Assessment of health-seeking behaviour of staff in tertiary health institutions in Federal Capital Territory (FCT), Nigeria

Gado E. Ema[1,3], Danraka Abubakar[1,2,3]

[1]Department of Pharmacy, National Hospital Abuja, Nigeria.
[2]National Institute for Pharmaceutical Research and Development (NIPRD) Abuja, Nigeria.
[3]West African Postgraduate College of Pharmacists (WAPCP) Lagos, Nigeria,

Corresponding author: Gado E. Ema
Email: emagado8@gmail.com
Telephone: +2348036397472

https://doi.org/10.60787/wajp.vol36no1.373

ABSTRACT

Background: The COVID-19 pandemic, massive exodus and emigration of health workers from the country have cumulatively put a major strain on the staff-strength of tertiary health institutions. This has caused health workers to look after their health in a haphazard way through inadequate consultation and inappropriate self-referral to specialist services.

Objective: To assess the health-seeking behaviour of hospital staff in tertiary health institutions in FCT, Nigeria.

Method: A multi-centered, descriptive cross-sectional study was conducted in three tertiary institutions in FCT, Nigeria amongst both clinical and non-clinical staff. A pretested 43-item questionnaire was used to assess health-seeking behaviours of 384 respondents. Data were analyzed using SPSS version 24, with descriptive statistics (frequencies and percentages) and chi-square tests.

Result: About 85.3 % response rate was achieved, with 384 completed questionnaires. Positive health-seeking behaviour was observed in 69 % of respondents for voluntary medical checkups, 78.9 % for basic self-care, 98.7 % for managing smoking risks, 63.3 % for avoiding high-salt processed food, 69.8 % for COVID-19 vaccination, and 68.8 % for hepatitis B vaccination ($P<0.05$). Cancer screenings and mental health evaluations were the least performed. Barriers to positive health-seeking behaviour included the perceived significance of periodic medical check-ups, lack of time, financial constraints, lack of hepatitis B screening, and scepticism towards COVID-19 vaccines.

Conclusion: Hospital staff at tertiary institutions in FCT, Nigeria exhibited overall positive health-seeking behaviour, particularly for medical checkups and self-care. However, cancer screenings and mental health evaluations were underperformed, highlighting areas for improvement.

Keywords: Abuja, FCT, Nigeria, Health-Seeking Behaviour, Health Workers, Tertiary Hospital

Évaluation du comportement de recherche de soins du personnel des établissements de santé tertiaires du Territoire de la capitale fédérale (FCT), Nigéria

Gado E. Ema[1,3], Danraka Abubakar[1,2,3]

[1]Département de pharmacie, Hôpital national d'Abuja, Nigéria.
[2]Institut national pour la recherche et le développement pharmaceutiques (NIPRD) Abuja
[3]Collège postuniversitaire de pharmaciens d'Afrique de l'Ouest (WAPCP) Lagos Nigéria

Auteur correspondant: Gado E. Ema
Courriel: emagado8@gmail.com
Téléphone: +2348036397472

RÉSUMÉ

Contexte: La pandémie de COVID-19, l'exode massif et l'émigration des professionnels de la santé hors du pays ont mis à rude épreuve les effectifs des établissements de santé tertiaires. Les professionnels de santé ont donc dû gérer leur santé de manière désordonnée, par le biais de consultations inadéquates et d'un auto-recours inapproprié à des services spécialisés.

Objectif: Évaluer le comportement du personnel hospitalier des établissements de santé tertiaires du FCT, au Nigeria, en matière de recherche de soins.

Méthode: Une étude transversale descriptive et multicentrique a été menée dans trois établissements tertiaires du FCT, au Nigeria, auprès du personnel clinique et non clinique. Un questionnaire pré-testé de 43 questions a été utilisé pour évaluer les comportements de recours aux soins de 384 personnes interrogées. Les données ont été analysées à l'aide de la version 24 du logiciel SPSS, avec des statistiques descriptives (fréquences et pourcentages) et des tests du chi carré.

Résultat: Un taux de réponse d'environ 85,3% a été atteint, avec 384 questionnaires remplis. Un comportement positif de recherche de soins a été observé chez 69% des répondants pour les examens médicaux volontaires, 78,9% pour les soins personnels de base, 98,7% pour la gestion des risques liés au tabagisme, 63,3% pour éviter les aliments transformés riches en sel, 69,8% pour la vaccination contre la COVID-19 et 68,8% pour la vaccination contre l'hépatite B ($P < 0,05$). Les dépistages du cancer et les évaluations de la santé mentale étaient les moins effectués. Les obstacles à un comportement positif en matière de recherche de santé comprenaient la perception de l'importance des examens médicaux périodiques, le manque de temps, les contraintes financières, l'absence de dépistage de l'hépatite B et le scepticisme à l'égard des vaccins contre la COVID-19.

Conclusion: Le personnel hospitalier des établissements de soins tertiaires du FCT, au Nigéria, a affiché un comportement globalement positif en matière de recherche de soins, notamment en ce qui concerne les examens médicaux et les soins auto-administrés. Cependant, les dépistages du cancer et les évaluations de santé mentale ont été insuffisamment réalisés, ce qui met en évidence des points à améliorer.

Mots-clés: Abuja, FCT, Nigéria, comportement de recherche de soins, personnel de santé, hôpital tertiaire

INTRODUCTION

Health-seeking behaviour has been defined as any action that is undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy.[1] Health workers tend to take a self reliant view when it comes to taking care of their own health. It was found that doctors, most especially, look after their health in a haphazard way through unofficial consultation, self medication, and inappropriate self referral to specialist services.[2] Health professionals feel they are knowledgeable in diseases and would rather engage in self-diagnosis and self-treatment rather than seek health care when ill. This can result in misdiagnosis, inappropriate and insufficient medical interventions. Despite having access to knowledge, healthcare facilities and professionals, healthcare workers and hospital staff have experienced increased mortality and morbidity rates.[3]

Studies on health-seeking behaviour among health workers in Nigeria reveal inconsistencies in the uptake of routine medical check-ups and a strong reliance on self-medication. In Ilorin, Kwara State, only a fifth of health workers underwent periodic check-ups, and these were irregular and spaced over long intervals.[4] Similarly, in Cross River State, while most health professionals demonstrated good knowledge and a positive attitude toward routine check-ups, only 46 % adhered to them in practice.[5] In contrast, a study in Ekiti State reported a higher rate of regular medical check-ups at 74 %, suggesting that institutional policies and regional factors may influence health-seeking behaviours among health professionals.[6] In Sokoto, despite recognizing the importance of periodic check-ups, over half of the health professionals had never undergone one due to fear of positive diagnosis.[3] A study in southeast Nigeria assessed the feeding behaviour of healthcare workers in a tertiary health institution. The findings indicated that the overall feeding behaviour was fair, with significant gender differences favouring females. Notably, participants exhibited poor dietary habits concerning carbohydrates and fats, suggesting a potential risk for non-communicable diseases.[7] Another study that sort to investigate the factors influencing routine medical screening among health workers in a tertiary hospital in Delta State revealed that despite adequate knowledge of the importance of regular health screenings, actual participation was suboptimal. Some of the barriers identified include time constraints, fear of positive diagnoses, and perceived invulnerability to illness.[8]

This study builds on these findings by assessing health-seeking behaviours among tertiary health institution staff in FCT, Nigeria as no study has specifically examined health-seeking behaviour among health workers in FCT, Nigeria's capital, where access to tertiary healthcare facilities and workplace health policies may influence these behaviours differently. By focusing on FCT, this study provides necessary insights into an under-researched region while contributing to evidence-based policies that promote better health-seeking behaviours among healthcare professionals. This study also adopts a more comprehensive approach by exploring health-seeking behaviour towards health promotion activities (such as vaccination, exercise, and stress management) and health-seeking behaviour towards some health risk factors (such as smoking, alcohol and salt consumption) in addition to the commonly researched health-seeking behaviour towards routine checks and medical consultation.

This study aimed to assess the health-seeking behaviour of hospital staff working at tertiary health institutions in FCT, Nigeria.

METHODS

Study setting

The study was carried out in the three tertiary institutions within the Federal Capital Territory, Nigeria: namely the University of Abuja Teaching Hospital (UATH) Gwagwalada, Federal Medical Centre (FMC) Jabi and National Hospital Abuja (NHA).

Sampling

Population was drawn from the two categories of staff of the three tertiary health institutions: Staff category will include both Clinical and Non-Clinical staff. All participants drawn from the study population who gave voluntarily consent to participate based on the inclusion criteria.

Inclusion criteria

All clinical staff, non-clinical staff, administrative staff, finance staff, and support staff with work experience greater or equal to one-year were included.

Exclusion criteria

Students, Interns, House-officers, National Youth Service Corps staff and other staff with less than one-year working experience with the facility were excluded.

Sample size estimation

The minimum Sample size was calculated using the Taro Yamane formula for cross-sectional study by considering a 95 % confidence interval, a 5 % margin of error and a 10% non-response rate.[9]

$$n = \frac{N}{1 + N (e)^2}$$

Where:

n = corrected sample size

N = population size

e = margin of error (0.05) based on research condition.

To calculate the value of n;

N = 2,548 + 2,155 + 1,690 = 6,393

$$n = \frac{6,393}{1 + 6,393 (0.05)^2}$$

= 376.45

The Taro Yamane formula from above: $n = N/1+N (e)^2$ when all parameters were applied gave a sample size of 376.45 which was rounded up to 377 respondents.

Since the questionnaires was self-administered, in anticipation of non-responses, inappropriately filled or missing questionnaires,[10] an addition of 73 was made. Thus, making the total number of expected respondents 450.150 questionnaires were shared per facility; of 105 was shared among clinical staff and 45 among non-clinical staff. The convenient sampling technique was used with proportionate allocation to the two categories of staff (Clinical and Non-clinical).

Data collection

The Health seeking behaviour questionnaire from Adamu *et al*.,[3] was adapted and expanded to include health rick and health promotion components. The Health risk and health promotion components were derived from Drug Use questionnaire (DAST-20);[11] Pan American Health Organization Questionnaire on knowledge, attitude and behaviours towards dietary salt and health;[12] Key questions from Global Adult Tobacco Survey (GATS);[13] the WHO STEPS instrument for Chronic Disease Risk Factor Surveliance.[14] A 43-item questionnaire was derived, pretested and then administered to 450 staff of the three tertiary institutions who voluntarily agreed to participate and provided informed consent for the study over a period of two months. The questionnaire included sections on socio-demographic characteristics, health-seeking behaviour towards routine check-ups and consultations, health-seeking behaviour for managing health risks, and health-seeking behaviour related to health promotion activities. Data collection was carried out over a three-month period, from April 2023 to June 2023. Two research assistants were engaged in distributing and collecting the questionnaires-one in UATH and one in FMC-while the principal investigator administered and collected the questionnaires in NHA.

Of the 450 questionnaires distributed to participants, 384 respondents filled and returned the questionnaires which gave an 85.3 % response rate.

Data analysis

The questionnaire responses were reviewed for completeness. The collected data were entered into Microsoft Excel and analysed using the statistical package for social science (SPSS) version 24. Mean standard deviation (SD) and frequency (percentage) were used to describe the summary statistics. Data gathered was analyzed for descriptive and inferential statistics to show frequencies and percentages (presented in tables) and chi square statistical measures was used to determine the p-value for health seeking behaviour and the degree of association between influencing factors and observed behaviours.

Ethical consideration

Ethical approval was obtained from the Ethics Committee of Federal Medical Center Jabi (Approval number: FMCABJ/HREC/2023/090), University of Abuja Teaching Hospital Gwagwalada (Approval number: UATH/HREC/PR/253) and National Hospital Abuja (Approval number: NHA/EC/050/2023). Participants were not identified by name during the analysis of the data. Written consent was obtained from each respondent after the purpose of the study has been explained.

RESULTS

Out of four hundred and fifty (450) questionnaires shared, an 85.3% response rate was achieved to give three hundred and eighty four hundred (384) respondents.

Nearly half (47.4%) of the respondents were aged 31-40 years, with a mean age of 38.59±8.41 years and a median age of 38 years. The majority were male (51.3%) and clinical staff (70.6%), with 29.2% of clinical staff having 6-10 years of work experience. Most respondents were married (70.8%) and spent 40-60 hours weekly at the workplace (61.7%).

Table 1: Socio-demographic distribution of respondents

Variables	Respondents (N=384)	Percentage (n%)
Age Group		
20 – 30yrs	77	20.1
31 – 40yrs	182	47.4
41 – 50yrs	77	20.1
>51yrs	48	12.5
Mean ±SD, Median age(IQR)	*38.59±8.41, (38yrs)*	
Gender		
Male	197	51.3
Female	187	48.7
Category of Staff		
Clinical Staff	271	70.6
Non-clinical staff	113	29.4
Years of Experience		
1 - 5yrs	108	28.1
6 -10yrs	112	29.2
11 -20yrs	107	27.9
> 20yrs	57	14.8
Marital Status		
Married	272	70.8
Not married	112	29.2
Working Hours		
< 40 hours	98	25.5
40 - 60 hours	237	61.7
> 60 hours	49	12.5

Nearly half (47.4 %) of the respondents were aged 31-40 years, with a mean age of 38.59±8.41 years and a median age of 38 years. The majority were male (51.3 %) and clinical staff (70.6 %), with 29.2% of clinical staff having 6-10 years of work experience. Most respondents were married (70.8 %) and spent 40-60 hours weekly at the workplace (61.7 %).

Table 2: Medical check-up distribution of respondents

Medical Check-up Parameters	Respondents (N=384)	Percentage (%)	P-value
Voluntary medical check up			
Yes	265	69.0	0.003*
No	119	31.0	
Blood pressure			
Never	41	10.7	0.631
Monthly	149	38.8	
3 – 6mth	110	28.6	
6-12mth	58	15.1	
1-5yrs	20	5.2	
≥5yrs	6	1.6	
Blood sugar level			
Never	87	22.7	0.292
Monthly	52	13.5	
3 – 6mth	104	27.1	
6-12mth	88	22.9	
1-5yrs	35	9.1	
≥5yrs	18	4.7	
Blood cholesterol			
Never	150	39.1	0.966
Monthly	16	4.2	
3 – 6mth	61	15.9	
6-12mth	98	25.5	
1-5yrs	33	8.6	
≥5yrs	26	6.8	
Eye check			
Never	136	35.4	0.554
Monthly	10	2.6	
3 – 6mth	56	14.6	
6-12mth	76	19.8	
1-5yrs	71	18.5	
≥5yrs	35	9.1	

Dental check			
Never	183	47.7	0.042*
Monthly	3	0.8	
3 – 6mth	42	10.9	
6-12mth	64	16.7	
1-5yrs	50	13.0	
≥5yrs	42	10.9	
Never	2461	64.1	0.002*
Monthly	1	0.3	
3 – 6mth	21	5.5	
6-12mth	33	8.6	
1-5yrs	51	13.3	
≥5yrs	32	8.3	
Infectious disease (hepatitis/HIV, TB, COVID)			
Never	79	20.6	0.313
Monthly	11	2.9	
3 – 6mth	82	21.4	
6-12mth	108	28.1	
1-5yrs	68	17.7	
≥5yrs	36	9.4	
Mental & psychiatric evaluation			
Never	306	79.7	0.187
Monthly	1	0.3	
3 – 6mth	15	3.9	
6-12mth	20	5.2	
1-5yrs	20	5.2	
≥5yrs	22	5.7	
General physical examination			
Never	114	29.7	0.424
Monthly	43	11.2	
3 – 6mth	68	17.7	
6-12mth	91	23.7	
1-5yrs	40	10.4	
≥5yrs	28	7.3	

*$X^{2=}$ Chi-square was performed at p<0.05 and * show statistically significant*

Table 2 reveals that 69 % of respondents had undergone voluntary medical check-ups, with a higher proportion of non-clinical staff (41.6 %) than clinical staff (26.6 %) never participating. Blood pressure checks were the most frequent, with 38.8% checking monthly and 28.6% every three to six months. Other tests, such as infectious disease screening (28.1 %), blood cholesterol checks (25.5 %), eye checks (19.8 %), and dental checks (16.7 %), were primarily conducted every six to twelve months. 79.7 % of respondents had never undergone a mental or psychiatric evaluation, 64.1 % had never had cancer screening, 47.7 % had never had dental checks, and 39.1 % had never checked blood cholesterol levels

Table 3: Medical Consultation Distribution of Respondents

Medical Consultation Parameters	Respondents N=384	Percent (%)	P-value
Practice basic self-care and home remedy			
Yes	265	69.0	0.003*
No	119	31.0	
Seeking attention of physician for treatment /management of an ailment			
Yes	303	78.9	0.049*
No	81	21.1	
Ever sought treatment from other source ailment			
Yes	209	54.4	0.002*
No	175	45.6	
If yes, what are they?			
Herbal	146	38.1	
Spiritual	55	14.3	
Aromatherapy	4	1.0	
Acupuncture	3	0.8	
Cheaper	60	15.6	
More effective	51	13.3	
Orthodox medicine	27	7.0	
Others	15	3.9	

*$X^{2=}$Chi-square was performed at p<0.05 and * show statistically significant*

Table 3 shows that 69 % of respondents practice basic self-care and use home remedies when ill. About 54.4 % sought treatment from alternative sources. Herbal treatment (38.1 %) was the most common alternative, often chosen for its perceived affordability and effectiveness.

Table 4: Health risk distribution of respondents

Health Risk Factors Parameters	Respondents N=384	Percent (%)	P-value
Currently Smoked Cigarettes			
Less than daily	3	0.8	0.049*
Daily	2	0.5	
Not at all	379	98.7	
Have You Ever Smoked Cigarette?			
Yes	37	9.6	0.423
No	347	90.4	
Number Of Cigarette Smoked In Entire Life			
≤ 10 cigarette	18	4.7	0.086
11-100 cigarette (=5pack)	8	2.1	
≥ 100 cigarette (=5packs)	5	1.3	
Last Time You Smoked			
Within last 30 days	2	0.5	0.396
Between 1-12mth	8	2.1	
Over a year	20	5.2	
Have You Ever Drank Alcohol?			
Yes	148	38.5	0.146
No	236	61.5	
How Often Do You Have A Drink Containing Alcohol?			
Never	218	56.8	0.400
Monthly	90	23.4	
2-3 time per week	28	7.3	
2-3 time per month	16	4.2	
4 or more time per weeks	3	0.8	
1-2	117	30.5	0.865
3-4	13	3.4	
5-6	2	0.5	
7-9	0	0.0	
10 or more	0	0.0	
Never	150	39.1	0.001*
Rarely	171	44.5	
Often	54	14.1	
Always	9	2.3	

Add Salt While Cooking Or Preparing Food				
Never		11	2.9	0.237
Rarely		45	11.7	
Often		143	37.2	
Always		185	48.2	
Never		18	4.7	0.045*
Rarely		225	58.6	
Often		134	34.9	
Always		7	1.8	
Do You Know Your:				
Body Mass Index (BMI)?				
Yes	106	27.6	0.001*	
No	278	72.4		
Waist Hip Ratio?				
Yes	16	4.2	0.008	
No	368	95.8		
Have you used drugs other than those required for medical reason?				
Yes	32	8.3	0.318	
No	352	91.7		

*$X^{2=}$Chi-square was performed at p<0.05 and * show statistically significance*

Table 4 highlights that 98.7% of respondents demonstrated appropriate health risk management regarding smoking, with only 9.6 % having ever smoked. Among them, 5.2% quit over a year ago, and 0.5% smoked within the last 30 days. Most respondents (61.5 %) reported never drinking alcohol, while 56.8 % currently abstain. Those who drink alcohol typically consume 1-2 drinks (30.5 %) at monthly or less frequent intervals (23.4 %). Regarding salt consumption, 44.5 % rarely add salt at the table, 48.2 % always add salt during cooking, and 58.6% rarely eat processed foods high in salt. However, only 27.6 % of respondents know their BMI, 18.8 % their waist circumference, and 4.2 % their waist-hip ratio. Additionally, 8.3 % admitted to using substances for non-medical purposes.

Table 5: Health promotion activities of respondents

Health Promotion Activities Parameters	Respondents N=384	Percent (%)	P-value
Regular exercise			
Yes	242	63.0	0.185
No	142	37.0	
How often do you engage in physical exercise?			
Never	45	11.7	0.688
Less than 1day/week	79	20.6	
1 day/week	63	16.4	
2-3day/week	89	23.2	
4-6days/week	47	12.2	
Everyday	57	14.8	
What could prevent you from engaging in physical exercise?			
Lack of time	279	72.7	
Lack of facilities/gym	105	27.3	
Lack of funds	67	17.4	
I'm physically active enough	71	18.5	
How do you manage stress?			
Reading book	85	22.2	0.070
Exercise	77	20.1	
Sleeping	278	72.4	
Take deep breath andmediate	59	15.4	
Socialize with friends/family	134	34.9	
Others	19	4.9	
How frequently do you relax?			
1 hardly have the time to do so	116	30.2	0.874
1 day/week	88	22.9	
2-3days/week	95	24.7	
4-6days/week	16	4.2	
Everyday	68	17.7	
How did you spend your last annual leave?			
I did not have one	38	9.9	0.185
Taking care of other affairs	86	22.4	
Resting at home	60	15.6	
Go some rest while taking care affairs	152	39.6	
Went foe vacation	44	11.5	
Have you taken hepatitis B vaccine?			
Yes	264	68.8	0.001*
No	119	31.2	
Have you taken the COVID-19 vaccine?			
Yes	268	69.8	0.022*
No	116	30.2	

*$X^{2=}$ Chi-square was performed at p<0.05 and * show statistically significant*

Table 5 reveals that 63% of respondents engage in regular exercise. Common stress-relief methods included sleeping (72.4%) and socializing with friends and family (34.9%), while 30.2% reported lacking time to relax after work. During their last annual leave, 39.6% rested while managing other affairs, and 9.9% did not take any leave. Regarding vaccinations, 30.2% and 31.2% had not received the COVID-19 and Hepatitis vaccines, respectively.

Table 6: Factors Influencing the Observed Health-Seeking Behaviour

Common factors Parameters	Respondents N= 384	Score (%)	Remark
Periodic Medical Check-Up Is Important			
Yes	376	97.9	Dominant
No	8	2.1	
If Yes, Why is it important?			
Prevention	218	56.8	
Early diagnosis	253	65.9	Dominant
Knowledge of health status	249	64.8	
Others	2	0.5	
Ever Requested/Advised To Go For Medical Check-up?			
Yes	275	71.6	Dominant
No	109	28.3	
Reason For Performing Medical Check-Up?			
Pre-Employed exam	198	51.6	Dominant
Persistence of symptom	135	35.2	
Family history illness	71	18.5	
Previous history illness	52	13.5	
Others	13	3.4	
What Could Prevent You From Undergoing Periodic Medical Check-Up Examinations?			
Lack of time	167	43.5	Dominant
Lack of facilities	46	12.0	
Lack of funds	130	33.9	
High cost	112	29.2	
Discomfort/pain	29	7.6	
Fear of the unknown	66	17.2	
If am well(no symptom)	119	31.0	
Lack of skills personal	30	7.8	
What Could Prevent You From Engaging In Physical Exercise?			
Lack of time	279	72.7	Dominant
Lack of facilities/gym	105	27.3	
Lack of funds	67	17.4	
I'm physically active enough	71	18.5	

What Could Prevent You From Unwinding and Relaxing After Working Hours?			
Lack of funds	143	37.0	
Lack of time	242	63.0	Dominant
I am well and see so need	41	10.7	
I do not need the time to rest	8	2.1	
Reasons For Not Receiving Hepatitis Vaccine			
Not available	19	4.9	
I don't have hepatitis	27	7.0	
Inconvenience	13	3.4	
Test positive	11	2.9	
Not yet screened	34	8.9	Dominant
Laziness/procrastination	15	3.9	
Reasons for Not Receiving Covid-19 Vaccine			
No reason	23	6.0	
Missed the schedule	12	3.1	
Lac k of time	10	2.6	
Afraid for side effect	28	7.3	
I'm pregnancy	7	1.8	
Don't believe in vaccine/lack of truth	36	9.4	Dominant

Most of the study population were of the opinion that periodic medical check-up is important (score=97.9 %) though this didn't adequately correlate to the percentage (69 %) of respondents who have ever gone for a voluntary check-up (as shown in table 6). The most dominant response as to why the study population were of the opinion that periodic medical check-up is important for Early diagnosis (score=65.9 %), followed by knowledge of health status (score=64.8%). About 71.6 % of respondents had been requested or advised to go for medical check-up. Pre-employment examination (score=51.6 %) and Persistence of symptoms (score=35.2%) were the most dominant reasons for performing medical check-up.

Lack of time (score=43.5 %) and lack of funds (score=33.9 %) were identified as the primary barriers preventing the study population from undergoing periodic medical check-ups. Time constraints were particularly impactful, as they were also the leading factor preventing participation in physical exercise (score=72.7 %) and relaxation after working hours (score=63.7 %). Additionally, lack of funds (score=37 %) was another significant obstacle to unwinding and relaxing after work

The most dominant reason for not taking the Hepatitis vaccine was because they had not yet been screened (8.9 %). About 7 % misunderstood and believed that they did not have hepatitis and therefore did not need the vaccine. Other reasons for not taking the hepatitis vaccine are the in-availability of the vaccine, laziness or procrastination, inconvenience, and "tested positive". The major reason for not taking the covid-19 vaccine was because they didn't believe in the vaccine or felt there was a lack of truth to the vaccine.

DISCUSSION

Health-seeking behaviour towards medical check-up

This study found that most respondents had undergone a voluntary medical check-up. The most frequently conducted medical check was the blood pressure check, with majority performing the check on either monthly or every 3-6 months. Similarly, Omokhua and Ehizele observed that a significant proportion of dental health workers conducted blood pressure checks every 6 months.[15] This trend could be linked to the high prevalence of hypertension and the associated need for consistent monitoring.

This study also found that blood sugar level checks were most frequently conducted every 3-6 months while blood cholesterol checks, eye checks and dental checks were most often conducted every 6-12 months. A previous study by Abadom and Otene reported that nearly half of health care workers performed blood sugar checks during their last routine medical screening.[8] This finding aligns with the observation in this study that blood sugar checks are more frequently conducted by hospital staff at a 3-6-month interval.

Mental and psychiatric evaluations were found to be rarely undertaken by most respondents in this study. Similarly, Ogunlesi and Adelekan reported low general awareness of mental health among primary healthcare workers.[16] This lack of engagement with mental health evaluations poses a significant barrier to seeking care for mental illnesses among healthcare workers. Cancer screening emerged as the most poorly practiced medical check, with many respondents admitting to never undergoing such tests. Omokhua and Ehizele similarly reported that about one-third of female health workers had never done a cervical smear or breast mammogram, while nearly half of male health workers had never done a PSA test.[15] This finding agrees with this study's observation, indicating very poor cancer screening practices among healthcare workers. Dental checks were found to be rarely undertaken, with about half of the population reporting that they have never had one. In contrast, Omokhua and Ehizele reported that the majority of dental health workers in Edo State, Southern Nigeria, not only had dental checks but had undergone one within the last 6 months.[4] This discrepancy could be attributed to the fact that dental health workers, being specialists in dental care, are likely more knowledgeable and have greater access to dental checks from their colleagues compared to the broader population of health workers.

Blood cholesterol level checks were notably neglected by a sizeable proportion of the study population, with almost half reporting that they had never undergone such a check. In light of this, the American Academy of Family Physicians (AAFP) recommends lipid screening for men aged 35 years and older and women aged 45 years and older who are at increased risk for coronary heart disease. The AAFP further advises screening based on overall cardiovascular risk assessment, reinforcing the importance of routine cholesterol checks to identify potential health risks early.[17]

Health-seeking behaviour towards consultation

Health-seeking behavior towards consultation was generally positive in this study, with a high proportion practicing basic self-care and home remedies, and an even higher proportion seeking medical attention from a physician. Similarly, numerous studies have shown that self-medication is a common practice among health workers, supporting the results of this study.[18,19]

In addition to medical physicians, the most sought-after treatments were herbal medicine and spiritual solutions with one-third of the respondents using herbal treatments for their illnesses. This aligns with findings by Osamor and Owumi and Elolemy et al. who reported significant use of traditional medicine among hypertensive patients and health workers, respectively.[21,22] Wada *et al*. also found that most of his study population (pharmacists in Nigeria) used traditional medicine.[23] The use of herbal medicine by healthcare workers and the general population highlights its crucial role in Africa and Nigeria's healthcare system.

Health-seeking behaviour towards health risks

This study found a minimal fraction of health workers in tertiary institutions in FCT, Nigeria who admitted to smoking, with even fewer reporting smoking in the past 30 days. These rates are lower than those documented by Omotowo *et al*. in Enugu, eastern Nigeria, and Bandele and Osadiaye in Lagos.[24,25] Smoking prevalence was however higher among health workers in Turkey and Asia[26,27] possibly due to cultural acceptance and colder climates in those regions compared to Nigeria.

Alcohol consumption patterns in this study showed that while most respondents had never drank, the most prevalent alcohol consumption behavior was having 1-2 drinks monthly or less frequently. This finding aligns with Obadeji *et al*, who reported that the majority of health workers abstained from alcohol, with only a small

proportion engaging in hazardous alcohol use.[28]

The salt consumption behaviour among study participants revealed that a high proportion of participants always added salt while cooking. This is similar to the high proportion of health care workers in Jos[29] and in south-eastern Nigeria[30] where poor feeding behaviour for salt intake was reported. However, most participants reported rarely eating processed foods high in salt, similar to health professionals in South Africa.[31] Feeding behaviour, including salt-consumption habits, is an important factor in the prevention and management of non-communicable diseases, which are the leading cause of death globally.[7] Reducing salt intake is recommended as it lowers both systolic and diastolic blood pressure, and reduces heart disease mortality.[31] In non-hypertensives, dietary changes, including salt reduction, can help prevent hypertension.[32]

A small proportion of participants in this study knew their body mass index (BMI), waist circumference, or waist-hip ratio, which are key indicators of central obesity, a risk factor for metabolic syndrome and conditions such as cardiovascular disease and insulin resistance. Previous studies on Nigerian health workers and civil servants have shown notable rates of obesity or overweight based on BMI or waist-to-hip ratio.[33,34,35]

Health seeking behaviour towards health promotion activities

A higher proportion of hospital staff in this study engage in regular exercise compared to health workers in Plateau State, where about half were inactive.[34] This is also in contrast to a 2015 study in south-west Nigeria by Iwuala *et al*., which found low physical activity levels among healthcare professionals.[36] The most common exercise frequency in this study was 2-3 days per week, which is considered beneficial, as regular physical activity, such as 45 minutes of walking three times a week, has been shown to improve both systolic and diastolic blood pressure.[37] Regular exercise also supports weight management, cancer prevention, and the reduction of chronic non-communicable diseases.[38]

Hospital staff in this study reported managing stress primarily by sleeping, socializing with friends and family, followed by reading and exercising. This aligns with stress management practices among construction workers in Bonny, Nigeria, where aerobics and social support were common.[39] Other effective stress management strategies include relaxation, vacations, lunch breaks, and maintaining a family/work balance.[40] However, about one-third of participants mentioned having little time to relax after work, a concern echoed by hospital staff in China and nurses in India.[41,42] Additionally, fewer staff took vacations, while more rested during annual leave while attending to other responsibilities.

About two-thirds of the study population had received the COVID-19 vaccine, a finding consistent with Ugochukwu et al., who reported a similar proportion of hospital staff willing to take the vaccine.[43] Similarly, around two-thirds of participants had received the Hepatitis B vaccine, aligning with a study by Ogoina *et al*. in Yenagoa, Nigeria, where more than half of healthcare workers were vaccinated.[44] However, Omotowo et al. reported a significantly lower uptake in Enugu, Nigeria.[45] Fatusi *et al*. reported a higher uptake among staff at a tertiary hospital in Nigeria, where free vaccination programs were offered, highlighting the positive impact of such initiatives on vaccine compliance and uptake.[46]

Factors influencing the observed health-seeking behaviours

Dominant factors identified to be responsible for the observed health-seeking behaviour towards medical check-up are: the perception that periodic medical check-up is important for majorly early diagnosis and for the knowledge of health status, as well as being requested or advised to go for a medical check-up. Similarly, Desmannu revealed that most staff of college of Medicine in Ibadan Nigeria, participated in an institutionalized medical check-up to know their health status.[47]

Lack of time was the most dominant factor to hinder periodic check-up. However, a study by Abadom and Otene among health workers in a tertiary hospital in Delta, Nigeria, revealed that the cost of test was the main reason for not doing routine medical screening.[8] The difference could be due to the existence of health insurance (National Health Insurance Scheme) for staff that covers the cost of most of the medical check-ups therefore resolving the issue of cost in tertiary health institutions in FCT, Nigeria.

Lack of time was also the dominant factor to hinder participation in health promotion activities like exercise and stress management. Lack of funds was also identified as the next dominant factor that could hinder relaxation, while the lack of facilities or a gymnasium was another that could hinder engaging in physical exercise.

Regarding the Hepatitis vaccine, lack of screening and the belief that they do not have hepatitis were major reasons identified by the proportion of the study population who haven't received the hepatitis vaccine. In a study conducted by Nasir *et al* in Lahore, Pakistan the main reason for hepatitis B non-vaccination among health care workers was high cost of vaccination, while the main reason for medical students was the belief that they were not at risk.[48] This shows the knowledge gap pertaining the role of vaccines even amongst hospital staff and the need to educate and promote the uptake of vaccines.

For the COVID-19 vaccine, the most dominant reason was lack of trust and disbelieve in the efficacy of the COVID-19 vaccine. As purported by Peterson et al in 2022, concerns about safety and efficacy, mistrust of government and institutions were among the reasons for COVID-19 hesitancy among health workers.[49]

Pregnancy was another factor that hindered the uptake of the COVID-19 vaccine agreeing with the findings from a study by Illaysu *et al* which revealed that distrust and infertility-related rumors were among the reasons for vaccine hesitancy in health workers in northern Nigeria.[50]

CONCLUSION

The study concluded that most hospital staff at tertiary health institutions in FCT, Nigeria engaged in voluntary medical check-ups and sought medical consultation when unwell, although poor health-seeking behaviour was observed regarding cancer screenings. Staff exhibited responsible health management, including healthy alcohol consumption and avoiding cigarettes and non-medical drug use. However, there was a lack of awareness about essential health indicators such as body mass index, waist circumference, and waist-to-hip ratio.

Regarding health promotion, the majority of staff actively participated in preventive measures, including receiving COVID-19 and hepatitis B vaccinations, engaging in regular exercise, and practicing relaxation through sleep, socializing, or taking annual leave. Despite these positive behaviours, there are areas where health awareness and practices could be improved to promote a healthier workforce.

ACKNOWLEDGMENT

The support of the hospital staff that facilitated the efficient data collection at the three health institutions is greatly appreciated. The authors declare no conflict of interest.

REFERENCES

1. Kasl SV, Cobb S (1966). Health behavior, illness behavior, and sick role behavior. *Archives of Environmental Health*, 12:246-66.
2. Clarke J, Macguire YO (1998). A study of self-care among Irish doctors. *Irish Medical Journal*, 91(5):175-6.
3. Adamu H, Yusuf A, Inalegwu CU, Sufi RA, Adamu AN (2018). Factors influencing health-seeking behaviour of health workers in a tertiary health institution in Sokoto, Northwest Nigeria. *Sahel Medical Journal*, 21:162-70.
4. Akande TM, Salaudeen AG (2008). Health-care seeking behaviour in Anyigba, North-Central, Nigeria. *Research Journal of Medical Science*, 2(2):47-51.
5. Ojong IN, Nsemo AD, Aji P (2020). Routine medical checkup knowledge, attitude and practice among health care workers in a tertiary health facility in Calabar, Cross River State, Nigeria. *Global Journal of Health Science*, 12(8):27-35.
6. Oguntoye OO, Yusuf M, Durowade KA (2017). Perception and practice of routine medical check-up by health workers at a tertiary health facility in South-West Nigeria. *International Journal of Medicine and Biomedical Research*, 6(3):151-162.
7. Nnadozie UU, Asouzu NC, Asouzu NC, Anekwu EM, Obayi NOK, Maduba CC, *et al*. (2021). Feeding behavior among health-care workers in a tertiary health institution, Southeast Nigeria. *Annals of African Medicine* 20(3):169.
8. Abadom EG, Otene CI (2022). Factors affecting routine medical screening among health workers in a tertiary hospital in Delta State. *Nigerian Journal of Clinical Practice* 25(6):951-9.
9. Yamane T. (1973). Statistics: An Introductory Analysis. 3rd edition. New York: Harper & Row.
10. Molenberg FJM, de Vries C, Burdorf A, Van Lenthe FJ (2021). A framework for exploring non-response patterns over time in health surveys. *BMC Medical Research Methodology* 21(37).
11. Skinner HA (1982). Drug Use Questionnaire (DAST-20). Center for Addiction and Mental Health, Toronto, Canada.
12. Pan American Health Organization (2013). Questionnaire on Knowledge, Attitudes, Behavior toward Dietary Salt and Health. Washington, D.C.: PAHO. Available at: https://www.paho.org/en/documents/questionnaire-knowledge-attitudes-behavior-toward-dietary-salt-and-health. Accessed July 28, 2023

13. Global Adult Tobacco Survey Collaborative Group (2011). Tobacco Questions for Surveys: A Subset of Key Questions from the Global Adult Tobacco Survey (GATS) 2nd Edition. Atlanta, GA: Center for Disease Control and Prevention.
14. Riley L, Guthold R, Cowan M, Savin S, Bhatti L, Armstrong T, Bonita R. (2016). The World Health Organization STEPwise approach to noncommunicable disease risk-factor surveillance: methods, challenges, and opportunities. *American Journal of Public Health*. 106 (1):74-8.
15. Omokhua HA, Ehizele AO (2020). Routine medical check among dental health workers in Edo State. *Nigerian Journal of Dental Research* 5(1):20-9.
16. Ogunlesi AO, Adelekan ML (1988). Nigerian primary health care workers: a pilot survey on attitude to mental health. *Bulletin of Royal College of Psychiatrists* 12(10):441-3.
17. American Academy of Family Physicians (2020). Clinical practice guideline: Management of blood cholesterol. Available at: https://www.aafp.org/family-physician/patient-care/clinical-recommendations/all-clinical-recommendations/cholesterol.html. Accessed July 29, 2023.
18. Bana S, Yakoob J, Jivany N, Faisal A, Jawed H, Awan S (2016). Understanding health seeking behavior of health care professionals in tertiary care hospitals in Pakistan. *Journal of Ayub Medical College Abbottabad* 28(3):545-9.
19. Babatunde OA, Fadare JO, Ojo OJ, Durowade KA, Atoyebi OA, Ajayi PO, Olaniyan T (2016). Self-medication among health workers in a tertiary institution in South-West Nigeria. *The Pan African Medical Journal* 24.
20. Ali AN, Kai JTTK, Keat CC, Dhanaraj SA (2012). Self-medication practices among health care professionals in a private university, Malaysia. *International Current Pharmaceutical Journal* 1(10):302-310.
21. Osamor PE, Owumi BE (2010). Complementary and alternative medicine in the management of hypertension in an urban Nigerian community. *BMC Complementary and Alternative Medicine*. 10:1-9.
22. ElOlemy AT, Radwan NM, Dawood W, Ali I, Fouda LM (2018). Complementary and alternative medicine use among health workers in Mid-Delta, Egypt. *Majmaah Journal Health Sciences*. 1(2):35-35.
23. Wada AS, Jatau AI, Bala AA, Haruna A, Isa AM, Safiyya AS, Sha'aban A (2019). Use of traditional medicines among pharmacists in Nigeria. *Complementary Therapies in Clinical Practice* 35:53-56.
24. Omotowo IB, Ndibuagu EO, Ezeoke U (2016). Cigarette smoking and attitudes concerning its control among healthcare workers in Enugu, South-East Nigeria. *Health* 8(11):1049.
25. Bandele EO, Osadiaye JA (1987). Attitudes and smoking habits of physicians at the Lagos University Teaching Hospital. *Journal of the National Medical Association* 79(4):430-2.
26. Huriah T, Rahman A (2021). Smoking behavior on health workers in Indonesia: A phenomenological study. In: 4th International Conference on Sustainable Innovation 2020-Health Science and Nursing (ICoSIHSN 2020). Available at: https://www.atlantis-press.com/proceedings/icosihsn-20/125951161 . Accessed May 25, 2023.
27. Saglam L, Bayraktar R, Kadioglu EE, Acemoglu H (2010). Smoking prevalence and the degree of nicotine dependence among healthcare workers at the Ataturk University Medical Facility. *The Eurasian Journal of Medicine* 42(2):74.
28. Obadeji A, Oluwole L, Dada M, Oshatimi M (2018). Alcohol use and psychological wellbeing of health workers in a Nigerian hospital: An exploratory study. *Malawi Medical Journal* 30(1):31-36.
29. Banwat ME, Haruna SA, Vongdip NG, Duru AK, Afolaranmi TO (2020). Assessment of the nutritional knowledge, eating habits, and nutritional statuses of healthcare workers in Jos, North-Central Nigeria. *Research Journal of Food Science and Nutrition* 3(2):15-22.
30. Kunene SH, Taukobong NP (2017). Dietary habits among health professionals working in a district hospital in KwaZulu-Natal, South Africa. *African Journal of Primary Health Care and Family Medicine* 9(1):1-5.
31. Karppanen H, Mervaala E (2006). Sodium intake and hypertension. *Progress Cardiovascular Diseases* 49(2):59-75.
32. Appel LJ, Brands MW, Daniels SR, Karanja N, Elmer PJ, Sacks FM; American Heart Association (2006). Dietary approaches to prevent and treat hypertension: A scientific statement from the American Heart Association. *Hypertension* 47(2):296-308.
33. Adaja TM, Idemudia JO (2018). Metabolic syndrome among healthcare workers in a tertiary hospital in South-South, Nigeria. *Asian Journal of Medicine and Health* 16(3):1-8.

34. Olaitan OO, Olanrewaju OI, Akinmoladun FO, Fadupin GT (2020). Central obesity and stress-predisposing factors to hypertension among health workers in Jos University Teaching Hospital, Plateau State, Nigeria. *Current Research in Diabetes & Obesity Journal* 12(4):111-6.
35. Aladeniyi I, Adeniyi OV, Fawole O, Adeolu M, Ter Goon D, Ajayi AI, Owolabi EO (2017). Pattern and correlates of obesity among public service workers in Ondo State, Nigeria: A cross-sectional study. *South African Family Practise*, 59(6):195-200.
36. Iwuala SO, Sekoni AO, Olamoyegun MA, Akanbi MA, Sabir AA, Ayankogbe OO (2015). Self-reported physical activity among health care professionals in South West Nigeria. *Nigerian Journal of Clinical Practice* 18(6):790-5.
37. Fritz T, Wändell P, Aberg H, Engfeldt P (2005). Walking for exercise-does three times per week influence risk factors in type 2 diabetes? *Diabetes Research and Clinical Practice* 68(3):213-219.
38. World Health Organization (2009). Preventing chronic diseases: A vital investment: *WHO Global Report*. Available at: https://iris.who.int/bitstream/handle/10665/43314/9241563001_eng.pdf?sequence=1&isAllowed=y . Accessed June 29, 2023. World Health Organization, Geneva Switzerland.
39. Agwu MO, Tiemo JA (2012). Problems and prospects of stress management in the Nigeria Liquefied Natural Gas construction project Bonny. *Journal of Emerging Trends in Economics and Management Sciences* 3(3):266-271.
40. Hardy S, Carson J, Thomas BL (1998). *Occupational stress: Personal and Professional Approaches.* 1st Edition. Cheltenham: Nelson Thornes.
41. Wang Q, Collet JP, Liu W, Lang X, Feng D, Ding F, Huang S (2023). Work-related stress and stress management practice among Chinese hospital staff working night shifts: A mixed-methods study. *International Journal of Stress Management.*
42. Sharma P, Davey A, Davey S, Shukla A, Shrivastava K, Bansal R (2014). Occupational stress among staff nurses: Controlling the risk to health. *Indian Journal Occupational and Environmental Medicine* 18(2):52.
43. Markus R, Ugochukwu C, Umar S, Haruna JJ, Haruna H (2022). Knowledge, attitude and uptake of COVID-19 vaccine among health care workers of University of Maiduguri Teaching Hospital, Nigeria. *AHRO Reviews of Nursing & Midwifery* 1(1). Available at: https://www.scienceopen.com/hosted-document?doi=10.36295/ARNM/2022/7600. Accessed May 13, 2023.
44. Ogoina DI, Pondei K, Adetunji B, Chima G, Isichei C, Gidado S (2014). Prevalence of hepatitis B vaccination among health care workers in Nigeria in 2011-12. *The International Journal of Occupational and Environmental Medicine* 5(1):51.
45. Omotowo IB, Ndibuagu EO, Ezeoke U (2016). Cigarette smoking and attitudes concerning its control among healthcare workers in Enugu, south-east, Nigeria. *Health.* 8(11):1049.
46. Fatusi AO, Fatusi OA, Esimai AO, Onayade AA, Ojo OS (2000). Acceptance of hepatitis B vaccine by workers in a Nigerian teaching hospital. *East African Medical Journal* 77(11):608-612. Available from: https://pubmed.ncbi.nlm.nih.gov/12862107/ . Accessed June 17, 2023.
47. Desmennu A, Ife-Ajayi OT, Arulogun O (2018). Experience and satisfaction with institutionalised medical check-up: case study of the staff of the College of Medicine, University of Ibadan, Nigeria. *African Journal of Medicine and Medical Sciences* 47:355-363.
48. Nasir K, Khan KA, Kadri WM, Salim S, Tufail K, Sheikh HZ, Ali SA (2000). Hepatitis B vaccination among health care workers and students of a medical college. *Journal of the Pakistan Medical Association* 50(7):239-43.
49. Peterson CJ, Lee B, Nugent K (2022). COVID-19 vaccination hesitancy among healthcare workers-a review. *Vaccines* 10(6):948.
50. Iliyasu Z, Umar AA, Abdullahi HM, Kwaku AA, Amole TG, Tsiga-Ahmed FI, Garba RM, Salihu HM, Aliyu MH (2021). They have produced a vaccine, but we doubt if COVID-19 exists: correlates of COVID-19 vaccine acceptability among adults in Kano, Nigeria. *Human Vaccines and Immunotherapeutics* 17(11):4057-4064. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC8828136/. Accessed June 7, 2023.