



PERCEIVED INFLUENCE OF DIGITAL HEALTH LITERACY ON HEALTH-SEEKING BEHAVIOUR AMONG STUDENTS IN PUBLIC TERTIARY INSTITUTIONS IN ANAMBRA STATE, NIGERIA

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Abstract

The main purpose of the study was to determine the influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State. Two research questions guided the study and one hypothesis was tested at 0.05 level of significance. Descriptive survey research design was adopted for the study. The population comprised 312 third-year students in the Department of Health Education and Health Promotion across four tertiary institutions in Anambra State in the 2024/2025 academic session. The instruments for data collection were two structured questionnaires developed by the researcher. The instruments were validated by three experts and the reliability of the instruments was ascertained through a pilot test. Mean, standard deviation and simple regression were used to analyse data for the study. Findings of the study revealed that the level of digital health literacy of students in public tertiary institutions in Anambra State is moderate. The finding of the study also revealed that the influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State is high. Furthermore, digital health literacy significantly influences health-seeking behaviour of students in public tertiary institutions in Anambra State. Based on these findings, the researchers recommended that administrators of tertiary institutions should integrate courses that will promote students' digital health literacy in academic curriculum or extracurricular programmes.

Keywords: Digital health literacy, Influence, Health-seeking behaviour, Students, Tertiary institutions.

Introduction

Health is a fundamental aspect of human existence; encompassing physical, mental and social well-being. For individuals, good health enables active participation in daily activities, pursuit of personal goals and overall quality of life. A healthy population contributes to economic growth, reduced healthcare costs and enhanced social cohesion. This is why health literacy is viewed as an important means through which individual gets health information. Health literacy is defined by The World Health Organization (WHO) (cited in Erica, Sundell; Josefin, Wangdahi and Asa, Grauman.2022) as the combination of cognitive and social skills that influence an individual's motivation and ability to access, comprehend and utilize health-related information to sustain and enhance well-being. Health literacy is indeed a broad concept that encompasses how individuals seek, interpret, assess and apply accurate



health information to lead a disability-free life and maintain quality of life during both health and illness (Erikson, 2024). Furthermore, health literacy is too the capacity of individuals to read, comprehend and use health information to make informed decisions (Afşar and Özkan, 2022). These meanings imply that health literacy is linked to how individuals acquire, apply and interpret health information. It then means that poor health literacy, especially when influenced by misinformation and disinformation, can significantly impact an individual's health and safety. Thus, possessing fundamental health knowledge is essential for making appropriate health-related decisions. Gulhan, Yiğitalp; Vasfiye Bayram Deger; and Sema, Cifci (2021) opined that it involves basic literacy and numeracy skills necessary for navigating health services effectively. In this direction, studies have shown that a substantial proportion of university students' exhibit limited health literacy. Bhussal S, Paudel R, Gaihre M, Paudel K, Adhikari TB, and Pradhan PMS (2021). for instance, reported that nearly 61% of students had inadequate or problematic health literacy levels. This is concerning because university students are often expected to be more health-literate due to their educational background. This situation has increased the call for the adoption of technology in improving health literacy. This is what many scholars refer as digital/e-health literacy.

Digital health literacy (DHL) thus refers to the ability to utilise electronic resources to locate, comprehend and apply health-related information. DHL also encompasses the capacity to use these digital tools to make informed health decisions and take appropriate actions. Norman and Skinner in Levin-Zamir (2023) revealed DHL as the capacity to search for, locate, comprehend and assess health-related information from electronic sources and apply this knowledge to addressing or resolving health issues. While individuals already differ in their ability to manage their health and healthcare—an aspect referred to as health literacy—digital health literacy adds another layer, emphasising the need to effectively navigate digital platforms, which are becoming essential for accessing healthcare services. The ability to engage in digital health literacy may seem like a matter of individual competence; yet, it is deeply influenced by social and contextual factors. While these definitions were initially useful in explaining how health information became more accessible online, they did not account for the skills required to interact with digital platforms such as social media and patient portals. Moreover, the World Health Organization (WHO) (2023) observed digital health literacy as the ability to seek, locate, interpret and critically evaluate health information from electronic sources and apply the acquired knowledge to address health concerns.

Digital health literacy extends beyond essential digital skills and knowledge of the healthcare system, relying on various elements that shape meaningful digital connectivity, as outlined by the United Nations (Health Action International (HAI), 2024). These factors include device availability, affordability, access to information, network quality and availability, as well as infrastructure and cybersecurity. HAI further stated that the integration of digital tools in healthcare has become more



widespread, particularly following the COVID-19 pandemic. Examples include virtual consultations, online access to electronic health records and remote patient monitoring. Consequently, individuals with limited digital health literacy may struggle to access and utilise healthcare services, further deepening existing health disparities (EuroHealthNet, 2019). As a result, digital health literacy is increasingly being acknowledged as a key social determinant of health strongly linked to individuals' health-seeking behaviours.

Health-seeking behaviour focuses on identifying the factors that either facilitate or hinder individuals in making appropriate health-related decisions. Maneze D, Everett B, Astorga C, Yogendran D, and Salamonson Y. (2016) view health-seeking behaviour as the actions individuals take to regain their well-being when experiencing illness. Another perspective describes health-seeking behaviour as the process of obtaining information about health risks, diseases and protective measures to enhance overall well-being (Erikson, 2024). With internet access, individuals can now search for health-related information, review personal medical records and engage with healthcare professionals online. However, those with limited health literacy may struggle to navigate websites, comprehend medical terminology and determine the credibility of health information sources. The ability to understand and use health information critically influences health-seeking behaviour (Martucci and Gulanick, 2012). Digital health literacy (DHL), in particular, plays a crucial role in this context as it guides individuals toward reliable online resources and healthcare services.

For students of public tertiary institutions in Anambra state, digital health literacy (DHL) plays a crucial role in shaping their preferences for accessing healthcare increased facilities, self-medications and the use of alternative treatments such as herbal medicine. Atakpo MGand Neuerer M. (2024) revealed a significant correlation between higher health literacy and utilisation of hospital services. It has thus become evident that Students with adequate DHL often rely on credible sources; such as official websites and institutional platforms to obtain accurate health information (Bak et al., 2022). In contrast, those with limited DHL may depend on social media or other unreliable sources, increasing their risk of misinformation and inappropriate health-seeking behaviours (Htay et al., 2022). Bin et al. (2024) revealed that These information boils down to the fact that DHL is associated with healthier lifestyle behaviours, including regular physical activity, balanced nutrition and the avoidance of harmful habits such as smoking and excessive alcohol consumption (Bin et al. 2024). As such, Students with higher DHL are more likely to make informed choices about their well-being, leading to better self-care practices (Cetin et al., 2024). This suggests that improving DHL could play a significant role in encouraging healthier lifestyles among public tertiary institution students in Anambra state by providing them with the necessary knowledge and skills that will enable them to adopt preventive health measures.



Improving DHL has indeed become germane as moderate levels of DHL among students increase their vulnerability to various health risks (Bin et al., 2024). Contributing to this are limited access to digital tools, inadequate training on evaluating online health information and reliance on unverified sources (Kasaye et al., 2024). Many students may also struggle to distinguish credible health information from misinformation, leading to poor health-seeking behaviours. It is against these backgrounds that this paper investigates the perceived influence of digital health literacy on health-seeking behaviour among students in public tertiary institutions in Anambra State, Nigeria.

Statement of the Problem

Health-seeking behaviour among students of public tertiary institutions in Anambra State has become a growing concern. This is as many students fail to adopt timely and appropriate measures when addressing health-related issues. Observations by researchers seem to suggest that some students tend to neglect early symptoms of illnesses, resort to self-medication, or rely on unverified health information sourced from social media and peers. Some even students seem to prefer alternative treatments, such as herbal remedies over professional medical consultations. This is based on the delay and improper treatment often associated with professional medical practice. Also contributing to this poor health-seeking behaviours are financial constraints, fear of stigmatisation and a lack of awareness about available healthcare services.

It is also observable that some public tertiary institution students in Anambra state exhibit reluctance in seeking professional medical care due to misconceptions about healthcare services, misinformation and inadequate digital health literacy (DHL). On this note, many students appear to struggle with distinguishing credible health information from misleading or inaccurate sources online. This raises concerns about the role of DHL in shaping students' health decisions and whether higher DHL could lead to improved health-seeking behaviours.

Purpose of the Study

The main purpose of this study is to determine the influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State. Specifically, the study:

1. Assessed the level of digital health literacy of students in public tertiary institutions in Anambra State.
2. Determined the influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State.

Research Questions

The following research questions guided the study:

1. What is the level of digital health literacy of students in public tertiary institutions in Anambra State?



2. What is the influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State?

Null Hypothesis

The null hypothesis was tested at 0.05 level of significance:

Digital health literacy does not influence health-seeking behaviour of students in public tertiary institutions in Anambra State.

Methodology

This study adopted a descriptive survey design. The population comprised 312 third-year students in the Department of Health Education and Health Promotion across four tertiary institutions in Anambra State in the 2024/2025 academic session. The entire population was used because it was manageable. Two structured instruments were used to collect data for the study. The first instrument is titled "Questionnaire on Influence of Digital Literacy on Health-Seeking Behaviour among Students in Tertiary Institutions (QIDLHSBSTIT)". The questionnaire was divided into two clusters: Cluster A and Cluster B. Cluster A contained 10 items on students digital health literacy. Cluster B comprised 10 items on influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions. The instrument was structured on 5-point Likert scale of Very High Level (VHL), High Level (HL), Moderate Level (ML), Low Level (LL) and Very Low Level (VLL). The second instrument is titled Questionnaire on Health Seeking Behaviour of Students (QHSBS). The instrument contains 10 items on students' health seeking behaviour. The instrument is structured on 5-point Likert scale of Strongly Agree (SA), Agree (A), Moderately Agree (MA), Disagree (D) and Strongly Disagree (D).

To ensure validity, the instrument underwent face and content validation by three experts from the Department of Health Education and Health Promotion, Faculty of Education, Nnamdi Azikiwe University, Awka. Additionally, a pilot study was conducted with 20 third-year students in health education programmes at tertiary institutions in Enugu State. The reliability of the instrument was established using the Cronbach Alpha method. The QIDLHSBSTIT yielded coefficient values of 0.86 for Cluster A and 0.88 for Cluster B, with an overall reliability coefficient of 0.87 while the QHSBS yielded reliability co-efficient of 0.91. The questionnaire was administered directly by the researchers with the assistance of three lecturers from the participating institutions. The instruments were distributed and retrieved on the spot and in cases where immediate retrieval was not possible, appointments were scheduled for collection. This process lasted for two weeks. Out of the 312 questionnaires administered, 285 were successfully retrieved in good condition, resulting in 91% response rate. The 285 valid responses were used for data analysis.

Data collected were analysed using mean scores and standard deviations. Mean scores of 2.50 and above indicated a high level of literacy or influence, while mean scores below 2.50 signified a low level of literacy or influence. The standard deviation



scores were used to determine the homogeneity or non-homogeneity of the respondents' responses. The test of the hypothesis was done using simple regression. The decision rule was based on the p-value: if the p-value was less than 0.05, the null hypothesis is rejected, indicating a statistically significant influence. Conversely, if the p-value is greater than or equal to 0.05, the null hypothesis was not rejected, suggesting that the influence was not statistically significant.

Results

Research Question 1

What is the level of digital health literacy of students in public tertiary institutions in Anambra State?

Table 1: Mean Ratings on Respondents Level of Digital Health Literacy of Students in Public Tertiary Institutions in Anambra State (N= 285)

S/N	Item Statements As a student, I:	Mean	SD	Remarks
1	Can effectively search for health-related information online.	3.65	0.85	High
2	Can evaluate the credibility of online health information.	3.54	0.79	High
3	Understand online health-related terminologies.	3.42	0.88	Moderate
4	Can apply digital health information to personal health decisions.	3.60	0.82	High
5	Am aware of reliable digital health sources.	3.47	0.91	Moderate
6	Can differentiate between credible and misleading online health content.	3.38	0.86	Moderate
7	Utilise digital health platforms for preventive healthcare.	3.55	0.83	High
8	Have access to various digital health resources.	3.29	0.95	Moderate
9	Am confident in navigating online health services and apps.	3.57	0.81	High
10	Can interpret online health statistics and research findings.	3.33	0.89	Moderate
Cluster Mean		3.48		Moderate

Data in Table 1 show the level of digital literacy of students in public tertiary institutions in Anambra State. Items 3, 5, 6, 8 and 10 with mean ratings ranging between 3.29 and 3.43 are possessed at moderate level while items, 1, 2, 4, 7 and 9 with mean ratings ranging between 3.54 and 3.65 are possessed at high level. The standard deviation score ranging between 0.79 and 0.95 showed that the respondents' opinions were close. The cluster mean of 3.48 indicate that the level of digital health literacy of students in public tertiary institutions in Anambra State is moderate.

**Research Question 2**

What is the influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State?

Table 2: Mean Ratings on Respondents Influence of Digital Health Literacy on the Health-Seeking Behaviour of Students in Public Tertiary Institutions in Anambra State (N= 285)

S/N	Item Statements	Mean	SD	Remarks
11	Digital health literacy enables students to seek medical advice online before visiting a hospital.	3.65	0.8	High
12	Students with high digital health literacy are more likely to use telemedicine services.	3.58	0.7	High
13	Access to online health information encourages students to engage in self-medication.	3.40	0.8	Moderate
14	Digital health literacy helps students to detect early symptoms of illnesses.	3.72	0.8	High
15	Students with digital health literacy make informed decisions about their health.	3.55	0.9	High
16	Online health platforms influence students' choice of healthcare facilities.	3.38	0.8	Moderate
17	Digital health literacy improves students' awareness of preventive healthcare.	3.60	0.8	High
18	Students rely on online health information to determine when to seek professional medical help.	3.47	0.9	Moderate
19	Students who use digital health resources are more likely to adopt healthy lifestyle habits.	3.50	0.8	High
20	Digital health literacy reduces students' dependence on traditional healthcare services.	3.33	0.8	Moderate
Cluster Mean		3.52		High

Data in Table 2 show the perceived influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State. Items 13, 16, 18 and 20 with mean ratings ranging between 3.33 and 3.47 moderately influence health-seeking behaviour of students in public tertiary institutions in Anambra State while items, 11, 12, 14, 15, 17 and 19 with mean ratings ranging between 3.50 and 3.72 highly influence health-seeking behaviour of students in public tertiary institutions in Anambra State. The standard deviation score ranging between 0.79 and 0.91 showed that the respondents' opinions were close. The cluster mean of 3.52 indicate that the influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State is high.



Null Hypothesis

Digital health literacy does not influence health-seeking behaviour of students in public tertiary institutions in Anambra State.

Table 3: Test of Significance of Simple Regression Analysis on Influence of Digital Health Literacy on the Health-Seeking Behaviour of Students in Public Tertiary Institutions in Anambra State

	Unstandardized B	Std. Dev. β	Standardized B	t- value	p- value
Constant	28.156	4.367		28.452	0.000
DHL	0.638	0.411	0.612	31.291	0.000
R	0.612				
R ²	0.608				
Adj. R ²	0.601				
F	42.642				0.000

The summary of the test of significance of simple regression analysis as shown in Table 3 revealed that the simple regression coefficient (R) is 0.612 while the R² is .608 and Adjust R² is 0.601. The F-ratio associated with regression is 42.642, the t-test is 31.291 and the P-value = 0.000. Since p-value (0.000) is less than the specified level of significance 0.05. This means that the effect of digital health literacy on health-seeking behaviour of students in public tertiary institutions in Anambra State is statistically significant. Thus, digital health literacy significantly influences health-seeking behaviour of students in public tertiary institutions in Anambra State. Thus, the null hypothesis was rejected.

Discussion

The finding of the study revealed that students in public tertiary institutions in Anambra State possess a moderate level of digital health literacy (DHL). This finding may be attributed to factors such as inconsistent access to digital health resources, limited exposure to online health platforms and a lack of formal training on evaluating health information. While many students own smartphones and have internet access, their ability to navigate and critically assess online health information may be limited, affecting their overall DHL levels. The finding of the study is in agreement with Martucci and Gulanick (2012) who reported that DHL plays a crucial role in shaping health-seeking behaviour. Individuals with moderate DHL may struggle to differentiate credible online health information from misinformation, which can lead to reliance on unreliable sources or self-medication. This suggests that while students in Anambra State may access online health resources, their ability to critically assess and apply this information remains limited, potentially affecting their healthcare decisions. Furthermore, Atakpo et al. (2024) found that higher DHL is associated with



increased utilisation of hospital services, while those with lower DHL are more likely to engage in alternative health-seeking behaviours like self-medication or reliance on social media for health advice.

The finding of the study revealed that the influence of digital health literacy on the health-seeking behaviour of students in public tertiary institutions in Anambra State is high. The finding may be attributed to students' frequent use of digital platforms to access health-related information, their reliance on online resources for self-diagnosis and their engagement with virtual healthcare services. The widespread availability of smartphones and internet access has likely contributed to this trend, enabling students to seek medical advice, book appointments and learn about preventive healthcare measures online. This is in congruence with the postulation of Martucci and Gulanick (2012), that individuals with higher DHL are more likely to engage in proactive health-seeking behaviours. The finding in context aligns with this view, as students with sufficient DHL may utilise credible health websites and online medical consultations to make informed health decisions. This suggests that DHL serves as a vital tool in guiding students towards appropriate healthcare services and reducing dependence on misinformation. Atakpo et al. (2024) however established a strong correlation between DHL and hospital utilisation, stating that individuals with higher DHL are more likely to seek professional medical care rather than relying on self-medication or unverified health sources. This supports the study's finding that students in Anambra State who possess strong DHL are more inclined to visit hospitals or consult healthcare professionals online and demonstrate a more structured and informed approach to managing their health.

The finding of the study further revealed that digital health literacy significantly influences health-seeking behaviour of students in public tertiary institutions in Anambra State. This is in line with Bin et al. (2024) who reported that DHL is associated with healthier lifestyle choices, including regular exercise, balanced nutrition and the avoidance of harmful habits. The high influence of DHL observed in this study suggests that students with better digital health literacy are more conscious of preventive health measures and are more likely to engage in positive health-seeking behaviours. This could be due to their exposure to accurate health information through digital platforms, which empowers them to make informed decisions about their well-being. Students should also have critical thinking when they get any information online, for not all information are true.

Conclusion

Based on the findings of the study, the researcher concludes that digital health literacy influences health-seeking behaviour of students in public tertiary institutions in Anambra State. This is on the rationale that the finding of the study showed that the level of digital literacy among students in tertiary institutions in Anambra State is moderate. This is also on the reason that the study showed the influence of digital health literacy on the health-seeking behaviour of students in public tertiary



institutions in Anambra State was high. It is therefore imperative that effective measures be put in place to promote health seeking behaviours among students in tertiary institutions through the development of digital health literacy. Students are however cautioned to exercise critical thinking over certain online information on digital health literacy.

Recommendations

Based on the findings of the study, the researchers recommended that:

1. Administrators of tertiary institutions should integrate courses that will promote students digital health literacy in academic curriculum or extracurricular programmes. This will equip students with the necessary skills that will enable their critical evaluation of online health information, differentiation of credible sources from misinformation and making of informed health decisions.
2. Administrators of tertiary institutions should collaborate with health organisations and technology experts to develop digital health awareness campaigns. These campaigns should educate students on the importance of DHL and provide guidance on how to navigate digital health platforms effectively.
3. The Federal and State Governments should improve access to digital health resources by providing students with reliable internet services, health information portals and mobile health applications. This will enhance students' ability to seek professional medical advice and access trustworthy health information.

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