may see greater academic rewards if they receive formal training on how to utilize AI tools appropriately. Negative reactions in your environment may have been influenced by a lack of orientation or concerns about giving "misleading answers(28). The inconsistent outcomes in various contexts demonstrate how context greatly influences nursing students' perceptions of ChatGPT. Negative or neutral opinions frequently stem from worries about accuracy, a lack of institutional support, and inadequate training. On the other hand, when ChatGPT is presented as an organized learning support tool, favorable opinions are observed. Therefore, the main factors that determine whether ChatGPT is viewed as helpful or inaccurate may be institutional supervision and integration into nursing courses.

CONCLUSION

According to this study, many female nursing students had doubts regarding ChatGPT's value, dependability, and function in academic learning, even though they acknowledged its accessibility and simplicity of use. Responses that are overwhelmingly unfavorable and neutral suggest a cautious approach to its adoption. ChatGPT has the potential to be a useful teaching tool, but its successful use will need

organized direction, instruction, and explicit guidelines to handle issues with prejudice, accuracy, and ethics.

RECOMMENDATIONS

Curriculum Integration: To improve student learning and emphasize evidence-based practice, nursing curriculum should progressively incorporate AI tools such as ChatGPT.

Training and Orientation: To enhance pupils' self-assurance, digital literacy, and ability to critically assess AI-generated information, workshops and training sessions have to be held.

Ethical and Responsible Use: Organizations should create rules and regulations that handle issues with data privacy, plagiarism, accuracy, and ethics in relation to the use of AI in education.

Faculty Involvement: Instructors should be urged to set an example of appropriate AI use in class assignments by offering advice on how to strike a balance between critical thinking and AI support.

Additional Research: To examine the long-term effects of AI adoption on learning outcomes and professional practice, more research in a variety of nursing student demographics is advised.

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