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Health-Seeking Behaviour and Healthcare Service Utilization among Healthcare Workers in Tertiary Hospitals in Ondo State, Nigeria

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Abstract

Background: Healthcare workers are central to delivering quality care, yet many struggle to care for their own health due to heavy workloads, long hours, and a culture that normalizes self-treatment. This study explored how healthcare workers in tertiary hospitals in Ondo State, Nigeria, seek healthcare and what drives their utilisation of available services. **Method:** A comparative, mixed-methods cross-sectional design was used to assess 460 participants—230 clinical and 230 non-clinical workers—across two tertiary health facilities. Quantitative data were collected with pretested interviewer-administered questionnaires, while qualitative insights were gathered through Key Informant Interviews. Data analysis involved descriptive statistics, chi-square tests, and logistic regression at a significance level of $p < 0.05$. Qualitative data were thematically analysed using NVIVO 14. **Results**: Findings revealed notable differences between the two groups. Clinical workers were generally younger and reported poorer health behaviours compared to their non-clinical counterparts. Inappropriate health-seeking behaviour was high in both groups but more pronounced among clinical staff (87.4% vs. 80%). Utilisation of health services was similarly poor across both groups, though non-clinical workers reported slightly lower use (83.9% vs. 82.2%). Predictors of better healthcare utilisation among clinical workers included being on regular medication, having appropriate health-seeking behaviour, and possessing health insurance. Among non-clinical workers, having ever consulted a doctor and exhibiting appropriate health-seeking behaviour significantly increased the likelihood of good utilisation.

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Conclusion: Overall, despite perceiving themselves as healthy, both groups demonstrated poor health-seeking patterns and underutilisation of available health services. These findings underscore the urgent need for policies and institutional interventions that actively promote preventive care, routine screening, and a healthier workplace culture for all healthcare workers.

Subject Areas

Occupational Health

Keywords

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

1. Introduction

Health-seeking behaviour refers to the actions individuals take when they perceive a deviation from their normal health, including illness prevention, symptom management, and treatment seeking [1]. It ranges from self-medication and home remedies to formal consultations and routine screening [2]. These behaviours are influenced by beliefs, social networks, cultural norms, economic factors, and perceived illness severity [1]. When ill, individuals may choose public or private care, traditional or modern options, self-treatment, or no care at all [3]. Health-seeking behaviour is ultimately a sequence of actions aimed at finding appropriate remedies and includes the time from symptom onset to provider contact and treatment compliance [4].

Health-seeking behaviour falls within the broader concept of health behaviour, which involves actions to maintain health, prevent illness, and respond to deviations from good health [5]. It is commonly viewed as how people act regarding their health and the extent to which they use healthcare services—the endpoint of seeking care [6] [7]. It is multi-dimensional and context-dependent [6]. Health-seeking behaviour influences national health and economic development [1]. Healthcare utilisation, defined as the quantity and use of services [8] [9], varies across socioeconomic groups in developing countries and is shaped by demographic and belief factors [10]. Many prefer private facilities due to accessibility and perceived quality as against public facilities [6].

Due to financial constraints, some poor people choose self-treatment or no treatment. Healthcare utilisation among clinical healthcare workers is shaped by professional culture, knowledge, time constraints, workload, mental health stigma, access issues, and occupational risks [11]. For non-clinical healthcare workers, utilisation is influenced by job roles, workplace environment, access to services, cultural beliefs, and socioeconomic status [12] [13]. Five major approaches are used to study health service utilisation—the socio-cultural, socio-demographic, socio-psychological, organisational, and social systems approaches [14] [15]. Although

each has limitations, the social system approach integrates features of the others and provides deeper insight into health-seeking behaviour, offering a strong framework for further research [14] [15].

In Nigeria, these issues are intensified by systemic challenges such as workforce shortages, high workload, and limited time for self-care. Evidence shows that despite awareness of the importance of routine screening and timely care, many healthcare workers do not consistently practice health care-seeking behaviours [16] [17]. Non-clinical staff may face workplace stressors and lower health literacy but receive less research attention [18]. In Ondo State, instances of sudden illness and preventable deaths among healthcare workers highlight gaps in timely care-seeking and utilisation [19]. This study therefore investigates health-seeking behaviour and healthcare utilisation among clinical and non-clinical healthcare workers in tertiary hospitals in Ondo State to inform evidence-based interventions and improve workforce health and system performance.

2. Methodology

2.1. Study Area

The study was conducted in the two public tertiary health facilities in Ondo State, southwestern Nigeria [21]. Created on February 3, 1976, Ondo State is bordered by Ekiti, Kogi, Edo, Delta, Ogun, Osun, and the Atlantic Ocean [20]. It features mangrove forests, tropical rainforest, and wooded savanna [20]. Akure is the state capital, and the state is regarded as one of Nigeria's most educationally advanced [20]. With a population of 5,372,477, it is the 19th most populated and 25th largest by landmass. [20]. The predominantly Yoruba population engages in farming, fishing, and trading, with Christianity as the major religion [20]. The state has about 8805 healthcare workers [21].

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 Decem-

ber 2015, has a 300-bedded capacity and a total staff population of 1146 [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. 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.

2.4.1. 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.

2.4.2. 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.

2.4.3. 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].

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

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

$$n = \frac{(2.8)^2 \left[(0.126 \times 0.874) + (0.226 \times 0.774) \right]}{(0.1)^2}$$

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

$$n = \frac{7.84 \times 0.285}{0.01}$$

$$n = 223$$

Finite Correctional Formula

The total population of healthcare workers (clinical and non-clinical) in FMC Owo and UNIMEDTH, Ondo state was about 2397, which is less than 10,000 [24]. Hence, a finite correctional formula was applied.

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

N_f = 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.

2.6. Sampling Technique

2.6.1. Quantitative

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.

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.

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.

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

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 in English was used to collect data. The instrument was adapted from relevant literature on health-seeking behaviour and healthcare utilisation and pretested among similar clinical

and non-clinical healthcare workers using 10% of the sample size. Necessary revisions were made to improve clarity, feasibility, and resource planning. The reliability coefficient for health-seeking behaviour scales was 85%, exceeding the 70% minimum. Face validity was established by five community health experts, while content validity was confirmed using the Content Validity Index (CVI), meeting Lynn's ≥ 0.85 criterion. The questionnaire assessed and compared health-seeking behaviour and healthcare utilisation in FMC Owo and UNIMEDTH Ondo.

2.6.4. Qualitative Instrument

Key informant interviews were conducted with policymakers and unit heads using a guide adapted from relevant literature and pretested in non-study facilities. Information obtained covered facility policies for unwell staff, overall health-seeking behaviour, patterns of healthcare utilisation, and factors influencing service use among healthcare workers in FMC Owo and UNIMEDTH Ondo.

2.7. 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 were 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.

2.7.1. Qualitative Data Collection Method

Qualitative research assistants received focused training on using the KII guide. Interviews were conducted from 15-26 April 2024, lasted about 40 minutes, and were held in English or Yoruba. Sessions involved a moderator and note-taker, were audio-recorded, transcribed by experts, anonymised, and quality-checked by the principal investigator and research team.

2.8. Dependent Variables

1) Health-seeking behaviour [Primary].
2) Utilisation of health services [Secondary].

2.8.1. Independent Variables

1) 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) Personal and family factors, such as income.

2.8.2. Scoring and Classification of Variables

The questionnaire had five sections. Section A is the socio-demographic charac-

teristics 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 scores for the section were 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. Quantitative Data Analysis

The questionnaires used to obtain quantitative data were 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.

2.9.1. Qualitative Data Analysis

All audio files were transcribed, anonymised, and coded using identifiers such as "Clinical 1 - 6" and "Non-clinical 1 - 6," with sensitive details replaced by "XXX." A pre-codebook guided theme development. Transcripts were coded in NVivo 14 QSR Lumevero software. Producing refined themes and sub-themes aligned with research questions.

2.9.2. 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 par-

ticipate 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 were 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 would 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 of Quantitative Data Analysis

From **Table 3**, 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 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**
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)				
≤30,000	0 [0.0]	6 [2.6]	Fisher's exact =	**0.030**
>30,000	230 [100.0]	224 [97.4]		

**Others in ethnicity include Ebira, Edo, Idoma and Igala ethnic groups **χ^2: Chi-square. ***LR: Likelihood ratio ****Bolded p-value is statistically significant.*

In Table 4, 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 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]		

** χ^2: Chi-square **Bolded p-value is statistically significant.*

In Table 5, 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 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]		

Continued

Action taken during last illness [N = 257)				
Visited TBA/faith-based organization	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.*

From Table 6, 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].

In Table 7, 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 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]	$\chi^2 = 0.247$	0.619
Poor utilization	189 [82.2]	193 [83.9]		
Ever accessed health services [N = 460)				
Yes	112 [48.7]	108 [47.0]	$\chi^2 = 0.139$	0.709
No	118 [51.3]	122 [53.0]		

Continued

Mode of accessing health services [N = 220)				
Clinic appointment	88 [78.6]	100 [92.6]	$\chi^2 = 11.872$	**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]		

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]	$\chi^2 = 24.368$	**<0.001**
Quality of care	23 [10.0]	27 [11.7]	$\chi^2 = 0.359$	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]	$\chi^2 = 2.623$	0.105
Lack of family support	2 [0.9]	9 [3.9]	$\chi^2 = 4.564$	**0.033**
Accessibility to a health facility	10 [4.3]	17 [7.4]	$\chi^2 = 1.928$	0.165
Poor attitude of healthcare professionals	18 [7.8]	24 [10.4]	$\chi^2 = 0.943$	0.331
Lack of satisfaction with healthcare services	23 [10.0]	20 [8.7]	$\chi^2 = 0.231$	0.631
High cost of healthcare	30 [13.0]	40 [17.4]	$\chi^2 = 1.685$	0.194
Lack of time	36 [15.7]	21 [9.1]	$\chi^2 = 4.506$	**0.034**
Lack of essential drugs and facilities	81 [35.2]	39 [17.0]	$\chi^2 = 19.888$	**<0.001**
Lack of skilled personnel	16 [7.0]	4 [1.7]	$\chi^2 = 7.527$	**0.006**
Fear of stigmatisation	7 [3.0]	8 [3.5]	$\chi^2 = 0.069$	0.793
Confidentiality issues	13 [5.7]	3 [1.3]	$\chi^2 = 6.475$	**0.011**
None	114 [49.6]	95 [41.3]	$\chi^2 = 3.166$	0.075
Reasons for health service utilisation* [N = 460)				
Proximity to a health facility	37 [16.1]	21 [9.1]	$\chi^2 = 5.051$	**0.025**
Feeling of wellness	53 [23.0]	45 [19.6]	$\chi^2 = 0.830$	0.362
None	49 [21.3]	51 [22.2]	$\chi^2 = 0.051$	0.821

In **Table 8**, 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 8. Predictors of good healthcare services utilisation among clinical healthcare workers.

Variables	Adjusted 0dds 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			

**Bolded p-value is statistically significant.*

From **Table 9**, the predictors among non-clinical healthcare workers 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].

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			

**Bolded p-value is statistically significant.*

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 six sub-themes were generated following the analysis of the KII data.

The themes included:

- Health-seeking behaviour and its pattern:
  - ➢ Understanding of health-seeking behaviour.
  - ➢ Pattern of health seeking among healthcare workers.
  - ➢ Typical ways of seeking health information in the medical community.
- Factors influencing health seeking behaviour:
  - ➢ Individual health status.
  - ➢ Professional training and knowledge.
  - ➢ Cultural, societal attitudes and religious beliefs.
- Challenges experienced in seeking healthcare:
- Suggested solutions to improving healthcare accessibility, utilisation and health seeking behaviour for healthcare workers.

5. Discussion

This study assessed and compared the health-seeking behaviour and healthcare utilisation among clinical and non-clinical workers in tertiary hospitals in Ondo State, Nigeria. Understanding these patterns supports targeted occupational

health interventions, better absenteeism management, stronger staff health insurance policies, improved patient safety and overall system performance.

Findings showed poor health-seeking behaviour and service utilisation among both groups. A higher proportion of non-clinical workers (92.6%) accessed care through clinic appointments compared with clinical workers (78.6%). Key informant interviews confirmed poor utilisation: "We are not there yet, let me just say average" (Clinical Staff); "Everything available is poor… I can score it zero" (Non-clinical Staff). Clinical workers' poor utilisation was linked to over-familiarity with facility processes, while non-clinical workers cited lack of information: "The policy is there but it is not communicated" (Non-clinical Staff).

Similar studies in Nigeria, Ethiopia, Israel and Pakistan also reported poor utilisation among clinical workers [17] [18] [26] [29]. In this study, clinical workers mainly reported long waiting times, while non-clinical workers often claimed they were healthy. Reasons for non-utilisation included cost, time constraints, lack of drugs and equipment, privacy concerns and workload.

Healthcare workers with appropriate health-seeking behaviour demonstrated better service utilisation, particularly among non-clinical staff with previous doctor visits or health insurance.

6. Conclusion

Despite perceiving their health as good, clinical and non-clinical healthcare workers demonstrated poor health-seeking behaviour and low utilisation of healthcare services. Significant predictors explained differences between both groups, leading to rejection of the null hypothesis. Clinical staff often delayed care due to workload and self-treatment, while non-clinical staff underutilised services because of low health literacy, cost concerns, and poor insurance awareness. These behaviours increase morbidity and reduce productivity. Addressing the gaps requires a Staff Health and Wellness Clinic, protected sick leave, stronger occupational health systems, health-literacy programs, flexible clinic hours, better insurance utilisation, annual medical exams, and digital health monitoring.

Credit Author Statement

This work was carried out in collaboration with all authors. Author II designed the study. Authors AAO and AMA supervised the work, AOK and OAA were involved in Data collection and analysis, Author BCI edited the manuscript.

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Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this manuscript. No financial, professional, or personal relationships in-

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