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RESEARCH ARTICLE OPEN ACCESS

Healthcare service utilisation among undergraduate students: Knowledge, attitude, and experiences at a Nigerian university health service

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Abstract
Objective: This study examines undergraduate students' knowledge, attitude and experiences on the utilisation of healthcare services at the University hospital.
Method: A descriptive cross-sectional survey design was adopted. Data were collected from 420 undergraduate students using a multi-stage sampling approach. Interviewer-administered questionnaires were used for data collection. The questionnaire consisted of 42 items, including demographic information of respondents, knowledge of health services, attitude towards healthcare services, experience with use of health services and factors influencing the use of health services at BUTH.
Results: The findings reveal a generally neutral stance toward healthcare experiences, with respondents expressing mixed feelings regarding service accessibility and the responsiveness of healthcare staff. Notably, long waiting times and perceived staff attitudes were major barriers to utilisation. Although students demonstrated knowledge of available healthcare services, their experiences did not translate into strong confidence or recommendations to others. Factors influencing healthcare utilisation included the severity of symptoms and the reputation of healthcare professionals. The study underscores the need for service improvements to enhance healthcare satisfaction and utilisation among university students.
Conclusion: The study shows that undergraduate students possess adequate knowledge of university healthcare services; however, neutral perceptions and barriers such as prolonged wait times, care quality and staff attitudes limit utilisation. Enhancing service efficiency and responsiveness is essential to improving student satisfaction and healthcare engagement.

Keywords: Accessibility, Healthcare barriers, Healthcare services, Utilisation, Students' satisfaction

Plain English Summary

This study investigated how undergraduate students at a Nigerian university use and perceive their on-campus healthcare services. Researchers surveyed students to understand their knowledge of available services, their attitudes toward seeking care, and their actual experiences.

The study found that while students were generally aware of the health services offered, their experiences were largely neutral or negative. The biggest barrier to using the campus clinic was long waiting times. Students also reported dissatisfaction with the attitudes of healthcare staff and the overall quality of care they received.

As a result of these poor experiences, most students were reluctant to recommend the university health service to friends or family. The findings suggest that simply providing healthcare is not enough; the

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quality of the experience is crucial. To improve student health and well-being, the university should focus on making services more efficient, reducing wait times, and training staff to be more responsive and communicative.

Introduction

Among university students, the utilisation of healthcare services is critical for ensuring their health and academic success (1). This is because the provision of healthcare services and the satisfaction of such services by university students as users are designed to meet their health needs. In general, meeting the health needs of people irrespective of their locations and age is not only important to the well-being of such people but also as a strategy that strongly reduces the inefficiency of individuals (2, 3). Healthcare services are expected to cover prevention of illness, promotion of health, early identification of diseases, early prevention and management of some chronic health issues in a community (4) or among individuals. Provision of safe and effective healthcare services is central in the reduction of morbidity and mortality while positively impacting the productivity of individuals, the community and the country at large. In Nigeria, it is expected that all higher education institutions, which include universities, should have healthcare services, basically for students. More so, the "utilisation of health services at a University Health Centre (UHC) has implications for both the healthcare provider and the community members (staff and students of the university)" (5). As such, university healthcare facilities and services are designed to meet students' physical, social and mental health (6) needs and those of other members of its community.

The use of a healthcare service, procedure, device, or pharmaceutical drug to maintain one's health and well-being, prevent and/or treat health problems, or obtain information about one's health status and prognosis is referred to as "healthcare utilisation (7). Health care utilisation is reported using a range of different techniques, which amount to services used over time, as determined by the population denominator and the proportion of people who use particular services relative to those who are eligible for those services over time (8, 9). The need for care, awareness of that need, desire for care, and accessibility to care are all factors that affect how often people use health care services. Major factors affecting health care utilisation include health status and the requirement for medical treatments to maintain and improve health, which are influenced by factors such as non-availability of essential drugs, the time spent waiting to receive treatment, inadequate referral system, quality of health care provided, the health outcomes and patients' satisfaction with services (3).

Additionally, other factors such as religious beliefs, cost of medical care, proximity to healthcare facilities, and service standards influence healthcare utilisation (10, 11). High costs of medical services and long waiting periods in the queue before consultation further affect service utilisation at university health centres or hospitals (12), and a delay in responding to emergencies that happen outside the health facilities. To reduce healthcare financing and to enhance better service delivery to students at higher institutions, the federal government of Nigeria launched the Tertiary Institution Social Health Insurance Scheme (TISHIP) in 2007 as an outshot of the National Health Insurance Scheme (2). However, a wide gap still exists between healthcare provisions and the utilisation of healthcare services among tertiary institutions in Nigeria. Studies conducted on students' utilisation of university healthcare centres revealed that poor funding by universities (12), inadequate personnel, delay in administering health care services, lack of drugs and consumables (3, 12, 13) have affected the availability and quality of healthcare facilities in universities. Thus, this study is carried out to examine the undergraduate students' level of knowledge, attitude and their experience of utilising healthcare services at a University Hospital in Nigeria.

Materials and Methods

Research Design and Study Area

This research adopted a descriptive cross-sectional study design. The use of a descriptive cross-sectional design is to enable the researchers to collect and "analyse data from a population at a single point in time" (14). As an observational study, the use of this design is to enable the collection of data from many different individuals. The study was carried out at Babcock University, Ilishan-Remo, Nigeria. The university was named after an American missionary, David. C. Babcock, who pioneered the work of the Seventh-day Adventist church in Nigeria, established it was first established as the Adventist College of West Africa (ACWA) in 1959. Its name was later changed to Adventist Seminary of West Africa (ASWA), and the university was officially inaugurated on 20 April 1999. There is a mini campus commonly known as the Iperu (Law) campus, main campus, and the University has 18 halls of residence for undergraduate students.

Study participants, sampling and inclusion criteria

The study population were full-time Babcock undergraduate students. The inclusion criteria are basically registered undergraduate students who reside in any university hall of residence. The study excludes postgraduate students, non-Babcock undergraduate students, university staff, diploma, pre-degree and off-campus undergraduate students, as well as students at the Iperu mini-campus. Four hundred and twenty (420) students participated in this study, selected from the halls of residence. Only 409 copies of the questionnaire were eligible for analysis, resulting in a 97.3% return rate.

Sampling, Instrument, Data Collection and Analysis

Multi-stage sampling techniques were used. A ballot system was used to select the blocks from each hall of residence, the sample size was then divided by the total number of halls of residence to ensure that the questionnaires are distributed equally among the halls of residence and the final stage involved random selection of halls, rooms, and only one person (student) per selected room was eligible to participate in the study irrespective of the willingness of others in such room. The questionnaire was designed in line with the objectives and research questions of this study. The questionnaire had five sections, namely sections A through E the sections are broken down into the following details.

Section A: The socio-demographic characteristics of each partaker, consisting of their Age, gender, school of undergraduate program/course of study, level of study, etc.

Section B: Questions to assess the level of knowledge of undergraduate students of Babcock University, Ilishan-Remo, Ogun State, towards available health services offered at the BUTH.

Section C: Dealt with Attitudes of undergraduate students of Babcock University, Ilishan-Remo, Ogun State, towards Available Health services at BUTH.

Section D: Questions to determine the experience among undergraduate students of Babcock University, Ilishan-Remo, Ogun State, towards Available Health services at BUTH.

Section E: Questions to assess the factors that influence the Utilisation of available health services among undergraduate students of Babcock University, Ilishan-Remo, Ogun State.

The questionnaire was pretested with 42 students, which marked 10% of the study population in the Iperu campus. However, those who were involved in the pre-test were not part of the main study. The pre-test allowed for exposure to determine the time needed to complete the questionnaire, as well as to assess the study population's level of understanding of the questions asked. A questionnaire was administered to the willing participants, and ethical considerations were greatly observed. The computer-assisted IBM SPSS Statistics v24was used to analyse the results. The range of interpreting the Likert scale means scores is given as follows: 1.0-2.4 (Negative), 2.5-3.4 (Neutral), and 3.5-5.0 (Positive).

Results

Socio-demographic Information of Respondents

More than half (57.2%) of the respondents were female, the majority (85.3%) of respondents were Christians, while 13.4% were Muslims. About half (42.8%) of respondents were Yoruba by origin, while 35.5% were Igbo. Respondents were equally selected from all halls of residence. 28.9% of the respondents were in the 300 level, 27.1% of respondents were in the 200 and 300 levels respectively, while 0.7% of respondents were in the 600level, as depicted in Table 1.

Table 1: Socio-demographic Information of Respondents (N= 409) (Mean age = 19)

	Responses	Frequency	Percentage
Gender	Female	234	57.2
	Male	175	42.8
Religion	Christianity	349	85.3
	Islam	55	13.4
	Others	5	1.2
Ethnicity	Igbo	145	35.5
	Yoruba	175	42.8
	Hausa	40	9.8
	Others	49	12
Hall of residence	Bethel splendor	24	5.9
	Topaz	24	5.9
	Samuel Akande	24	5.9
	Nelson Mandela	24	5.9

	Gideon troopers	24	5.9
	Neal Wilson	24	5.9
	Welch	24	5.9
	Winslow	24	5.9
	Queen Esther	24	5.9
	White	24	5.9
	FAD	24	5.9
	Nyberg	24	5.9
	Havilah	24	5.9
	Crystal	24	5.9
	Platinum	24	5.9
	Ameyo	24	5.9
	Diamond	24	5.9
	Ogden	24	5.9
Level	100	54	13.2
	200	111	27.1
	300	118	28.9
	400	111	27.1
	500	12	2.9
	600	3	0.7

Knowledge of Healthcare services

The majority (42.1%) of respondents had the knowledge that healthcare services provided by the campus are primary healthcare services, 28.6% of the respondents believed that dental services are provided by the centre, while 3.7% had the knowledge that the centre provides ophthalmology services. The majority (74.1%) of respondents stated that acupuncture service is not provided in the clinic, 15.6% believed that physical therapy service is not provided in the clinic, while 4.4% opined that substance abuse treatment service is not available in the healthcare. The majority (74.6%) of respondents used carrier pigeons to schedule an appointment with the health centre, 10.3% normally call to schedule an appointment, while 4.4% opted for online to schedule an appointment. Almost half (45.0%) of respondents explained that due to the lack of availability of mental health counselling as a major reason for not using BUTH appropriately, one-fifth (20.8%) of respondents said it was due to minor illnesses, while 4.4% was due to no medical emergency care in the centre. On average (50.6%), respondents affirmed that having health insurance is a prerequisite to utilise the centre, 11.0% said it is partially true, while 26.9% revealed that it was not totally false. The majority (71.1%) of respondents agreed that students receive vaccination at the centre, 20.0% believed that students do not receive vaccination at the centre, while 6.8% partially believed that there are vaccinations for students to take. Slightly above half (54.0%) of respondents rarely visit the health centre to seek treatment for minor health issues, and 17.6% of respondents frequently delay seeking medical care elsewhere, as shown in Table 2.

Table 2: Knowledge of Healthcare Services and Routines Available at BUTH

Variables	Responses	Frequency	Percentage
Healthcare services provided	Counselling services	105	25.7
	Dental services	117	28.6
	Vision services	15	3.7
	Primary care services	172	42.1
Healthcare services are not provided	Physical Therapy	64	15.6
	Nutrition Counselling	24	5.9
	Substance Abuse Treatment	18	4.4
	Acupuncture	303	74.1
Ways to schedule an appointment	Walk-in Appointments	44	10.8
	Online Scheduling	18	4.4
	Call Scheduling	42	10.3
	Carriers Pigeon	305	74.6
Reasons for not using BUTH appropriately	Due to the annual physical exam	122	29.8
	Due to minor illnesses	85	20.8
	No emergency medical care	18	4.4
	No mental health counselling	184	45.0

Health insurance is a prerequisite to utilise health services at BUTH	True	254	50.6
	False	155	26.9
	Partially true	47	11.5
	Partially false	45	11.0
Students receive vaccination at the centre	True	291	71.1
	False	82	20.0
	Partially true	28	6.8
	Partially false	8	2.0
Frequency of seeking treatment for minor health issues	Always	40	9.8
	Often	66	16.1
	Sometimes	82	20.0
	Rarely	221	54.0
Delayed seeking medical care elsewhere	Frequently	72	17.6
	Occasionally	99	24.2
	Rarely	98	24.0
	Never	140	34.2

The knowledge score was rated on an 11-point rating scale, with minority 84.6% indicating a low level of knowledge among undergraduate students of Babcock University, Ilishan-Remo, Ogun State, towards the utilisation of available health services at BUTH, as shown in Table 3

Table 3: Level of Knowledge (Mean Score)

Practice Category	Respondents in the study: N=409	
	Frequency	Percentage (%)
Low (0-5)	346	84.6
High (6-11)	63	15.4
Mean ±SD		3.84 ± 1.62

Attitude of Respondents towards the Use of Healthcare Services at BUTH

The majority (70.4%) of respondents strongly agreed that preventive healthcare is an annual check-up, 7.3% were neutral concerning this, and 2.9% disagreed with the statement, while the mean score is 4.6. About half (56.2%) of respondents strongly agreed that early detection of diseases leads to better treatment outcome, 25.4% agreed with the statement, and 3.7% of respondents disagreed with the statement while score is 4.3. in seeking help from health professional on signs or symptoms of illness, 35.0% of respondents agreed with it, 14.4% were neutral while the mean score is 4.1. On the essential to consult a doctor before starting new medication or supplement, 29.8% agreed with the statement, while about one-tenth (9.5%) disagreed with it, and the mean score is 4.0. On the confidence in the quality of healthcare services at BUTH, 31.1% of respondents strongly agreed with the statement, 25.9% of them were neutral, while 5.4% strongly disagreed with it, and the mean score is 3.6. On healthcare at BUTH that is easily accessible when needed, 31.8% of respondents disagreed with the statement, 22.7% were neutral, while 19.3% strongly agreed, with a mean score of 3.0. On healthcare at BUTH, address specific health needs and concerns, 28.4% of respondents disagreed with it, 21.0% of them agreed with the statement, 23.5% were neutral, and the decision based on the mean score was positive. On preventive care (vaccinations, screenings), which is essential in maintaining overall health, 46.2% of respondents strongly agreed, 14.2% were neutral, and 14.4% disagreed with the statement, while the decision was positive based on the mean score. Overall, the mean score for Table 3 was 3.9, which implies that the attitude of respondents towards the use of healthcare services at BUTH was positive, as shown in Table 4.

Table 4: Attitude of Respondents towards the use of Healthcare Services at BUTH

Statements	SA		A		N		D		SD		Total score	Mean score	Decision
	F	(%)	F	(%)	F	(%)	F	(%)	F	(%)			
Preventive healthcare at BUTH	288	70.4	78	19.1	30	7.3	12	2.9	1	0.2	1867	4.6	Positive
Early detection of diseases leads to	230	56.2	104	25.4	57	13.9	15	3.7	3	0.7	1770	4.3	Positive

better treatment outcomes													
Seek help from a health professional on the signs or symptoms of illness	178	43.5	143	35.0	59	14.4	26	6.4	3	0.7	1694	4.1	Positive
Essential to consult a doctor before starting a new medication or supplement	176	43.0	122	29.8	64	15.6	39	9.5	7	1.7	1645	4.0	Positive
Confident in the quality of healthcare services at BUTH	127	31.1	96	23.5	106	25.9	58	14.2	22	5.4	1475	3.6	Positive
Healthcare at BUTH is easily accessible when needed	79	19.3	62	15.2	93	22.7	130	31.8	45	11.0	1227	3.0	Positive
Healthcare at BUTH addresses specific health needs and concerns	76	18.6	86	21.0	96	23.5	116	28.4	35	8.6	1279	3.1	Positive
Preventive care (vaccinations, screenings) is essential in maintaining overall health	189	46.2	97	23.7	58	14.2	59	14.4	6	1.5	1631	4.0	Positive
Overall attitude												3.9	Positive

Experiences of Respondents of Healthcare Services Utilisation of BUTH

On the satisfaction with accessibility of healthcare facilities, 27.1% of respondents strongly disagreed with the statement, 22.0% were neutral, and 19.3% strongly agreed with the statement, while the decision taken was neutral (3.0). On comfortable discussing sensitive health issues with doctors or nurses, one-quarter (24.9%) of respondents agreed with the statement, 29.1% were neutral, 25.7% of them strongly disagreed with the statement, while the decision taken was neutral. On being informed by healthcare professionals about diagnosis and treatment options, 27.1% of respondents were neutral on the statement, 23.5% strongly agreed, while 17.8% strongly disagreed with it, and the mean score was 3.3. On confidence in prescribed medications and treatments by health professionals, 26.9% of respondents strongly agreed with the statement, 5.4% of them disagreed, and 20.3% strongly disagreed, while the mean score is 3.3. On healthcare staff helpful in responding to questions and concerns, 36.4% of respondents strongly disagreed with the statement, 21.3% were neutral, and 23.0% of them agreed with it, while the mean score is 2.6. On recommending BUTH to friends and family based on personal experience, 12.2% of respondents strongly agreed, 19.1% were neutral, and almost half (47.0%) of respondents strongly disagreed with the statement, while the decision of respondents on the statement was negative. The overall mean score of respondents' experiences on the utilisation of

healthcare services at BUTH was neutral, with a mean score of 2.9, as presented in Table 5.

Table 5: Experiences of Respondents of Healthcare Services Utilisation of BUTH (N=409)

Responses	SA		A		N		D		SD		Total score	Mean score	Decision
	F	(%)	F	(%)	F	(%)	F	(%)	F	(%)			
Satisfied with the accessibility of healthcare facilities	79	19.3	99	24.3	90	22.0	30	7.3	111	27.1	1232	3.0	Neutral
Comfortable discussing sensitive health issues with doctors or nurses	54	13.2	102	24.9	119	29.1	29	7.1	105	25.7	1198	2.9	Neutral
Informed by healthcare professionals about diagnosis and treatment options	96	23.5	101	24.7	111	27.1	28	6.8	73	17.8	1346	3.3	Neutral
Confident in prescribed medications and treatments by health professionals	110	26.9	98	24.0	95	23.2	22	5.4	83	20.3	1354	3.3	Neutral
Healthcare staff help respond to questions and concerns	44	10.8	94	23.0	87	21.3	35	8.6	149	36.4	1076	2.6	Neutral
Recommend BUTH to friends and family based on personal experience	50	12.2	67	16.4	78	19.1	35	8.6	179	47.0	1001	2.4	Negative
Overall												2.9	Neutral

Factors Influencing the Utilisation of Health Services

Almost one-third (32.5%) of respondents identified the severity of symptoms as the main factor that influenced them to utilise BUTH, while 23.5% said it was the availability of transport fare. Slightly above one-third (35.9%) of respondents indicated that to access health care services, and 14.4% of them indicated not important in accessing healthcare services. More than half (56.5%) of respondents said long wait time was the main barrier preventing them from utilising healthcare services, 10.3% said it was due to fear of stigma and lack of health insurance, respectively. One-third (32.5%) said the proximity of healthcare to them did not play any significant role in utilising healthcare services, while 32.5% of them said it played a significant role. Almost half (46.9%) of respondents said the extent of quality of care impacted their service utilisation, while 3.2% said it did not. Half (51.1%) of respondents indicated that the reputation of healthcare services influenced them to utilise it very importantly, while 2.9% said it was not important at all. Almost average (48.9%) of respondents said the extent of waiting greatly impacted their decision for utilisation, and 17.4% said it impacted very little. About One-fifth

(22.5%) of respondents said it was somewhat important in accessing preventive care, while 36.7% of them said it was critically important, as shown in Table 6.

Table 6: Factors Influencing the Utilisation of Health Services at BUTH

	Items	Frequency	Percentage
The main factor influencing the decision to seek healthcare services	Severity of symptoms	133	32.5
	Cost of services	82	20.5
	Availability of transport fare	96	23.5
	Level of sickness	69	16.9
	Others	29	7.1
Level of importance in accessing health care services	Critically important	163	39.9
	Important	35	8.6
	Somewhat important	147	35.9
	Not important	59	14.4
	Maybe important	5	1.2
The main barrier preventing the utilisation of healthcare services	Lack of health insurance	42	10.3
	Lack of transportation	81	19.8
	Long wait times	231	56.5
	Fear of stigma	42	10.3
	Unspecified	12	2.9
Role of proximity in utilising health care services	A significant role	133	32.5
	A moderate role	102	24.9
	A minor role	127	31.1
	No role at all	42	10.3
	Unspecified	5	1.2
Extent of quality-of-care impact on utilisation	To a considerable extent	192	46.9
	To some extent	150	36.7
	Very little extent	51	12.5
	Not at all	13	3.2
	Other	3	0.7
Reputation of healthcare professionals in influencing utilisation	Very important	209	51.1
	Somewhat important	142	34.7
	Not very important	41	10.0
	Not important at all	12	2.9
	Other	5	1.2
Extent of waiting time impact on utilisation	A great deal	200	48.9
	Somewhat	109	26.7
	Very little	71	17.4
	Not at all	28	6.8
	Other	1	0.2
Level of importance in accessing preventive care	Critically important	150	36.7
	Important	113	27.6
	Somewhat important	92	22.5
	Not important	54	13.2

Discussions

This study was carried out among Babcock undergraduate students. It investigated the issue of healthcare utilisation. It reveals that there are more females (57.2%) than males who participated in the study, even though there are more males than females who are enrolled in Science, Technology, Engineering and Mathematics (STEM) courses in Nigerian universities (15, 16, 17). The mean age of the respondents is 19years, and this resulted from the 16-year minimum age requirement for admission. The high percentage (85.3%) of Christians indicates that the university is established by a Christian religious organisation (Seventh-day Adventist) in meeting three critical needs vis-à-vis education, health and spiritual (18). This brought about the very low percentage of other religious affiliations, even though religious affiliation is not part of the admission criteria into the university. Students of different ethnic groups are found in the university; all halls of residence are equally represented, and twenty-four respondents are systematically selected from each hall.

The high concentration of respondents from 200 to 400 levels shows that most of the respondents have spent at least a year in the university, and they are going to graduate in the next year. This implies that responses from these categories of

respondents are not going to be based on not having experiences with BUTH, as could be reflected at the 100 level or the final year students who are about to leave the university. Most of the respondents had the knowledge that vision services are not provided at the healthcare centre. This is also in line with studies conducted by (19, 20) that eye care services should be integrated into the primary healthcare services in Nigeria, and BUTH serves as a primary healthcare provider to students of the institution.
Acupuncture is mentioned as a service that is not provided by BUTH. This is not only peculiar to the university hospital, but also, such service is not provided in any PHC in Nigeria due to its evolving stage (21). However, it could be that acupuncture medicine is becoming popular among university undergraduate students in the country. One of the major reasons cited by the respondents for not using BUTH appropriately is the issue of not having mental health counselling in the centre. Can it be that students are looking for the availability of a mental healthcare unit in the centre for them to make use of the centre appropriately? The World Health Organisation (WHO) posits that mental health issues are responsible for more than seven per cent of the disease burden globally. Close to 400 million people are experiencing mental health problems, and it is projected that one in every four people will experience the problem at a point in their lives (22). Mental illness is prevalent among young people aged 15-26 years (23). However, mental health services are available at BUTH, but this shows that students are not utilising the services appropriately, and several factors could account for that, as revealed (1, 9).
Overall attitude of respondents towards the use of healthcare services is positive, with a mean score of 3.9. The findings reveal that all the statements verified under respondents' attitude are positive, with a ranking from 3.0 to 4.1 mean scores. Statement on preventive healthcare at BUTH is ranked highest (4.1), while healthcare services easily available at BUTH when needed are lowest, with a mean score of 3.0. Although this is not a very strong positive mean score, it implies that students have a positive attitude toward using BUTH.
Conversely, the experiences of respondents on the healthcare utilisation of BUTH are different from their knowledge of how to use it. None of the parameters used to measure the respondent's experiences with the centre is positive at the mean score. These range from how satisfied respondents are in using the healthcare facilities to recommending BUTH to friends and family based on their personal experiences. The findings reveal that students are not having good experiences with the healthcare centre since almost all of their responses are neutral. Statements on 'informed by healthcare professionals about diagnosis and treatment options' and "confident in prescribed medications and treatment by health professionals" have almost a positive mean score of 3.3 each.
Healthcare staff responding to questions and feeling concerned have an almost negative mean score, and this implies that several students who used the centre could not feel the impact of healthcare staff responding to their questions and showing good concern towards them. Leverage this, students have perceived that the attitudes of healthcare workers towards them are not desirable, and this is in line with the fact that poor attitudes of healthcare staff reduce the utilisation among students (24, 25, 26). This must have informed the majority decision that they cannot recommend BUTH to friends and family members, as the mean score shows 2.4. Although respondents initially showed positive knowledge about the healthcare services, their experiences with the centre discouraged them from recommending the healthcare services to people close to them. Not recommending BUTH shows a very low level of confidence in the utilisation by students of the institution. Thus, there is a high level of possibility of respondents seeking healthcare outside the centre, which is primarily designed for students. Overall, the respondents' experiences with BUTH have a low mean score (2.9).
The major barrier that prevents students from utilising healthcare services at BUTH is the long waiting time at the centre, as identified by more than half (56.5%) of respondents. The extent of waiting time has a great deal (48.9%) on their utilisation decision. About one-third (32.5%) believed that proximity to the healthcare centre actually plays a significant role in the utilisation of healthcare services. About half (46.9%) identified that the quality of care has a considerable impact on healthcare utilisation. However, the reputation of healthcare professionals played a very significant (51.1%) role among the factors that influenced students to make use of the health centre. There is a connection between the reputation of healthcare professionals, as well as long waiting times, and respondents not wanting to recommend BUTH to friends and family.

Limitations

The study is not without limitations. First, some of the participants did not provide an answer to all the questions, but overall, the completion rate of the questionnaire is put at 97%. Second, this study is not a holistic representation of healthcare service utilisation as BUTH, as postgraduate students, staff, undergraduate students at the Iperu campus (Law), and residents of the Ilishan

community and its environs were excluded from the study. Third, respondents may have been biased in providing their responses, as the data is based on self-reported information. Additionally, the students may be aware that they are still university students.

Conclusion

The study highlights significant gaps in healthcare service utilisation at BUTH. While students generally recognise available services, their experiences reveal dissatisfaction, particularly with waiting times, staff responsiveness, and perceived quality of care. The reluctance to recommend BUTH suggests a need for institutional reforms to improve patient confidence and satisfaction. Addressing these concerns is crucial to ensuring that students effectively utilise the healthcare centre as intended. This study recommends that to reduce waiting time, it is important to implement an appointment scheduling system to streamline service delivery. There should be enhanced staff-patient interaction through training programs for healthcare workers to improve communication and patient engagement. The management needs to expand mental health services by increasing awareness and accessibility of existing mental health support within BUTH. Improving service efficiency through regular assessment and upgrade of the healthcare infrastructure to enhance service quality is important. The management should strengthen patient feedback mechanisms through an established, structured feedback system to address concerns and improve users' experience.

List of Abbreviations

BUHREC: Babcock University Health Research Ethics Committee
BUTH: Babcock University Teaching Hospital
STEM: Science, Technology, Engineering and Mathematics

Declarations

Ethical approval and consent to participate

The ethics approval was obtained from Babcock University Health Research Ethics Committee (BUHREC) with the approval number. A written consent was obtained from the study participants; the researchers introduced themselves and ensured that the participants were given a briefing on the extent and the nature of the study being conducted. The participant's rights were as follows: (1) Right to informed consent: Respondents' informed consent was sought before questionnaire administration. (2). Right to privacy and confidentiality: The data collection was carried out only by the researchers. Priority was placed on the confidentiality of the respondent's answers. There was assurance that unauthorised persons would gain no access to the information they provided, as well as personal details being totally ruled out from being stated on the questionnaire. (3) There was no force used on the respondents to cause them to participate in the study. The fact of the study participation being voluntary was highlighted, and withdrawal from the study at any time, if they so wish, without any penalty or loss of privilege whatsoever, was allowed. (4). The respondents were informed that their involvement would not lead to any consequences, as their anonymity was guaranteed. That is, the rights of the participants were safeguarded by ensuring that their identities and personal information were not requested. This study was mindful that no physiological or psychological dangers must befall the participants.

Consent for publication

All the author(s) gave consent for the publication of the work under the Creative Commons Attribution-Non-Commercial 4.0 license.

Availability of data and materials

The data and materials associated with this review will be made available by the corresponding author upon reasonable request.

Competing interests

The author(s) declare that they have no competing interests.

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Author's contributions

LSA: Conceptualisation, data curation, writing–original draft, formal analysis, investigation, supervision, methodology, writing–review and editing.
NEC: Conceptualisation, data curation, methodology, data collection, validation, investigation, formal analysis.
AM: writing–review and editing, validation, formal analysis, investigation.
OOB: writing–review and editing, validation, formal analysis, investigation.

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