PERCEIVED BENEFITS OF ARTIFICIAL INTELLIGENCE (AI) ON THE PROVISION OF HEALTH INFORMATION AMONG UNIVERSITY STUDENTS IN ANAMBRA STATE.

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Abstract

The aim of the study was to explore the Perceived benefits of artificial intelligence on the provision of health information among university student in Anambra state . Three research questions guided the study and a descriptive survey research design was adopted for the study. The population of the study consisted of 4200 tertiary students in Faculty of Education at Chukwuemeka Odumegwu Ojukwu University . A simple random sampling technique was used to get a sample of 420 respondents from 7 department in the faculty . The instrument for data collection was a structured questionnaire which was validated by three experts from the Faculty of Education. The researcher employed Cronbach alpha for the reliability and the result yielded a 0.77. Data was analyzed using descriptive statistics, mean and standard deviation. The findings of the study revealed that the students accepted AI as beneficial on the provision of sexual health information. They all accepted that AI is of great importance on the provision of healthy lifestyle and wellness information, on the other hand, they disagreed that AI could be beneficial on the provision of stress management. From the results of the study, it was recommended amongst others that Institutions should Integrate AI Literacy into the curriculum or health-related courses to equip students with the skills to effectively use AI for health information and self-care.

Keywords: Perceived, Benefits, Artificial intelligence (AI), Health information, University Students.

Introduction

The rapid advancement in technology over the past few decades has led to a significant transformation in various sectors, including healthcare and education. Among the technological innovations, Artificial Intelligence (AI) has emerged as a powerful tool with the potential to revolutionize health information dissemination (Davenport, & Kalakota, 2020). AI is a rapidly growing field, with applications in healthcare, finance, transportation, and education, among others. The evolvement and development of AI-powered systems, such as chatbots, virtual assistants, and self-driving cars, is transforming the way we live and work and it's capable of reasoning and adapting to rules and environments, mimicking human intelligence and helps human with responsibilities (Brynjolfsson & McAfee, 2022). Artificial Intelligence (AI) is an astronomical subject of computer science concerned with constructing super computers capable of doing tasks that would typically need human perspicacity. AI encompasses a range of technologies, including machine learning, natural language processing, and data mining, that enable machines to simulate human intelligence and perform tasks such as problem-solving, decision-making, and data analysis (Johnson et al., 2020). In the context of health information, AI can enhance access, accuracy, and relevance, providing individuals with personalized health advice based on data inputs. The integration of Artificial Intelligence (AI) in the healthcare sector has revolutionized the way health information is provided to individuals, particularly in rural communities where access to healthcare services is limited. These university students in Anambra state are not immune to the challenges of accessing healthcare services, and the provision of health information is crucial to promoting health awareness and education among these students. A study published in the Journal of Medical Systems found that AI

can provide patients with personalized advice, support, and reminders, helping to improve patient engagement and outcomes and facilitating early detection and prevention of diseases (Bickmore et al., 2021). The perceived benefits of AI in providing health information among university students are multifaceted. One key benefit is the accessibility of health information. Health information encompasses a broad range of topics, including mental health, sexual and reproductive health, stress management, nutrition, and general well-being.

Sexual health information refers to the knowledge and education that individuals need to make informed decisions about their sexual health, including information about human development, relationships, and sexuality (World Health Organization, 2020). The use of AI in providing sexual health information among university students has several perceived benefits, including; Improved accessibility, personalized information, Anonymity and confidentiality. Healthy lifestyle and wellness information refers to the knowledge and education that individuals need to make informed decisions about maintaining a healthy lifestyle, including information about nutrition, physical activity, stress management, and mental health (World Health Organization, 2021). The use of AI in providing healthy lifestyle and wellness information among university students in Anambra has several perceived benefits, including; Improved accessibility, personalized information, Engagement and motivation, early intervention and prevention. Stress management refers to the techniques and strategies used to manage and reduce stress, including cognitive-behavioural therapy, relaxation techniques, and problem-solving skills (American Psychological Association, 2020). The use of AI in managing stress among these university students has several perceived benefits, including: personalized stress management plan, virtual counseling and support, stress monitoring and detection, convenience. The provision of accurate and reliable health information is crucial for promoting health awareness and education among university students, particularly in rural communities where access to healthcare services is limited (World Health Organization, 2022). According to Katz et al. (2020), health information is a critical component of health education, and it has the potential to improve health outcomes by enabling individuals to make informed decisions about their health.

However, traditional methods of providing health information, such as textbooks and lectures, have been shown to be ineffective in engaging students and promoting behaviour change (Harris et al., 2022). Artificial Intelligence (AI) has the potential to revolutionize the way health information is provided to university students. AI-powered tools and platforms can provide personalized health information, facilitate interactive learning, and promote behaviour change (Boulos et al., 2020).

The provision of health information among students in Anambra state university is critical, as it enables them to make informed decisions about their health and well-being. In many rural and urban regions, however, there are challenges associated with accessing accurate and timely health information. Some universities in Nigeria, like many other in SubSaharan Africa, often suffer from limited access to quality healthcare services and health education resources (Adebayo, 2021). Tertiary students, a vital segment of the population, face additional barriers, including limited internet access, insufficient healthcare infrastructure, and a lack of health literacy and discrimination. Therefore, the exploration of how AI can bridge these gaps and enhance health information provision for university students in this state becomes crucial. The study was delimited to Chukwuemeka Odumegwu Ojukwu University, Uli Anambra State.

Statement of the Problem

This study has public health relevance for university students, who are navigating a critical phase of their lives characterized by increased independence, academic pressures, and exploration of their identities.

Health information empowers students to make informed decisions about their wellbeing, academic performance, and overall quality of life. However, university students often face challenges in accessing reliable health information due to various barriers, including limited access to healthcare services, stigma associated with seeking health information, and inadequate health education. This situation calls for an innovative approach to improving health education for students in universities, particularly through the integration of Artificial Intelligence (AI) tools that can bridge the gap between students and health resources.

Purpose of the Study

The main Purpose of the study is to explore the Perceived benefit of AI on the provision of Health information among university students in Anambra state. Specifically, the study sought to:

1. To investigate the perceived benefits of Artificial Intelligence (AI) on the provision of Sexual health information among university student in Anambra state.
2. To investigate the perceived benefits of Artificial intelligence on the provision of healthy lifestyle and wellness information among university students in Anambra state.
3. To investigate the perceived benefits of Artificial intelligence on management of stress among university student in Anambra state.

Research Questions

The following research questions guided the study;

1. What are the perceived benefits of Artificial Intelligence (AI) on the provision of sexual health information among university student in Anambra state?
2. What are the perceived benefits of Artificial Intelligence (AI) on the provision of healthy lifestyle and wellness information among university student in Anambra state?
3. What are the perceived benefits of Artificial Intelligence (AI) on the management of stress among university student in Anambra state?

METHOD

Descriptive survey research method was adopted for this study. The study was carried out in Anambra state university recently known as Chukwuemeka Odumegwu Ojukwu University, popularly known as COOU.

The population of this study comprises of 4200 students across the 7 department in the faculty of Education Anambra state university, COOU. The sample size of the study was 420 students (10% of the total population), across the 7 department in the faculty of Education Anambra state university COOU, Using simple random sampling technique without replacement, 60 students were drawn from each of the 7 department to give to a total of 120 students.

The research instrument used for data collection for this research was a structured questionnaire, which was designed by the researchers. The questionnaire was titled “Questionnaire on perceived benefits of Artificial intelligence on the provision of health information (QPBAIPHI)". The instrument was validated and reliability of the instrument was conducted. Cronbach alpha instrument was used to measure the reliability of the instrument and 0.77 was obtained.

The distribution and collection of the instruments was done by Direct Delivery Method in order to ensure a 100% return of the questionnaires. The data for the study or questionnaire were collected and the answers gathered were analysed using the statistical method, mean and standard deviation. The average point for accepting the mean was put at 2.50, with the decision rule that from 2.50 and above was taken as agreed while 2.49 below was taken as disagreed.

Research Question 1: What are the perceived benefits of Artificial Intelligence (AI) on the provision of sexual health information among university student in Anambra state?

Table 1: Mean ratings on the perceived benefits of Artificial Intelligence (AI) on the provision of sexual health information among students of Chukwuemeka Odumegwu Ojukwu University, Uli Anambra State. N=420

	Mean	SD	Remark
1. AI improves my access to a specific sexual health information.	2.36	.80	Disagreed
2. It provides me with information on safe sex practices (condoms, dental dams).	2.58	.86	Agreed
3. It provides awareness on my sexual right e.g the right to be free from torture or cruel, inhumane or degrading treatment or punishment, the right to decide the number and spacing of one's children.	2.94	.74	Agreed
4. AI provides me with information on harmful practices such as female mutilation, etc.	3.00	.78	Agreed
5. It also provides me awareness and education on STI, and reproductive health.	2.54	.86	Agreed

Table 1 shows that the four questions out of five listed items on the perceived benefits of Artificial Intelligence (AI) on the provision of sexual health information among students of Chukwuemeka Odumegwu Ojukwu University, Uli Anambra State were agreed. The mean scores of the questions are as follows 2.36, 2.58, 2.94, 3.00 and 2.54 respectively. The respondents however have the following scores in SD; .80, .86, .74, .78, and .86 respectively.

Research Question 2: What are the perceived benefits of Artificial Intelligence (AI) on the provision of healthy lifestyle and wellness information among university student in Anambra state?

Table 2: Mean ratings on the perceived benefits of Artificial Intelligence (AI) on the provision of healthy lifestyle among among students of Chukwuemeka Odumegwu Ojukwu University, Uli Anambra State. N=420

	Mean	SD	Remark
6. AI provides me with information on how to maintain a healthy balanced diet and also provide platforms and apps like meal planner, Eatwise AI.	3.49	.64	Agreed
7. It also provides me with awareness on the benefits of quality sleep and it's timeframe.	3.15	.61	Agreed
8. AI provides me with access to a wider range of resources such as physical activity, and mental well-being.	2.93	.97	Agreed
9. It enhances me with healthy habits such as hydration i.e. benefits of taking plenty water.	3.00	.78	Agreed
10. It provides me with information on awareness of various disease and their risk factors.	3.07	.74	Agreed

Analysis in Table 2 shows that the respondents agreed in all the questions asked on the perceived benefits of Artificial Intelligence (AI) on the provision of healthy lifestyle among students of Chukwuemeka Odumegwu Ojukwu University, Uli Anambra State. The mean scores of questions 1 -5 are as follows 3.49, 3.15, 2.93, 3.00 and 3.07 respectively. The respondents however have the following scores in SD; .64, .61, .97, .78, and .74 respectively.

Research Question 3: What are the perceived benefits of Artificial Intelligence (AI) on the management of stress among university student in Anambra state?

Table 3: Mean ratings on the perceived benefits of Artificial Intelligence (AI) on the stress management among students of Chukwuemeka Odumegwu Ojukwu University, Uli Anambra State. N=420

	Mean	SD	Remark
11. AI provides me with personalized stress management plans and coping strategies as a student.	2.49	.91	Disagreed
12. AI helps me with mood tracking and monitoring of my emotions.	2.30	.88	Disagreed
13. It provides me with the access to relaxation techniques.	3.15	.61	Agreed
14. AI provides me with information on how to manage classroom / school stress	2.36	.86	Disagreed
15. It helps to create awareness for me on positive and negative stress patterns in classrooms.	3.07	.74	Agreed

Analysis in Table 3 shows that the respondents agreed in two of the questions asked out of five on perceived benefits of Artificial Intelligence (AI) on the stress management among students of Chukwuemeka Odumegwu Ojukwu University, Uli Anambra State. (mean = 3.15 and 3.07 respectively). Meanwhile, students of Chukwuemeka Odumegwu Ojukwu University, Uli disagreed on questions one and four (mean = 2.49 and 2.36 respectively). The respondents however have the following scores in SD; .91, .88, .61, .86, and .74 respectively.

Discussion

The findings of this study have shown that Artificial Intelligence (AI) plays a significant role in enhancing health education among university students in Anambra State. Interestingly, a majority of respondents also agreed that AI provided awareness of their sexual rights, such as bodily autonomy and freedom from cruel or degrading treatment. These findings align with the work of Ajit Kerketta et al. (2023), who, in their study on leveraging AI tools in rural healthcare in India, found that AI has substantial potential in addressing healthcare access disparities and delivering critical health education. Similar to this current study, Kerketta et al. emphasized how AI can overcome traditional barriers, especially in underserved or rural communities, by improving access to timely and personalized health information.

The researchers opined, based on her idea and perception towards this findings that One possible reason for the positive perception of AI's role in this area could be its ability to provide accessible, anonymous, and non-judgmental information on sensitive topics (for example, topics on reproductive health , safe sex practices). The researchers believe that AI could play a vital role in bridging the gap in sexual health education among university students, as it will revolutionize the way health information is disseminated among the university students.

This table two explored the perceived benefits of Artificial Intelligence (AI) on the provision of healthy lifestyle and wellness information among students of Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State. The analysis revealed that respondents agreed unanimously on the positive impact of AI in promoting healthy living. The students' agreement reflects a growing digital health awareness among university populations and aligns with global trends in health communication, where AI tools like mobile health apps, AIpowered fitness trackers, and chatbot-based wellness assistants are being widely adopted. These findings are consistent with the empirical study by Blessed Frederick et al. (2024), titled "Influence of Artificial Intelligence on Educational Performance of Nigerian Students in Tertiary Institutions." In that study, the researchers found that the majority of Nigerian students use AI tools, and that these tools have a positive influence on their academic and personal development, including areas such as learning enhancement, stress management, and knowledge expansion.

This study examined the perceived benefits of Artificial Intelligence (AI) in stress management among students of Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State. The findings revealed a mixed perception among students. On one hand, respondents accepted that AI provides them with access to relaxation techniques and raises awareness about positive and

negative stress patterns in classroom settings. These show that students recognize AI's potential for general mental health support and stress awareness. However, students rejected the notion that AI tools offer personalized stress management plans, coping strategies, mood tracking, or emotion monitoring. This indicates a perceived limitation in how AI currently addresses more individualized emotional support needs and in its depth of integration into students' day-to-day academic life.These findings align closely with those of Muna et al. (2022) in their study on students' perspectives on AI integration into healthcare services.

Conclusion

In conclusion, the findings of this study reveal that students of Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State perceive Artificial Intelligence (AI) as beneficial in several aspects of health information provision. They acknowledged AI's role in providing health information, such as safe sex practices, sexual rights, reproductive health, sexually transmitted infections (STIs), and harmful traditional practices like female genital mutilation. Additionally, students agreed that AI contributes positively to promoting healthy lifestyle choices, including general wellness awareness. Regarding stress management, while students accepted that AI offers relaxation techniques and helps raise awareness of stress patterns in academic settings, they expressed dissatisfaction with AI's ability to provide personalized stress management strategies, mood tracking, or guidance on managing classroom-related stress. Overall, the results suggest that AI is a valuable tool for general health education among university students, but its effectiveness in offering personalized support, particularly for mental and emotional well-being, remains limited.

Recommendations

1. Integrate AI Literacy into the Curriculum: Universities should include digital health and AI literacy in general studies or health-related courses to equip students with the skills to effectively use AI for health information and self-care.
2. Develop Student-Centered AI Tools: Developers and stakeholders should design AI platforms tailored to the unique health and stress management needs of students, with features such as mood tracking, coping strategies, and personalized support.
3. Promote Awareness Campaigns: Institutions should organize sensitization programs to increase students' awareness of the health benefits of AI and how to access and use available AI tools responsibly.

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