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Research Article

Understanding Poor Healthcare Utilisation Among Healthcare Workers: Insights from Clinical and Non-clinical Staff in Ondo State, Nigeria

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Abstract

Healthcare workers are central to delivering quality care, yet many struggle to attend to their own health due to heavy workloads, long hours, and a culture that normalizes self-treatment. This study examined healthcare-seeking patterns and determinants of service utilisation among clinical and non-clinical workers in tertiary hospitals in Ondo State, Nigeria, using a comparative mixed-methods cross-sectional design involving 460 participants. Quantitative data were collected through pretested interviewer-administered questionnaires, complemented by qualitative insights from Key Informant Interviews, with analysis conducted using descriptive statistics, chi-square tests, logistic regression ($p<0.05$), and thematic analysis with NVIVO 14. Findings showed that clinical workers were generally younger and exhibited poorer health behaviours compared to non-clinical staff, with inappropriate health-seeking behaviour high in both groups but more pronounced among clinical workers (87.4% vs. 80%). Utilisation of available health services was similarly poor, slightly lower among non-clinical workers (83.9% vs. 82.2%). Predictors of better healthcare utilisation among clinical workers included being on regular medication, appropriate health-seeking behaviour, and having health insurance, while among non-clinical workers, ever consulting a doctor and good health-seeking behaviour significantly increased utilisation. Overall, despite perceiving themselves as healthy, both groups demonstrated poor health-seeking patterns and underutilisation of available services, highlighting the urgent need for policies and institutional strategies that promote preventive care, routine screening, and a healthier workplace culture for all healthcare workers.

Keywords

Health-seeking Behaviour, Healthcare Utilisation, Clinical Workers, Ondo State

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1. Introduction

Health-seeking behaviour refers to the actions individuals take when they perceive a deviation from their normal health, including efforts to prevent illness, manage symptoms, or access treatment. [1] It spans a spectrum of responses—ranging from self-medication and home remedies to formal consultations and routine screening. [2] These behaviours are shaped by beliefs, social networks, cultural norms, economic circumstances, and perceptions of illness severity. [1] Ultimately, health-seeking behaviour influences how quickly and appropriately people utilise available healthcare services, with direct consequences for disease outcomes and overall well-being.

One of the dynamics of human behaviour is how they react when they are sick. [1] When someone is ill, health-seeking behaviour entails going to a health facility or using a home remedy. [3] The individual's choice covers all existing healthcare options, which include public or private, traditional or modern healthcare facilities, self-medication, or not using any health services. [2].

Health-seeking behaviour is defined as any action undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy. [4] Health-seeking behaviour has also been defined as a sequence of remedial actions that individuals undertake to rectify perceived ill health. The time span from symptom onset to contacting a healthcare provider, the type of healthcare provider chosen by the household, and the patient's compliance with treatment are included in this definition.

Health-seeking behaviour is situated within the broader concept of health behaviour, which includes activities embarked upon in order to maintain good health, prevent ill health, and deal with any deviation from a good state of health. [5] Health-seeking behaviour is commonly thought of as the ways in which people behave in relation to their health or as the level of utilisation of healthcare services, which is the endpoint of the process of seeking care. [6] Hence, health-seeking behaviour is measured by the utilisation of healthcare services, and it is the behavioural component that drives the utilisation of healthcare services. [7] Health-seeking behaviour is a multi-dimensional concept that depends on the context and time an individual is facing it. [6] Health behaviour includes practices, actions and habits that positively or negatively affect one's health status. [6] Health-seeking behaviours are closely linked to the health status of a nation and, by extension, its economic development. [1].

Utilisation of healthcare is a dynamic concept that is also dependent on time and affected by a multitude of factors such as accessibility, comprehensiveness, and continuum of care. [8] Utilisation of healthcare is described as the quantity of healthcare services used, a concept that can be measured by costs and visits. [9] Utilisation of healthcare has also been defined as the use of healthcare services by the people. [9] The utilisation of healthcare facilities in developing countries varies greatly between socioeconomic classes and depends on predisposing factors such as demographic characteristics, social structure and belief systems. [10] People in developing countries like India and Africa prefer to use private healthcare facilities because they are easier to access and provide more personalised care, whereas public facilities are perceived to be of low quality, located in remote areas, and have long waiting times and insufficient facilities. [6] Due to financial constraints, some poor people choose self-treatment or no treatment.

The utilisation of healthcare services by the clinical healthcare workers is influenced by several unique factors which are tied to their professional culture, knowledge and awareness, time constraints and workload, mental health stigma, access to healthcare, and occupational health risks. [11] The utilisation of healthcare services among the non-clinical healthcare workers is influenced by a variety of unique factors related to their job roles, work place environment, access to healthcare services, cultural beliefs, and socioeconomic status. [12, 13] There are five different approaches that are used to study the utilisation of health services. [14, 15] They include the socio-cultural, socio-demographic, socio-psychological, organisational and social systems. [14, 15] Each of these has its own limitations, but the social system approach incorporates the features of all the other approaches and provides a better insight into the utilisation of health services and also provides a valuable framework on which other research can be undertaken. [14, 15].

In Nigeria, these concerns are amplified by systemic challenges—workforce shortages, demanding clinical environments, and limited time for self-care. Evidence suggests that despite high awareness of the benefits of routine screening and prompt care-seeking, many healthcare workers struggle to practice what they teach. [16, 17] Non-clinical staff, though less exposed to direct clinical risks, also experience workplace stressors and may have lower health literacy, yet receive far less research attention. [18].

Ondo State, like many regions in Nigeria, has witnessed cases of sudden illness and preventable deaths among healthcare workers—events that highlight gaps in timely healthcare utilisation and underline the need for empirical investigation. Yet, despite growing concern, research focusing specifically on how healthcare workers in tertiary hospitals seek care and what determines their utilisation of professional health services remains sparse. [19].

This study therefore examines the health-seeking behaviour and healthcare utilisation patterns among clinical and non-clinical healthcare workers in tertiary hospitals in Ondo State. By identifying differences between the two groups and exploring the utilisation of health services, the findings aim to support evidence-based interventions, promote a healthier

workforce, and strengthen overall health system performance.

2. Methodology

2.1. Study Area

The study was conducted in the two tertiary health facilities located in Ondo state. Ondo state is a state in southwestern Nigeria. It was created on February 3, 1976, from the former western state (Ondo province). [20] Ondo state is bordered by Ekiti state (formerly part of the state) to the North, Kogi state to the North East, Edo state to the East, Delta state to the South East, Ogun state to the South West, Osun state to the North West and the Atlantic Ocean to the South. Ondo state includes Mangrove swamp forest near the Bight of Benin, Tropical Rainforest in the central part and Wooded Savanna on the gentle slopes of the Yoruba hills in the North. [20] The state's capital is Akure, the former capital of the ancient Akure kingdom. Her crop of educated elites has led to it being classified as one of the most educationally advanced states in Nigeria. [20] Nicknamed the 'Sunshine State', Ondo state is the 19th most populated state in the country. [20] It is also the 25th largest state by landmass, with a current population of 5,372,477. [20].

The state is predominantly Yoruba, where the Yoruba language is commonly spoken. [20] The state economy is dominated by the petroleum industry, with cocoa production, asphalt mining and activities utilising the state's extensive coastline also serving as major economic factors. [20] Ondo state has eighteen local government areas (LGAs), the major ones being Akoko, Akure, Okitipupa, Ondo, Ilaje, Idanre and Owo. [20] The two tertiary health facilities in the state are public-owned and they are located in Qwo and Ondo towns. [21] The total number of healthcare workers in the state is about 8,805. [21].

The ethnic composition of the Ondo state is largely from the Yoruba subgroups of the Idanre, Akoko, The Edo speaking, Akure, Ikale, Ilaje, Ondo and Owo. Ijaw people. [20] The people are mostly subsistence farmers, fishermen, and traders. [20] The vast majority of the population are Christians, while the minority practices Islam and traditional worship. [20].

2.2. Study Sites

The General Hospital, Owo, established in 1989 and owned by the Ondo state government, was taken over by the Federal Government of Nigeria and re-designated as Federal Medical Centre, Owo, in 1993. Federal Medical Centre (FMC) is a Federal Tertiary Hospital that is located in Owo, a city in Ondo state, Southwestern Nigeria. Federal Medical Centre, Owo, a 300-bedded hospital was one of the five pioneer Federal Medical Centres established by the Federal Government of Nigeria in 1993 in line with the government policy to establish Federal Medical Centres in states without federal government owned tertiary hospitals. [19].

University of Medical Sciences Teaching Hospital (UNIMEDTH), Ondo was formed following the amalgamation of seven health institutions in Ondo state to form a multi-complex teaching hospital. [22] Those institutions include: Trauma and Surgical Centre, Kidney Care Centre, Mother and Child Hospital, State Specialist Hospital Ondo, State Specialist Hospital Akure, Millennium Eye Centre, and Dental Headquarters Akure. [22] The teaching hospital was established in December 2015, has a 300-bedded capacity and a total staff population of 1,146. [22].

2.3. Study Design

This research is a comparative facility-based cross-sectional study. The research utilised a concurrent mixed methods approach, which comprised surveys and key informant interviews.

2.4. Study Population

2.4.1. Quantitative Survey

The study population comprised clinical healthcare workers (doctors, nurses, pharmacists/pharmacy technicians, physiotherapists, laboratory scientists/technicians, and therapists/technologists) and non-clinical healthcare workers (administrative, account, works and services and medical records) in Federal Medical Centre Owo and University of Medical Sciences Teaching Hospital Ondo, Ondo state, Nigeria.

2.4.2. Qualitative Survey

For the key informant interview (KII), the study population was drawn from healthcare workers (Head Clinical Services, Director of Administration, Head Nursing Services, ARD president, NANNM president, MAHWUN chair and JOHESU president) who doubled as stakeholders in the selected tertiary health facilities.

2.4.3. Inclusion Criteria

1) Male and female employees who have worked for more than six months in the selected facilities. This is because, within six months, they are still under probation and would be required to do certain documentation in order to be stable and well-established in the system.
2) Healthcare workers who are willing to participate in the study.

2.4.4. Exclusion Criteria

1) Part-time staff such as youth corps, interns, and contract staff. This is to eliminate some interfering factors, such as the absence of medical insurance, cost of care, salary issues and job stability.
2) Staff not available during data collection (due to annual

leave, maternity leave, study leave, or outside posting).
3) Any members of staff who are ill and unable to come to work.

2.5. Sample Size Determination

In determining the sample size, the formula for the comparison of proportions of two independent groups was used [23].

$$n = \frac{(Z\alpha+Z\beta)^2[P_1(1-P_1)+P_2(1-P_2)]}{(P_2-P_1)^2}$$

$$n = \frac{(1.96+0.84)^2[0.126(1-0.126)+0.226(1-0.226)]}{(0.226-0.126)^2}$$

$$n = \frac{(2.8)^2[(0.126\times0.874)+(0.226\times0.774)]}{(0.1)^2}$$

$$n = \frac{7.84[(0.110)+(0.175)]}{0.01}$$

$$n = \frac{7.84\times0.285}{0.01}$$

n = 223

Finite correctional formula

The total population of healthcare workers (clinical and non-clinical) in FMC Owo and UNIMEDTH, Ondo state was about 2,397, which is less than 10,000. [24] Hence, a finite correctional formula was applied.

$$Nf = \frac{n}{1+\frac{n}{N}}$$

Nf = corrected sample size

n = sample size determined when total population is less than 10,000

N = the size of the population from which the sample is to be selected

Nf = 204

Adjusting for non-response, assuming a non-response rate of 10%, the sample size was adjusted using the formula:

$$nf = \frac{n}{1-NR}$$

nf = 230

This gave an overall sample size of 460 (230 clinical healthcare workers, 230 non-clinical healthcare workers).

2.6. Sampling Technique

2.6.1. Quantitatively

A Two-stage sampling technique was used for the selection of respondents.

Stage 1: Purposive selection of the two tertiary health facilities in Ondo state (UNIMEDTH ONDO & FMC OWO) was done.

Stage 2: A list comprising updated names of all active clinical and non-clinical staff was obtained from the nominal roll at the administrative office of the hospitals. Proportional allocation to size was calculated for each cadre using the formula below:

1) Number of clinical workers sampled = Population of each clinical cadre / Total Population of clinical workers in each facility × 115. The selection of the clinical healthcare workers is as shown in Table 1 below.
2) Number of non-clinical workers sampled = Population of each non-clinical cadre / Total population of non-clinical workers in each facility × 115. The selection of the non-clinical healthcare workers is as shown in Table 2 below.

Table 1. *Number of Clinical Healthcare Workers Selected in FMC OWO and UNIMEDTH.*

CADRES	FMC OWO		UNIMEDTH	
	No of Staff in FMC Owo	Number Selected in FMC Owo	No of Staff in UNIMEDTH	Number Selected in UNIMEDTH
Doctors	205	33	185	27
Nurses/CHEW	361	57	426	61
Laboratory	74	12	106	15
Physiotherapy	6	1	38	6
Pharmacy	26	4	31	4
Therapist/Technologist	52	8	14	2
TOTAL	724	115	800	115

Table 2. Number of Non-clinical Healthcare Workers Selected in FMC OWO and UNIMEDTH.

DEPARTMENTS	FMC OWO		UNIMEDTH	
	Number of Staff in FMC Owo	Number Selected in FMC Owo	Number of Staff in UNIMEDTH	Number Selected in UNIMEDTH
Administrative	271	59	175	60
Account	86	19	15	5
Works and Services	115	25	19	7
Medical records	55	12	125	43
TOTAL	527	115	334	115

2.6.2. Qualitative Study

In the investigation of health-seeking behaviour and health services utilisation among clinical and non-clinical health workers in tertiary health facilities in Ondo State; twelve key informant interviews (KIIs) were conducted face-to-face with seven male and five female participants working at the University of Medical Health Sciences (UNIMED), Ondo, and Federal Medical Centre (FMC), Owo, both in Ondo State. These key informants are experts who have adequate knowledge on the research topic as it relates to the health facility.

Six healthcare workers (Head Clinical Services, Director of Administration, Head Nursing Services, ARD president, NANNM president, MAHWUN chair and JOHESU president) were selected by purposive sampling from each health facility, which then made the number of key informant interviews (KII) conducted to be twelve in total.

2.6.3. Quantitative Instrument

A semi-structured interviewer-administered questionnaire was used to elicit data from respondents in the English language. The instrument was adapted from a review of available literatures on health-seeking behaviour and utilisation of healthcare services to suit the objectives of this study. The questionnaire was pretested among clinical and non-clinical healthcare workers in similar settings not selected for the study. Ten percent of the estimated sample size was used for the pre-test, and necessary modifications and corrections were made to the questionnaire before its final administration to the main study. This helped to address the appropriateness of wordings of the questionnaire, resources needed to carry out the data collection exercise, feasibility of the designed instruments for data collection and analysis. The reliability coefficient of the scaled questions on health seeking behaviour was 85% more than the expected minimum of 70%.

The validity of the instrument was determined by face and content validity criteria. The face validity was obtained by giving the instrument to 5 experts in the field of community health to evaluate its validity. Their judgement was used to modify the tool before using the instrument for field testing. The instrument was then examined by an independent, versatile researcher for content coverage and suitability for the study, following which the instrument was adjudged valid. The content validity of the questionnaire was calculated using a content validity index (CVI). Experts rated each item of the questionnaire on a 4-point scale of relevance (1 not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant). For each item, the cumulative content validity index (I-CVI) was computed by the number of raters who gave a rating of 3 or 4, divided by the total number of experts. All the experts who gave either a value of three or four for all the items were given an I-CVI that is acceptable. This was in line with Lynn, who posited that when there are five or fewer experts, the I-CVI must be ≥ 0.85.

The questions were used to assess and compare the health-seeking behaviour, patterns of utilisation of healthcare services and the factors associated with the utilisation of healthcare services by healthcare workers in Federal Medical Centre Owo and UNIMEDTH Ondo.

2.6.4. Qualitative Instrument

Key informant interview (KII) was conducted for the policymakers and unit heads of the selected health facilities using a key informant interview guide developed from previous literatures on similar subject. The interview guide was pretested among healthcare workers in other health facilities that were not used for the study, before actual data collection to ensure the questions are well-defined and presented in a logical manner to aid participant's understanding.

The information gathered included the health facility's policies on taking care of unwell clinical as well as the non-clinical healthcare workers, the assessment of health-seeking behaviour of the entire workforce of the facility, patterns of utilisation of healthcare services and the factors associated with the utilisation of healthcare services by healthcare workers in FMC Owo and UNIMEDTH Ondo.

2.7. Data Collection Methods

2.7.1. Quantitative Data Collection Method

Questionnaires were interviewer-administered and were administered after written informed consent was obtained, and each questionnaire was checked daily for accuracy and completeness. The field supervisor's daily briefing and reviewing of activities was also carried out.

Four research assistants with a minimum educational qualification of Ordinary National Diploma (OND) were trained by the researcher. The purpose of the training was to ensure that the research assistants understand the study objectives and protocol, as well as learn the correct interview techniques. The training was scheduled for two days.

2.7.2. Qualitative Data Collection Method

The research assistants who assisted with qualitative data collection were trained alongside with the research assistants for quantitative data collection. However, more emphasis was placed on how to use the KII guide for this group.

The interviews were conducted between 15 and 26 April 2024. An interview lasted about 40 minutes at selected offices/venues and at a convenient time as requested by each participant. All sessions were conducted in English, but participants were given the freedom to express themselves in Yoruba if they felt the need to do so; and all were translated and transcribed accordingly. Each interview consisted of a moderator and a note-taker. All sessions were recorded with Sony audio recorders. This was supplemented by the use of a phone device to ensure the security of the data collected. However, the audio recorded on the phones were deleted after comparison with the audio on the recorders for both clarity and audibility.

Finally, all audio files were transcribed into English by experts in the field, and non-verbal responses noted were collated. All identifiers inadvertently revealed by the interviewees were removed. The supervisor, researcher and analyst oversaw the data preparation process to ensure the trustworthiness of the data and quality control of the interviews and transcripts.

2.8. Data Management

2.8.1. Dependent Variables

1) i Health-seeking behaviour (Primary)
2) ii Utilisation of health services (Secondary)

2.8.2. Independent Variables

1) i Socio-demographic (predisposing) factors such as age, gender, marital status, educational level, occupation, availability of health insurance, years of practice, employment status and religion.
2) ii Personal and family factors, such as income.

2.8.3. Scoring and Classification of Variables

The questionnaire had five sections. Section A is the socio-demographic characteristics and did not have any score. Sections B, C, and D had multiple questions where the frequency of responses was computed and some were allocated marks, with each correct response having a maximum of 1 mark and minimum of 0 mark for the incorrect responses, while section E is on the perceived utilisation of healthcare services and was not scored.

1) Health behaviour of healthcare workers

The assessment of health behaviour of healthcare workers was done using a standardised health behaviour scale as adapted from Barbara et al. [25] The domains used focused on individual preventive behaviour (1 item), health behaviours related to diet (2 items), health behaviour related to physical activity (1 item), unhealthy behaviours (2 items). The health behaviour of healthcare workers serves as a covariate for assessing the health-seeking behaviour. The items were scored on a scale of 0 to 1 score. Positive health behaviours had a score of 1, while unhealthy behaviours had a score of 0. The minimum and maximum possible score for the section was 0 and 6 marks respectively, and the assessed score was converted to a percentage by dividing the calculated assessed score by the maximum possible score multiplied by 100. The scoring was then categorised as:

Good health behaviour – 75% and above

Poor health behaviour – less than 75%

2) Health-seeking behaviour

This was assessed with questions adapted from health-seeking behaviour questionnaires. [12, 16, 26].

In this study, appropriate health-seeking behaviour is defined as consulting a qualified medical professional or seeking healthcare at orthodox health facilities such as private clinics, primary health centres, state and federal hospitals during illness episodes or any situation requiring medical attention, or seeking healthcare within 24 hours of onset of illness. [27].

Inappropriate health-seeking behaviour comprises seeking healthcare from patent medicine vendors, chemists, traditional healers, or family members, doing nothing at all or seeking healthcare after 24 hours of the onset of symptoms or seeking healthcare informally on the phone, corridors, etc. [27] Traditional healers are unqualified persons who treat the sick using traditional and non-medical methods. Patent medicine vendors or chemists are non-qualified persons who sell drugs without medical prescriptions. Health condition of severe concerns is defined as illness, injury, impairment or physical disability requiring hospitalisation and continuing treatment. [28].

The health-seeking behaviour was assessed by asking the following questions: what do you do first when ill? Did you seek healthcare the last time you fell ill? And how many days after the onset of illness did you seek healthcare? In the last three months, have you had any illness that got you concerned? did you seek healthcare?

The minimum and maximum possible score for the section was 0 and 6 marks respectively, and the assessed score was converted to a percentage by dividing the calculated assessed score by the maximum possible score multiplied by 100. The scoring was then categorised as:

Appropriate health-seeking behaviour – 75% and above

Inappropriate health-seeking behaviour – less than 75% [12, 16, 26]

2.9. Data Analysis

2.9.1. Quantitative Data Analysis

The questionnaires used to obtain quantitative data was sorted and cross-checked for errors and omissions, which was corrected before data coding, entry and analysis using SPSS version 27.0. Frequencies and percentages were used to summarise categorical variables of interest. Appropriate tables and charts were used to present results.

Socio-demographic, individual, community, organisational and need factors relating to health-seeking behaviour and utilisation of healthcare services were analysed using univariate analysis. bivariate analysis using chi-square was used to measure the association between the socio-demographic variables and the dependent variables. This study compared clinical and non-clinical healthcare workers in tertiary facilities. The p-value of less than 0.05 was set as the level of significance.

2.9.2. Qualitative Data Analysis

All audio files were transcribed into English and all identifiers inadvertently revealed by the interviewees were removed, hence the use of 'Clinical 1, Clinical 2....6' as well as 'non-clinical 1, 2...6'. Similarly, names, job titles, places or identifications mentioned in the interviews were coded as 'XXX' in the transcripts. This approach was selected because it provides a systematic method for organising, analysing and presenting qualitative data collected from multiple sources. In the context of the above definitions, a pre-codebook was developed and reviewed by the researcher before it was used to develop themes. I then read the transcripts to become familiar with the data before coding or extracting relevant content. The extracted content was then subject to iterative scrutiny against the themes that had been deductively derived, with constant reference to the research questions. This process yielded eight themes and eight sub-themes. However, due to inconsistency in the data collected, there was a revision of the themes which were labeled and described.

Consequently, a theme was removed, resulting in the identification of nine themes and eight sub-themes as the codes in the qualitative software used for the analysis. Subsequently, the themes underwent further refinement and were structured hierarchically according to the objectives and research questions, and were coded using NVIVO 14 QSR Lumevero (Incorporated) software.

2.9.3. Quality Assurance and Quality Control

In order to ensure quality assurance and control, effort was made to recruit highly experienced research assistants who were trained with the use of the research instrument. In addition, on-field supervision was carried out, as well as debriefing at the end of each day's work to discuss challenges encountered and modalities for overcoming them would be agreed upon. The principal investigator vetted all instruments returned for each day and gave feedbacks as appropriate to the research assistants. Data was sorted and cross-checked for errors and omissions, which was corrected before data coding, entry and analysis using SPSS version 27.0.

3. Ethical Considerations

Ethical approval for this study was obtained from the Ondo State Ministry of Health Ethics Committee as well as the Health Research and Ethics Committees of Federal Medical Centre, Owo and University of Medical Sciences Teaching Hospital, Ondo prior to the commencement of the study. In addition, written informed consent was obtained from each of the participating clinical and non-clinical healthcare workers, including the provision of a detailed explanation of the study objectives and information about the benefits as well as the freedom to participate or otherwise without any risk of sanctions or ill-treatment.

3.1. Confidentiality of Data from Respondents

Serial numbers and codes were used to identify respondents and the research assistants who interviewed them. The questionnaires were kept in a safe place accessible to the researcher alone. The respondents were assured that their responses would not be reported individually but as part of an overall study and that they would not face any consequences for the responses provided.

3.2. Beneficence to Participants

The study is to assess and compare the health-seeking behaviour and utilisation of health services among clinical and non-clinical healthcare workers in the selected tertiary hospitals in Ondo state. Respondents were counselled and guided appropriately on questions concerning other aspects of their health not covered in the study.

3.3. Non-maleficence to Participants

The study was not invasive and without any harm to respondents since only questionnaires was used.

3.4. Freedom to Decline or Withdraw from Study

Participants were informed of their freedom to decline or opt out of the study at any time and were assured that there will not be any consequences for refusing to participate in the study.

3.5. Limitations

This study was a cross-sectional study that assessed and compared the health-seeking behaviour and utilisation of healthcare services among clinical and non-clinical healthcare workers and therefore, relied on self-reported questionnaires, which were prone to recall bias. This was reduced by limiting enquiries on health-seeking behaviour and utilisation of healthcare services to three months, careful selection of research questions that provided more information on the study subject, and also ensuring that the research assistants were well trained.

Another limitation was the social desirability bias, which was found among healthcare workers who had inappropriate health-seeking behaviour as well as poor utilisation of health services. This was also demonstrated by healthcare workers who had poor health behaviour, a covariate of health-seeking behaviour. This bias was reduced by assuring respondents that their responses would not be reported individually but as part of an overall study and that the sensitive questions would be well-framed.

4. Results

4.1. Results of Quantitative Data Analysis

Table 3. *Socio-demographic Profile of Healthcare Workers.*

Variables	Clinicals N=230 n (%)	Non-clinicals N=230 n (%)	Test statistics	P-Value
Age (years)				
<40 (Young adults)	130 (56.5)	84 (36.5)	χ^2=18.489	<0.001
≥40 (Middle aged)	100 (43.5)	146 (63.5)		
Age (Mean±SD)	38.60±8.416	40.96±7.324	t-test= -3.203	0.001
Sex				
Male	82 (35.7)	105 (45.7)	χ^2=4.767	0.029
Female	148 (64.3)	125 (54.3)		
Marital status				
Single	52 (22.6)	19 (8.3)	χ^2=18.138	<0.001
Married	172 (74.8)	204 (88.7)		
Divorced/separated/widowed	6 (2.6)	7 (3.0)		
Religion				
Christianity	217 (94.3)	208 (90.4)	χ^2=2.505	0.113
Islam	13 (5.7)	22 (9.6)		
Ethnicity				
Yoruba	176 (76.5)	205 (89.1)	χ^2=14.021	0.001
Igbo	27 (11.7)	9 (3.9)		
Others*	27 (11.7)	16 (7.0)		
Level of education				
Primary	0 (0.0)	9 (3.9)	LR=42.613	<0.001

Variables	Clinicals N=230 n (%)	Non-clinicals N=230 n (%)	Test statistics	P-Value
Secondary	0 (0.0)	30 (13.0)		
Tertiary	230 (98.7)	191 (83.0)		
Length of practice (years)				
≤3	50 (21.7)	52 (22.6)	χ^2=0.050	0.822
>3	180 (78.3)	178 (77.4)		
Length of practice (Mean ±SD)	10.13 ±7.285	8.30 ±6.175	t-test = 2.907	0.004
Monthly income (naira)				
≤30000	0 (0.0)	6 (2.6)	Fisher's exact=	0.030
>30000	230 (100.0)	224 (97.4)		

*Others in ethnicity include Ebira, Edo, Idoma and Igala ethnic groups.

From Table 3 above, a significant proportion (56.5%) of the clinical healthcare workers were <40 years compared to 36.5% of the non-clinical healthcare workers (p<0.001). More (64.3%) of the clinical healthcare workers were females than 54.3% of non-clinical healthcare workers (p=0.029). Majority (89.1%) of non-clinical healthcare workers belonged to Yoruba tribe compared to 76.5% of the clinical healthcare workers (p=0.001).

Table 4. *Health Behaviour of Clinical and Non-clinical Healthcare Workers.*

Variables	Clinicals N=230 n (%)	Non-clinicals N=230 n (%)	Test statistics	P-Value
Health behaviour				
Good health behaviour	40 (17.4)	72 (31.3)	χ^2=12.085	0.001
Poor health behaviour	190 (82.6)	158 (68.7)		
Alcohol intake				
Yes	30 (13.0)	25 (10.9)	χ^2=0.516	0.472
No	200 (87.0)	205 (89.1)		
Regularity of alcohol intake (N=55)				
Everyday	0 (0.0)	5 (20.0)	Fisher's exact=	0.024
Alternate days	11 (36.7)	10 (40.0)		
Occasionally	19 (63.3)	10 (40.0)		
Cigarette smoking				
Yes	6 (2.6)	3 (1.3)	Fisher's exact=	0.503
No	224 (97.4)	227 (98.7)		

In Table 4 above, a significant proportion (82.6%) of the clinical healthcare workers had a poor health behaviour as against 68.7% among the non-clinical healthcare workers (p=0.001).

Table 5. Health Seeking Behaviour Among Clinical and Non-clinical Healthcare Workers.

Variables	Clinicals n (%)	Non-clinicals n (%)	Chi-square	P-Value
Health seeking behaviour (N=460)				
Appropriate	29 (12.6)	46 (20.0)	4.604	0.032
Inappropriate	201 (87.4)	184 (80.0)		
Sought healthcare services at last time of illness (N=460)				
Yes	123 (53.5)	134 (58.3)	1.067	0.302
No	107 (46.5)	96 (41.7)		
Type of health facility preferred to visit when ill (N=460)				
Private	54 (23.5)	21 (9.1)	17.349	<0.001
Public	176 (76.5)	209 (90.9)		
Action taken during last illness (N=257)				
Visited TBA/faith-based organisation	1 (0.8)	1 (0.7)	0.074	0.964
Consulted pharmacist/patent medicine vendor	9 (7.3)	11 (8.2)		
Visited a health facility	113 (91.9)	122 (91.0)		
Actions taken during last illness while not seeking healthcare (N=203)				
Nothing	11 (10.3)	8 (8.3)	3.405	0.182
Took over-the-counter self-medications	73 (68.2)	76 (79.2)		
Others*	23 (21.5)	12 (12.5)		
Motivation for visiting health facility at last time of illness (N=235)				
Fear of the unknown	55 (48.7)	64 (52.5)	9.049	0.011
The severity of illness	42 (37.2)	54 (44.3)		
Type of health facility visited at last time of illness (N=235)				
Private	15 (13.3)	9 (7.4)	2.225	0.136
Public	98 (86.7)	113 (92.6)		

*Others- self relaxation, counsel from colleagues, herbal concoction.

In Table 5 above, a significant proportion (87.4%) of the clinical healthcare workers had inappropriate health seeking behaviour compared to 80.0% among the non-clinical healthcare workers (p=0.032). More (90.9%) of non-clinical healthcare workers preferred to visit public health facility than 76.5% of the clinical healthcare workers (0.001).

Table 6. Utilisation of Health Services Among Healthcare Workers.

Variables	Clinicals n (%)	Non-clinicals n (%)	Test statistics	P-Value
Utilisation of health services (N=460)				
Good utilization	41 (17.8)	37 (16.1)	χ^2=0.247	0.619
Poor utilization	189 (82.2)	193 (83.9)		
Ever accessed health services (N=460)				

Variables	Clinicals n (%)	Non-clinicals n (%)	Test statistics	P-Value
Yes	112 (48.7)	108 (47.0)	χ^2=0.139	0.709
No	118 (51.3)	122 (53.0)		
Mode of accessing health services (N=220)				
Clinic appointment	88 (78.6)	100 (92.6)	χ^2=11.872	0.003
Over the phone	8 (7.1)	6 (5.6)		
Home visit	16 (14.3)	2 (1.9)		
Complied with doctor's prescription (N=202)				
Yes	98 (100.0)	102 (98.1)	Fisher's exact=	0.498
No	0 (0.0)	2 (1.9)		
Frequency of accessing check-up (N=124)				
Monthly	12 (19.4)	23 (37.1)	LR=17.326	0.002
Quarterly	13 (21.0)	24 (38.7)		
Bi-annually	9 (14.5)	4 (6.5)		
Yearly	24 (38.7)	8 (12.9)		
Cannot recall the last time	4 (6.5)	3 (4.8)		

From Table 6 above, clinic appointment was the mode of consultation among majority (92.6%) of the non-clinical healthcare workers compared to 78.6% of clinical healthcare workers (p=0.003). A significant proportion (38.7%) of the clinical healthcare workers had routine medical check-up yearly compared to 12.9% of non-clinical healthcare workers (p=0.002). More clinical staff (17.8%) had good utilisation of health services than 16.1% of non-clinical staff (p=0.619).

Table 7. *Reported Reasons for Utilising or Not Utilising Health Services Among Clinical and Non-Clinical Healthcare Workers.*

Variables	Clinicals n (%)	Non-clinicals n (%)	Test statistics	P-Value
Reasons for not utilising healthcare services* (N=460)				
Cost of care	24 (10.4)	66 (28.7)	χ^2=24.368	<0.001
Quality of care	23 (10.0)	27 (11.7)	χ^2=0.359	0.549
Cultural beliefs	1 (0.4)	5 (2.2)	Fisher's exact=	0.216
Regular stock-out of drugs	83 (36.1)	100 (43.5)	χ^2=2.623	0.105
Lack of family support	2 (0.9)	9 (3.9)	χ^2=4.564	0.033
Accessibility to a health facility	10 (4.3)	17 (7.4)	χ^2=1.928	0.165
Poor attitude of healthcare professionals	18 (7.8)	24 (10.4)	χ^2=0.943	0.331
Lack of satisfaction with healthcare services	23 (10.0)	20 (8.7)	χ^2=0.231	0.631
High cost of healthcare	30 (13.0)	40 (17.4)	χ^2=1.685	0.194
Lack of time	36 (15.7)	21 (9.1)	χ^2=4.506	0.034
Lack of essential drugs and facilities	81 (35.2)	39 (17.0)	χ^2=19.888	<0.001
Lack of skilled personnel	16 (7.0)	4 (1.7)	χ^2=7.527	0.006

Variables	Clinicals n (%)	Non-clinicals n (%)	Test statistics	P-Value
Fear of stigmatisation	7 (3.0)	8 (3.5)	χ^2=0.069	0.793
Confidentiality issues	13 (5.7)	3 (1.3)	χ^2=6.475	0.011
None	114 (49.6)	95 (41.3)	χ^2=3.166	0.075
Reasons for health service utilisation* (N=460)				
Proximity to a health facility	37 (16.1)	21 (9.1)	χ^2=5.051	0.025
Feeling of wellness	53 (23.0)	45 (19.6)	χ^2=0.830	0.362
None	49 (21.3)	51 (22.2)	χ^2=0.051	0.821

In Table 7 above, more of non-clinical healthcare workers than clinical healthcare workers reported reasons for not utilising healthcare as cost of care (28.7 vs 10.4%; p<0.001) and lack of family support (3.9 vs 0.9%; p=0.033), respectively. However, more of clinical healthcare workers than non-clinical healthcare workers reported proximity to a health facility (p=0.025), as reason for their use of healthcare services.

Table 8. *Predictors of Good Healthcare Services Utilisation Among Clinical Healthcare Workers.*

Variables	Adjusted odds ratio	P-value	95% Confidence Interval (95% CI)	
			Lower	Upper
Medical condition requiring routine monitoring				
Yes	1.710	0.375	0.523	5.588
No (Ref)	1			
On regular medications				
Yes	5.519	0.003	1.804	16.885
No (Ref)	1			
Health seeking behaviour				
Appropriate	4.869	0.001	1.944	12.198
Inappropriate (Ref)	1			
Availability of health insurance				
Yes	2.633	0.041	1.042	6.652
No (Ref)	1			

From Table 8 above, the predictors of good healthcare services utilisation among the clinical healthcare workers were being on regular medications, appropriate health seeking behaviour and availability of health insurance. Clinical healthcare workers who were on regular medications are 5.5 times more likely to utilise healthcare services that those who were not on regular medication (AOR=5.519; 95%CI=1.804-16.885). Clinical healthcare workers who had appropriate health seeking behaviour are 4.9 times more likely to utilise healthcare services than their counterpart who had inappropriate health seeking behaviour (AOR=4.869; 95%CI=1.944-12.198). The clinical healthcare workers who reported availability of health insurance are 2.6 times more likely to utilise healthcare services that those who reported non-availability of health insurance (AOR=2.633; 95%CI=1.042-6.652).

Table 9. Predictors of Good Healthcare Services Utilisation Among Non-clinical Healthcare Workers.

Variables	Adjusted odds ratio	P-value	95% Confidence Interval (95% CI)	
			Lower	Upper
Ever seen a doctor				
Yes	12.929	0.014	1.692	98.813
No (Ref)	1			
Health seeking behaviour				
Appropriate	3.871	0.001	1.745	8.587
Inappropriate (Ref)	1			
Availability of health insurance				
Yes	2.115	0.080	0.913	4.898
No (Ref)	1			

In Table 9 above, the predictors were ever seen a doctor and health seeking behaviour. The non-clinical healthcare workers who had ever seen a doctor are 12.9 times more likely to utilise healthcare services than those who had never seen a doctor (AOR=12.929; 95%CI=1.692-98.813). Non-clinical healthcare workers with appropriate health seeking behaviour are 3.8 times more likely to utilise healthcare services than those with inappropriate health seeking behaviour (AOR=3.871; 95%CI=1.745-8.587).

4.2. Results of Qualitative Data Analysis

Twelve key informant interviews (KIIs) were conducted face-to-face with seven male and five female participants working at the highest level of health care and administrative services (CMAC, DNS, DA, ARD President, MAHWUN Chair, JOHESU Chair) in the University of Medical Health Sciences Teaching Hospital (UNIMEDTH) Ondo, and Federal Medical Centre (FMC), Owo, both in Ondo State.

Four themes and two sub-themes were generated following the analysis of the KII data.

The themes included:

1) Utilisation of healthcare services
2) Existing policies on utilisation of healthcare services for healthcare workers in your facility
3) Factors affecting healthcare services utilisation by healthcare workers
4) Suggested solutions to improving healthcare accessibility, utilisation and health seeking behaviour for healthcare workers

Theme 1: Utilisation of healthcare services

Subtheme 1: Access to necessary healthcare services as a healthcare worker

The participants described several issues surrounding their access to necessary healthcare services. While acknowledging limitations for specialised investigations (CT scans, MRIs) and consultations (Specialists). The clinical participants reported that they could navigate the system for their basic health needs through informal consultations with colleagues or utilising online resources. Availability and adequacy of healthcare services for healthcare workers within the healthcare facility was regarded as almost non-existent and some clinical healthcare workers viewed basic services as adequate within the facility.

"To score availability of specialised services for staff, *"Over 10, I will say 4"* (Clinical 1)

"Arh! Well, access is fine, they are available, ehm… we think they are adequate at least for the usual routine health challenge let us not have challenges that are beyond the normal you know and rare conditions but access for the normal routine things I think that's good enough at least within this health facility" (Clinical 2)

"I will say it is average for adequacy of healthcare services for healthcare workers because we are not yet there, at all. We still have a lot of things to do, in this country, especially in this my environment. We are not there yet, let me just say average" (Clinical 6)

Cost emerged as a major concern for non-clinical participants. Affordability of medications, tests, and limited specialist consultations were highlighted. Stock-outs of essential medications was a recurring concern. Although some mentioned good quality of care from the limited available specialists, however, many others expressed doubts about the quality of services being rendered by the 'Orange health insurance', especially on the issue of medications being offered.

"Generally, we still have inadequacy: it is not been adequate because you know the declining clinical capacity has also greatly affected quality of healthcare and services; some of the specialties are no longer available" (Non-

clinical 1)

"Availability of drugs is the issue... the brand they are giving you is not what you will use your money to buy…it's too low a standard for you to use and not for hospital like this…even for all the money we are even paying, what is it?" (Non-clinical 4)

"Let me say it's poor, yes, it's poor. Everything available is poor, I can score it zero" (Non-clinical 5)

Subtheme 2: Undertaken routine preventive healthcare measures with reasons

Several clinical participants described actively managing their health through healthy lifestyle changes like dietary modification, routine exercise, and stress management. Some participants mentioned self-monitoring practices like weight checks and blood pressure measurements. They actively engage in routine screening for diseases like HIV, Hepatitis, and Lassa fever, as well as staying up-to-date on vaccinations.

"Preventive measures, errm life style modification, that is just physical fitness" (Clinical 1/4) "The preventive healthcare measures, as a preventive nurse, I exercise then I make sure I eat healthy, then another is I check my weight. I have access to blood pressure apparatus; I have access to glucometer so most of the time I do check all these by myself" (Clinical 3/5)

"I do much believe in preventive medicine... every human being as much as you can assess any medical check-up, go for it" (Clinical 5)

"I try to create time for myself, just to participate in all those things, because I believe that as a health worker, I have to be sound to be able to treat somebody" (Clinical 6)

The non-clinical participants identified stress management techniques like identifying stress triggers and prioritising sleep. A few of the non-clinical participants also engaged in routine medical check-ups and screenings.

"*Routine medical screening as healthcare is something I think is very necessary... we stand at a very high risk of contracting infections from patients*" (Non-clinical 1)

"Well, if we take it from non-medical, I try to identify moment of stress, on a personal level, once I sense that my body is talking to me, I drop activities… learning to eat on time, then, sleeping; adequate sleep" (Non-clinical 6)

While, some non-clinical participants expressed commitment to regular medical check-ups and vaccination, others demonstrated a more casual approach or even hesitancy towards these practices. These decisions regarding vaccination and medical check-ups were reported to have been influenced by various external factors, including rumours, reports and misconceptions, as well as personal experiences.

"I don't do regular medical check-ups..." (Non-clinical 3)

"I did not even take covid 19 ooo even though I'm the focal point for covid test, see all their property full everywhere" (Non-clinical 4)

"For the COVID '19, I took only two vaccinations..." (Non-clinical 5)

*Vaccination? I've not really exposed myself to it, all those screenings I've not gone for any one before self, I should oo, it's in my mind, I tell people but I've not gone. Hepatitis vaccine? The adult one? I've not oo... I did not even take covid 19 ooo even though…" (*Non-clinical 6)

Theme 2: Existing policies on utilisation of healthcare services for healthcare workers

Most clinical participants expressed uncertainty and non-awareness of existing policies on healthcare service utilisation for healthcare workers but two participants acknowledged the existence of the policies. *"Well, I know there are some existing policies, but I cannot mention some of them"* Clinical 1*"The policy that is available for healthcare worker is that when you are sick, you go to the staff clinic*" Clinical 5 This suggests a lack of familiarity with specific policies, which may contribute to poor enforcement and utilisation.

Non-clinical participants appeared to have demonstrated awareness of various policies related to healthcare service utilisation for healthcare workers. They mentioned schemes such as NHIS (National Health Insurance Scheme) and ORANGES (a state health scheme), indicating the availability of government-sponsored healthcare coverage. *"The policy is there but it is not communicated down to the people that should benefit"* Non-clinical 2*"Like I said, we have Orange Health scheme here and that's one of the policies that is a contribution from the government"* Non-clinical 5 They also highlighted challenges in policy implementation, including inadequate communication and understanding among staff.

Theme 3: Factors affecting healthcare services utilisation by healthcare workers

Several factors were identified by both clinical and non-clinical staff as affecting the utilisation of healthcare services by healthcare workers. These included busy schedules, insufficient staffing, ignorance about available healthcare options, poor treatment outcomes, attitudes of healthcare workers, financial concerns, self-denial, self-medication, limited coverage of health insurance schemes, waiting time, cultural and religious beliefs, among others. However, most pertinent of these included are financial concerns and time constraints (lack of time/busy schedule/waiting time). The clinical participants also reported a tendency for self-treatment and denial of illness due to fear of cost implications.

"The first thing is finance, finance because there is no way you will get to the hospital and you will not be billed, so bill is one of the things that get people discouraged concerning their when, when drugs are written, investigations are written" (Clinical 1/3)

"This attitude of 'Ehmmm…I know it all, I know what is wrong with me', that's one of the biggest challenges, 'I know what is wrong with me', so people therefore self-treat themselves" (Clinical 2)

Many of the non-clinical participants highlighted limited coverage by health insurance schemes, which still culminated to the issue of finance. Other factors were long waiting time and time constraint because of workload.

"Also we can't even rest: no time to rest because it's unhealthy right now that a healthcare worker is working every day, 24/7, it's unhealthy no healthcare workers deserve to work like that" (Non-clinical 2)

"Availability of healthcare service is also a factor from people that access the care, errm health care services that are available, some of those things that are needed by them are not available so it is discouraging" (Non-clinical 4)

"There are so many factors, number one, bureaucracy, waiting for long time…yet, in two hours, you've not gotten anything, you know you will be discouraged" (Non-clinical 6)

Theme 4: Suggested solutions to improving healthcare accessibility, health-seeking behaviour and utilisation for healthcare workers

Several suggestions were made by both clinical and non-clinical participants. These included enforcement of regular health checks, community sensitisation and motivation, orientation and awareness, increased research and sensitisation, education and public enlightenment, advocacy and policy changes/implementation, bureaucracy reduction etc.

"Well like what you are doing now, I believe we should have more research, more studies and two based on the results of the study there should be a feedback to health care workers which should be some sensitisation on the need to improve on their health seeking behaviour, three routine or periodic medical check -up which can go hand in hand with the sensitisation, then improvement in the quality of service rendered to people, then delay in accessing quality health service should be improved. The policies that is available should be made known to people, then the sensitisation too should be there, what else I think have talked about the service, improvement in the service everything that is needed should be provided, I mean should be made available" (Clinical 1)

"Yes good policies must be put in place to protect the health and well-being of healthcare workers and this includes making sure that there is a clinic that is set out for healthcare workers alone where they can walk in whenever they do have any complaints or they need to seek health care and erm get health care…awareness must also be increased on the need for healthcare workers to what to cater for their own health…" (Non-clinical 1)

"…so it needs to be prioritised and the focal point will be that there will be that there should be determination by the management of the facilities and conscious effort to prioritise healthcare of workers. So, we need to consciously, deliberately prioritise health worker's welfare" (Non-clinical 4)

The key informants interviewed suggested solutions adopted in addressing challenges associated with healthcare seeking. This included integrating health checks into work schedule and seeking advice from colleagues for minor issues as mentioned by the clinical participants.

"…you know sometimes you see senior colleagues or colleagues and then discuss, not necessarily in a scheduled clinic atmosphere" (Clinical 2)

For the non-clinical, advanced planning such as pre-emptively retrieving their medical card to reduce wait times at appointments, resorting to private healthcare to avoid long waits/inefficiency and adopting self-medication respectively were the adopted solutions.

"I left for private hospital and in few minutes, I was attended to" (Non-clinical 4)

"Eeeh I just decided to take pain relieve and I was good…I didn't go (to the hospital) again when I was already okay" (Non-clinical 6)

5. Discussion

This study assessed and compared the health seeking behaviour and health service utilisation among healthcare workers in tertiary health facilities in Ondo state, Nigeria. An understanding of the health-seeking behavioural pattern and utilization of healthcare services among the clinical and non-clinical healthcare workers will allow for tailored occupational health interventions, improved work place absenteeism management, evidence-based strengthening of staff health insurance policies, an enhanced patient safety, and service delivery. Hence, leading to an efficient hospital functioning, and a more equitable and high-performing health system.

The utilisation of health services among clinical and non-clinical healthcare workers in this study was poor. This can be explained by the higher proportion (92.6%) of non-clinical healthcare workers who accessed health services through clinic appointments compared to 78.6% of the clinical healthcare workers; and further supported by the findings from the key informant interview where majority of the healthcare workers rated their utilisation of health services as being poor. "*We still have a lot of things to do, in this country, especially in this my environment. We are not there yet, let me just say average*" (Clinical Staff). "*Availability of drugs is the issue... the brand they are giving you is not what you will use your money to buy…it's too low a standard for you to use and not for hospital like this…even for all the money we are even paying, what is it?*" (Non-clinical Staff).

"Let me say it's poor, yes, it's poor. Everything available is poor, I can score it zero" (non-Clinical staff) The likely reason for the poor health service utilisation reported among the clinical healthcare workers is their over-familiarity with the health facility, knowledge about disease conditions, diagnosis and medical prescriptions. *"Well, I know there are some existing policies, but I cannot mention some of them"* (Clinical Staff).

The poor health service utilisation reported among the non-clinical healthcare workers could be due to their ignorance on matters related to their health. *"The policy is there but it is not communicated down to the people that should benefit"* (Non-clinical Staff).

The findings from previous studies done in South-South Nigeria, Ethiopia and Israel also revealed poor healthcare utilisation of 26.2%, 35.3% and 27.5% respectively among the clinical healthcare workers. [17, 18, 29] These studies were descriptive and were all done among clinical healthcare workers only. A Pakistan study that was done among clinical healthcare workers also reported poor healthcare utilisation among 39.0% of the respondents. [26] This could explain why the level of healthcare utilisation was a little higher in this study.

Most of the clinical healthcare workers (93.5%) who had ever seen a doctor did not encounter any difficulty in accessing care when compared to the non-clinical healthcare workers (86.2%); with a majority (66.7%) of the clinical healthcare workers citing long waiting time as the barrier experienced in utilising healthcare services. Majority of the non-clinical respondents gave their reason for having never seen a doctor as being healthy and having no complaints. A higher proportion (90.4%) of the non-clinical healthcare workers compared to 80.9% of the clinical healthcare workers made use of the public medical insurance.

Healthcare workers from this study, who were not utilising healthcare services cited their reasons as being cost of care, lack of family support, lack of time, lack of essential drugs and facilities, lack of skilled personnel and confidential issues. This was supported by findings from the key informant interview of this study where majority of the healthcare workers identified cost, shortage of medical equipment, long waiting time, privacy concerns and work schedule. The only reason cited by healthcare workers as reason for their utilisation of healthcare services was proximity to a health facility. Other reasons like feeling of wellness and none were not significant in the findings of this study. Previous studies in North-West Nigeria identified fear of the outcome of investigation [12], in South-East Nigeria identified belief of not having a problem and lack of time [30], in South-South Nigeria identified absence of disease, cost and time [31], a similar study in South-South Nigeria identified being a female gender, being managed for a medical condition and cost of care, [18] an Israeli study identified lack of time, and forgetfulness [32] while a Pakistan study identified high cost of care, [26] as reasons for non-utilisation of health services among healthcare workers. The explanation for the discordance in the reasons for not utilising health services was likely due to the fact that the study population in all the cited studies were clinical healthcare workers only.

Healthcare workers who had an appropriate health seeking behaviour had good health service utilisation. Only non-clinical healthcare workers who had gone to see a doctor in the past and those who had health insurance utilised health services. This is likely so as the manner and approach used by an individual in seeking healthcare will most likely determine the level of health service utilization. [12, 26].

6. Conclusion

Despite the clinical and non-clinical healthcare workers having a good perception of their health status, their health-seeking behaviour, coupled with their utilisation of healthcare services was poor. The study reported some predictors responsible for the differences in the health-seeking behaviour and utilisation of healthcare services between the clinical and non-clinical healthcare workers; as a result of this, the null hypothesis will be rejected.

This study provides information on the health-seeking behaviour and utilisation of healthcare services among clinical and non-clinical healthcare workers in tertiary health facilities in Ondo State, Nigeria, highlighting important differences and shared challenges that influence staff wellbeing and institutional performance. The findings demonstrate that while clinical healthcare workers often delay formal care due to workload pressures and a tendency toward self-treatment, non-clinical healthcare workers frequently underutilise available healthcare services because of limited health literacy, concerns about cost, or poor understanding of insurance benefits. These behavioural patterns collectively contribute to increased morbidity, reduced productivity, and potential threats to patient safety.

Addressing these gaps requires targeted and context-specific institutional responses. The establishment of a dedicated Staff Health and Wellness Clinic, implementation of protected sick-leave policies, improved occupational health systems, and tailored health-literacy programs for non-clinical healthcare workers represent critical strategies for improving timely care-seeking across staff categories. Introducing flexible clinic hours for shift-based clinical workers, institutionalising annual medical examinations, and strengthening staff insurance utilisation will further promote equity and accessibility. Additionally, developing a comprehensive wellness and mental health policy, supported by a digital staff health monitoring system, will provide a sustainable framework for continuous improvement in staff wellbeing.

Overall, this study underscores the need for a strategic, evidence-driven approach to workforce health management. By adopting these recommended institutional interventions, the hospital can reduce absenteeism and presenteeism, enhance staff motivation, strengthen patient safety, and improve overall health system performance. Ultimately, prioritising the health of healthcare workers is essential for ensuring reliable, efficient, and high-quality service delivery within any tertiary health institution.

Abbreviations

ARD	Association of Resident Doctors
CMAC	Chairman Medical Advisory Committee
DA	Director of Administration
DNS	Director of Nursing Services
FMC	Federal Medical Centre

JOHESU	Joint Health Sector Union
KII	Key Informant Interview
MAHWUN	Medical and Health Workers Union of Nigeria
NANNM	National Association of Nigerian Nurses and Midwives
NVIVO	Non-Versioned Information Versatile Outcomes
SPSS	Statistical Package for the Social Sciences
UNIMEDTH	University of Medical Sciences Teaching Hospital

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Conflicts of Interest

The authors declare no conflicts of interest.

References

[1] Poortaghi S, Raiesifar A, Bozorgzad P, Golzari SEJ, Parvizy S, Rafii F. Evolutionary concept analysis of health seeking behavior in nursing: A systematic review. BMC Health Serv Res. 2015; 15(1): 523. https://doi.org/10.1186/s12913-015-1181-9

[2] Adewoye KR, Aremu SK, Ipinnimo TM, Salawu IA, Orewole TO, Bakare A. Awareness and Practice of Proper Health Seeking Behaviour and Determinant of Self-Medication among Physicians and Nurses in a Tertiary Hospital in Southwest Nigeria. Open J Epidemiol. 2019; 09(01): 36–49. https://doi.org/10.4236/ojepi.2019.91004

[3] Savitha S, Kiran K. Health seeking behavior in Karnataka: Does micro-health insurance matter? Indian J Community Med. 2013 Oct; 38(4): 217–22. https://doi.org/10.4103/0970-0218.120156

[4] Ihaji E, Gerald EU, Helen C, Ogwuche E. Educational Level, Sex and Church Affiliation on Health Seeking Behaviour among Parishioners in Makurdi Metropolis of Benue State. J Educ Policy Entrep Res 2014; 1(2): 311–6. www.iiste.org

[5] Latunji OO, Akinyemi OO. FACTORS INFLUENCING HEALTH-SEEKING BEHAVIOUR AMONG CIVIL SERVANTS IN IBADAN, NIGERIA. Ann Ibadan Postgrad Med. 2018 Jun; 16(1): 52–60.

[6] Musoke D, Boynton P, Butler C, Musoke MB. Health seeking behaviour and challenges in utilising health facilities in Wakiso district, Uganda. Afr Health Sci. 2014; 14(4): 1046–55. https://doi.org/10.4314/ahs.v14i4.36

[7] Clewley D, Rhon D, Flynn T, Koppenhaver S, Cook C. Health seeking behavior as a predictor of healthcare utilization in a population of patients with spinal pain. PLoS One. 2018 Aug 1; 13(8): 0201348. https://doi.org/10.1371/journal.pone.0201348

[8] Adam V, Aigbokhaode A. Sociodemographic factors associated with the healthcare-seeking behavior of heads of households in a rural community in Southern Nigeria. Sahel Med J. 2018; 21(1): 31. https://doi.org/10.4103/1118-8561.232781

[9] Orbell S, Schneider H, Esbitt S, Gonzalez JS, Gonzalez JS, Shreck E, et al. Health Care Utilization. Encycl Behav Med. 2013; 2(1): 909–10. https://doi.org/10.1007/978-1-4419-1005-9_885

[10] Guzmán IB, Cuesta JG, Trelles M, Jaweed O, Cherestal S, Van Loenhout JAF, et al. Delays in arrival and treatment in emergency departments: Women, children and non-trauma consultations the most at risk in humanitarian settings. PLoS One. 2019 Mar 1; 14(3): 1–15. https://doi.org/10.1371/journal.pone.0213362

[11] Abaerei AA, Ncayiyana J, Levin J. Health-care utilization and associated factors in Gauteng province, South Africa. Glob Health Action. 2017; 10(1): 1305765. https://doi.org/10.1080/16549716.2017.1305765

[12] Adamu H, Yusuf A, Inalegwu C, Sufi R, Adamu A. Factors influencing health-seeking behavior of health workers in a Tertiary Health Institution in Sokoto, Northwest Nigeria. Sahel Med J. 2018; 21(3): 162. https://doi.org/10.4103/smj.smj_55_16

[13] Faruque M, Barua L, Banik PC, Sultana S, Biswas A, Alim A, et al. Prevalence of non-communicable disease risk factors among nurses and para-health professionals working at primary healthcare level of Bangladesh: A cross-sectional study. BMJ Open. 2021 Mar 1; 11(3): e043298. https://doi.org/10.1136/bmjopen-2020-043298

[14] Travers JL, Hirschman KB, Naylor MD. Adapting Andersen's expanded behavioral model of health services use to include older adults receiving long-term services and supports. BMC Geriatr. 2020 Feb 14; 20(1): 1–16. https://doi.org/10.1186/s12877-019-1405-7

[15] Veeder NW. Health services utilization models for human services planning. J Am Plan Assoc. 1975; 41(2): 101–9. https://doi.org/10.1080/01944367508977524

[16] Fawibe AE, Odeigah LO, Akande TM, Salaudeen AG, Olanrewaju I. Self-reported medical care seeking behaviour of doctors in Nigeria. Alexandria J Med. 2017; 53(2): 117–22. https://doi.org/10.1016/j.ajme.2016.04.003

[17] Peleg R, Ostermich A, Gienco V, Portughiez E. Screening tests among family doctors: Do we do as we preach? Public Health. 2012 Mar 1; 127(3): 282–9. https://doi.org/10.1016/j.puhe.2012.12.010

[18] Abadom EG, Otene CI. Factors affecting routine medical screening among health workers in a tertiary hospital in Delta State. Niger J Clin Pract. 2022 Jun 1; 25(6): 951–9.

[19] Ilesanmi OS, Oladimeji A, Adewuyi PA, Nguku PM, Oyemakinde A, Fawole OI, et al. Trends in mortality at Federal Medical Centre, Owo, Ondo State, Nigeria 2006-2014. Pan Afr Med J [Internet]. 2019 [cited 2022 May 17]; 32(1): 16. https://doi.org/10.11604/pamj.supp.2019.32.1.13279

[20] Felix Omotosho O, Ologbenla DK, Omotosho OOA, Omotosho OF. THE PEOPLE OF ONDO KINGDOM AND THEIR CULTURE: A HISTORICAL SURVEY AND POLITICAL UNDERPINNING. IJASOS- Int E-journal Adv Soc Sci. 2020; 6: 688–94. https://doi.org/10.18769/ijasos.789491

[21] Ojajuni OJ, Atanlogun SK AF. Population Growth and Health facilities in Nigeria: A case study of Ondo state. Int J Sci Technol Res. 2013; 2(8): 108–13.

[22] Article O, Thinking C. University of Medical Sciences. 2016; 4(4): 179–87.

[23] Suresh K. P CS. Sample Size Estimation and Power Analysis for Clinical Research Studies. J Hum Reprod Sci. 2012; 5(1): 7–13.

[24] Ondo State Ministry of Health. Medium Term Sector Strategy (Health Sector). 2024. 1–49 p.

[25] Gawłowska B, Chawłowska E. An Assessment of Health Behaviours in Primary Care Patients: A Cross-Sectional Study. Healthc. 2024 Jul 1; 12: 1405.

[26] Bana S, Yakoob J, Jivany N, Faisal A, Jawed H, Awan S. Understanding Health Seeking Behavior Of Health Care Professionals In Tertiary Care Hospitals In Pakistan. J Ayub Med Coll Abbottabad. 2016; 28(3): 545–9.

[27] Senbeto M, Tadesse S, Tadesse T, Melesse T. Appropriate health-seeking behavior and associated factors among people who had cough for at least two weeks in northwest Ethiopia: A population-based cross-sectional study. BMC Public Health. 2013 Dec 23; 13(1): 1–7. https://doi.org/10.1186/1471-2458-13-1222

[28] Kompaniyets L, Pennington AF, Goodman AB, Rosenblum HG, Belay B, Ko JY CJ. Underlying Medical Conditions and Severe Illness Among 540,667 Adults Hospitalized with COVID-19, March 2020-2021. Prev Chronic Dis Public Heal Res Pract Policy. 2021; 18.

[29] Getahun GK, Arega M, Keleb G, Shiferaw A BD. Assessment of Routine Medical Checkups for Common Non-Communicable Diseases and Associated Factors among Healthcare Professionals in Addis-Ababa, Ethiopia. Ann Med Surg. 2023; 85(5): 1633–41.

[30] Onwuegbuna AA, Apakama AI, Amobi MBC, Chianakwalam EA, Okosa CM, Igboegwu EE, et al. Practice of Eye Checks among Medical Doctors in South-East Nigeria. Adv Res. 2021 Sep 22; 22(4): 38–46. https://doi.org/10.9734/air/2021/v22i430309

[31] Chinawa N, Chime A. Eye Care Service Utilization among Health Workers in Mercy Hospital, Abak. J Adv Med Med Res. 2017 Jul 24; 23(1): 1–8. https://doi.org/10.9734/jammr/2017/34768

[32] Dotan G, Skaat A, Gershoni A, Gaton DD. Periodic Eye Examinations among Ophthalmologists: Attitudes, Performance, and Barriers for Compliance. Curr Eye Res. 2022; 47(6): 944–8. https://doi.org/10.1080/02713683.2022.2031225