

Prevalence and determinants of sickness absenteeism among healthcare workers in a tertiary hospital in southwestern Nigeria

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ABSTRACT

Introduction: Sickness absenteeism is a global problem that affects almost all forms of workers, especially healthcare workers. This study assessed the prevalence and determinants of sickness absenteeism among healthcare workers in a tertiary hospital in Southwest, Nigeria.

Methods: An institutional-based, cross-sectional study was conducted among 360 healthcare workers in a Tertiary Hospital in Southwest, Nigeria from October to December 2022. A pre-tested interviewer-administered, semi-structured questionnaire was used to elicit information from the respondents who were selected using a stratified sampling technique. Bivariate analysis and binary logistic regression analysis were performed to identify the predictors of sickness absenteeism using SPSS version 25.0. The significance of associations was determined at p-value < 0.05.

Results: The mean age \pm SD of the respondents was 34 ± 7.15 years. The prevalence of sickness absenteeism among the health workers was 21.0%, while the causes of sickness absenteeism were malaria (51%), body pain (18%), and diarrhea (5%). Family obligation (AOR: 2.1, 95% CI: (1.20, 3.53), P=0.009) and the job type (AOR: 2.7, 95% CI: (1.05, 6.83), P=0.038) were the only predictors of sickness absenteeism.

Conclusion: About one-fifth of the respondents had one spell of sickness keeping them away from work due to illnesses such as malaria, diarrhea, and body pain. Preventive interventions should be instituted by stakeholders based on the identified factors to reduce the prevalence of sickness absenteeism among these populations.

Keywords: Determinants, Healthcare workers, Nigeria, Prevalence, Sickness absenteeism

Introduction

Work absenteeism occurs when an employee does not show up at work as expected which may be due to any cause.¹ Absence from work due to illness/disease is called sickness absenteeism (SA).¹ According to the International Labour Organization (ILO) sickness absenteeism results when an employee does not show up for work for a period of one or more days (or shifts) when

assigned for a day of work.² Globally, the ILO estimates that some 2.3 million individuals are affected by work-related accidents or diseases every year; this corresponds to over 6000 deaths every day.³ Sickness absence is an employee's indicator of individual health and well-being and his potency to work, hence it is a major public health issue.^{1,4,5} It is a growing global occupational

health problem that interferes with productivity, service quality, and the workload of other employees.^{4,6} Absenteeism is associated with extra costs, discontinuity of service, loss of productivity and other economic effects that result in increased expenditure to the employee, employer and the government at large.^{4,6} Absenteeism is a growing problem among the healthcare workforce.⁷ Healthcare workers (HCWs) form a critical element for the efficient delivery of quality health services to a community.⁸ HCWs are exposed to various health hazards, including the risk of contracting various infectious diseases, in their occupational settings.⁸ Health problems in HCWs could adversely impact productivity, work efficiency, patient safety and quality of patient care.⁸

Sickness absenteeism can be scheduled (planned leave and approved leave examples are annual leave and maternity leave) or unscheduled (unplanned leave examples are sick days, disability, or workers compensation leave and partial shift absences).^{9,10} It can also be short-term SA (<4 days absence) or long-term SA (≥ 4 day absence).¹ Short-term SA are caused by mild to moderate, less serious illnesses while more serious illness usually causes long-term SA.¹

Increasing rates of SA have been reported among health professionals because of the nature of the caring professions, adverse working conditions, long working hours, decreased autonomy and insufficient support from their colleagues and supervisors.¹¹ Estimates suggest that around 7% of healthcare workers experience at least one sick leave episode per week.¹² Hence the study aimed to investigate the prevalence and determinants of sickness absenteeism among healthcare workers in a tertiary hospital in Southwestern Nigeria.

Methods

An institutional-based, cross-sectional study design was done among healthcare workers in Ekiti State University Teaching Hospital (EKSUTH), Ado-Ekiti, Nigeria over two months (October to December 2022). The Hospital had the following departments: Community Medicine, Internal Medicine, Surgery, Obstetrics and

Gynecology, Pediatrics, Dental, Ear, Nose and Throat, Mental Health, Family Medicine, Anesthesiology, Physiotherapy, Accident and Emergency, Radiology, Ophthalmology, Nursing, Laboratory, Maintenance among others. The Hospital during the study period comprised about 1,350 healthcare workers which included 205 Doctors, 320 Nurses and 50 Laboratory Scientists, 146 health assistants, 56 administrative officers and others.

The study population was the HCWs in Ekiti State University Teaching Hospital, Ado-Ekiti (EKSUTH). The study included all HCWs (6 Strata: Doctors, Nurses, Laboratory scientists, Health Assistants, Administrative Officers and others) aged 18 years and above, who gave informed consent and were gainfully employed and working for at least 6 months at EKSUTH, Ado Ekiti. However, the study excluded HCWs who were on annual leave or those posted outside the Hospital during the period of study.

The sample size was determined using Fisher's method,

$$n = Z^2pq/d^2$$

where,

n = minimum sample size;

Z = standard normal deviate at 95% CI = 1.96;

p = Prevalence of sickness absenteeism (54.6%) among health workers from a previous study done in Benin City, Nigeria;¹³

q = complimentary probability = 1- p ;

d = acceptable margin of error estimated (5%)

$n = 380.9 \approx 381$

For a population less than 10,000, final sample estimate will be calculated using

$$N_1 = n/(1+n/N)^{14}$$

where

N_1 = desired sample size when pop < 10,000,

n = desired sample size when pop >10,000,

N = estimated population size = 1350

$N_1 = 381/(1+381/1350) = 297.19 \approx 300$

Considering a non-response rate of 10%, a sample size of 330 was arrived at, however, 360 healthcare workers were sampled for the study.

The sampling technique adopted was a stratified

sampling technique in which the HCWs were grouped into 6 strata, and a proportional allocation was used to determine the number of participants chosen from each stratum. At the level of the stratum, a list of HCWs in different groups was collected from the Hospital registry and then a systematic random sampling was used to select participants. Hence the sample interval was derived from the total population of the group divided by the desired sample size. Afterward, the first respondent was selected by simple random sampling using the table of random numbers, and using the sample interval the subsequent participant was chosen till each desired sample size was reached for each stratum.

A pretested, 46-item, semi-structured interviewer-administered, adapted questionnaire,^{5,15,16} was used with sections 1-4 which included socio-demographic characteristics, the prevalence of sickness absenteeism, causes of sickness absenteeism and workplace factors respectively. Questions on the prevalence of sickness absenteeism in the past 6 months were asked to reduce the recall bias. A reliability test (Cronbach alpha = 0.72) and face and content validity were done by an occupational health expert. Six trained research assistants distributed and collected the questionnaire from the selected eligible participants.

The study variables were independent and dependent. Independent variables include socio-demographic characteristics (age, gender, marital status, health status, and educational level) and workplace /institutional factors (routine of work, job satisfaction, health worker autonomy, workload, employment sector, facility location, teamwork, and size of the organization, absence policy, accommodation, remuneration, and the work conditions) while the prevalence of sickness absenteeism among health workers and the type of diseases causing sickness absenteeism (SA) were the dependent variables.

Data collected was checked on the field by selected supervisors to avoid missing or incomplete data. Data entry and analysis was done using SPSS version 25.0. Descriptive analysis

was done by presenting data in frequency tables, charts, percentages, and summary statistics. Bivariate analysis (Chi-square test) and binary logistic regression analysis were performed to identify the predictors of sickness absenteeism. Odds ratio with 95% CI was generated and the significance of associations was determined at p -value ≤ 0.05 .

The ethical clearance was obtained from the Research Ethics Committee (EKSUTH/A67/2022/10/003), and the respondents were informed about the research objective and protocols. Both written and verbal informed consent were taken while confidentiality was maintained.

Results

There was a total of 360 participants, half of the respondents (50%) were aged between 30-39 years, with a mean age of 34 ± 7.15 years. The majority of the respondents (59.7%) were female, Christians (87.2%), married (65.8%) and had tertiary education (74.2%) and about two-thirds (62.5%) of the respondents had 1-4 children. Regarding the other personal factors relating to sickness absenteeism about two-thirds of the respondents (65.6%) have had minor physical ailments in the past, while only a few (6.9%) have had chronic conditions. About two-thirds of the respondents (69.2%) have families to look after. About half of the respondents (46.4%) had high family obligations. Furthermore, about one-third of the respondents (34.4%) had high psychological stress while about half (48.3%) had high financial stress.

In addition, the occupational factors of the respondents revealed that about two-thirds of the respondents (64.6%) were permanent staff while the remaining one-third (36.4%) were casual staff. Furthermore, the respondents were a mix of different occupations- doctors (15%), nurses (20.3%), health assistants (11.1%), laboratory technicians (8.3%), administrative officers (4.4%) and others (40%) included tailor, pharmacist, plumbers, engineer, and electrician. About half of the respondents (55.6%) had worked for 1-5 years and three-quarters of participants (76.1%) worked

1-8 hours per day. The majority of the respondents have had both pre-employment (77.8%) and period medical examination (59.4%) done in the past. Also, about three-fourths (72.8%) of the respondents had shift duties or call duties however, slightly above half of the respondents (56.4%) had flexible work schedules.

As shown in Figure 1, the prevalence of sickness absenteeism among the respondents was 21%. A large proportion of the respondents were absent from work through illnesses such as malaria (51%), body pain (18%), and diarrhea (5%) as shown in Figure 2.

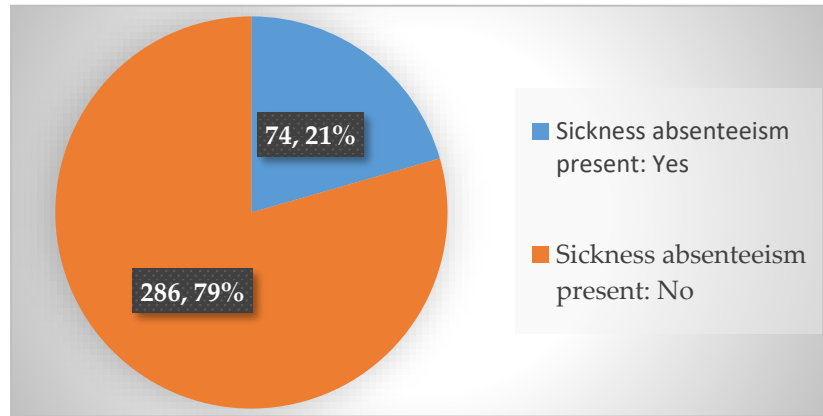


Figure 1: Prevalence of sickness absenteeism among tertiary health workers in Southwestern, Nigeria (n=360)

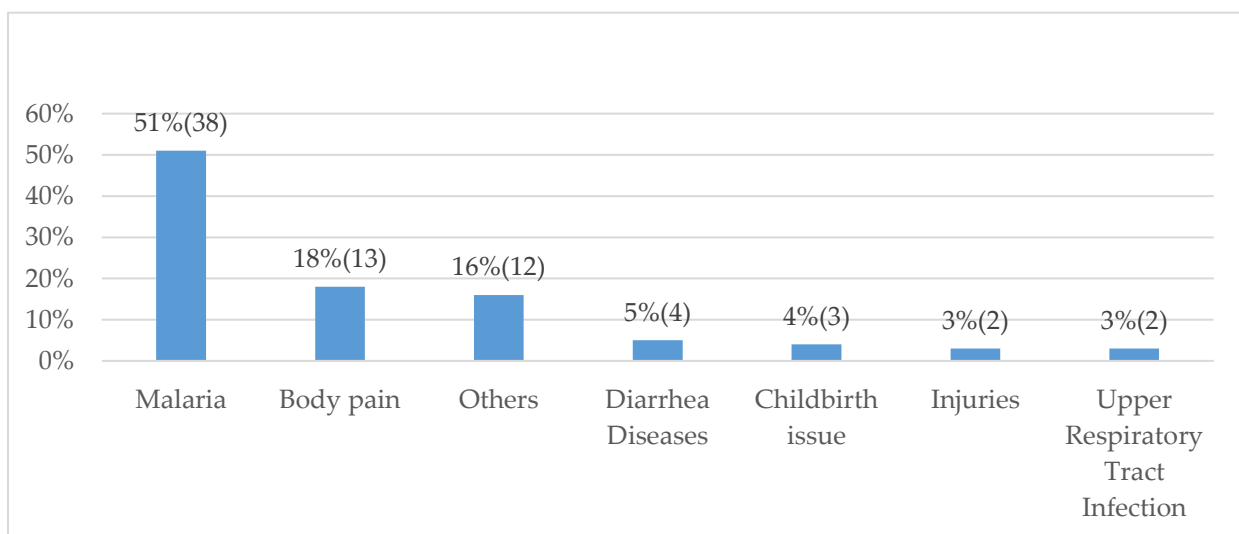


Figure 2: Common causes of sickness absenteeism among tertiary health workers in Southwestern Nigeria (n=74).

Table 1 shows the relationship between the socio-demographic characteristics of the study participants and the prevalence of sickness absenteeism. Family obligation was the only statistically significant factor ($p=0.011$), associated with sickness absenteeism, while the other factors were not statistically significant.

The bivariate analysis between the occupational factors and the prevalence of sickness absenteeism was revealed in Table 2. The only statistically significant factor was job type with $p=0.011$. However, all other factors were not statistically significant.

Table 1: The relationship between socio-demographic/personal factors and prevalence of sickness absenteeism among tertiary healthcare workers in Southwestern Nigeria (n=360)

Variable (n=360)	Yes (n=74)	No (n=286)	Total (%)	X ²	p-value
Age group (in years)					
20-29	22(20.4)	86(79.6)	108(30.0)	0.528*	0.913
30-39	38(21.1)	142(78.9)	180(50.0)		
40-49	13(20.6)	50(79.4)	63(17.5)		
50 and above	1(11.1)	8(88.9)	9(2.5)		
Gender					
Male	31(21.4)	114(78.6)	145(40.3)	0.101	0.751
Female	43(20.0)	172(80.0)	215(59.7)		
Marital status					
Single	20(16.8)	99(83.2)	119(33.1)	3.426*	0.180
Married	52(21.9)	185(78.1)	237(65.8)		
Separated/Divorced	2(50.0)	2(50.0)	4(1.1)		
Highest level of Education					
Primary	0(0.0)	1(100.0)	1(0.3)	3.595*	0.464
Secondary	14(23.7)	45(76.3)	59(16.4)		
Tertiary	50(18.7)	217(81.3)	267(74.2)		
Post-graduate	9(29.0)	22(71.0)	31(8.6)		
Others	1(50.0)	1(50.0)	2(0.5)		
Number of children					
0	23(17.4)	109(82.6)	132(36.7)	2.071*	0.558
1-2	29(24.2)	91(75.8)	120(33.3)		
≥3	22(20.4)	86(79.6)	108(30.0)		
Family obligation					
High	44(26.3)	123(73.7)	167(46.4)	6.399	0.011**
Low	30(15.5)	163(84.5)	193(53.6)		
Working two jobs					
Yes	18(25.0)	54(75.0)	72(20.0)	1.089	0.297
No	56(19.4)	232(80.6)	288(80.0)		
Psychological stress					
Yes	31(25.0)	93(75.0)	124(34.4)	2.288	0.130
No	43(18.2)	193(81.8)	236(65.6)		
Financial stress					
Yes	39(22.4)	135(77.6)	174(48.3)	0.712	0.399
No	35(18.8)	151(81.2)	186(51.7)		

*LR=likelihood ratio, **Statistically significant

Table 2: The relationship between occupational factors and prevalence of sickness absenteeism among tertiary healthcare workers in Southwestern, Nigeria (n=360)

Variable (n=360)	Yes(n=74)	No (n=286)	Total (%)	X ²	p-value
Job type					
Doctors	17(31.5)	37(68.5)	54(15.0)	14.931*	0.011**
Nurses	6(8.2)	67(91.8)	73(20.3)		
Health Assistant	10(25.0)	30(75.0)	40(11.1)		
Laboratory technicians	10(33.3)	20(66.7)	30(8.3)		
Administrative officers	2(12.5)	14(87.5)	16(4.5)		
Others	29(19.7)	118(80.3)	147(40.8)		
Number of Years of service					
1-5	45(22.5)	155(77.5)	200(55.6)	5.950*	0.203
6-20	29(19.0)	124(81.0)	153(42.5)		
>20	0(0.0)	7(100.0)	7(1.9)		
Working hour per day					
1- 8 Years	57(20.8)	217(79.2)	274(76.1)	0.043	0.836
Above 8 Years	17(19.8)	69(80.2)	86(23.9)		
Pre-employment check-ups					
Yes	55(19.6)	225(80.4)	280(77.8)	0.643	0.423
No	19(23.8)	61(76.3)	80(22.2)		
Periodic medical check-up					
Yes	44(20.6)	170(79.4)	214(59.4)	0.000	0.998
No	30(20.5)	116(79.5)	146(40.6)		
Shift duty or call duty					
Yes	60(22.9)	202(77.1)	262(72.8)	3.242	0.072
No	14(14.3)	84(85.7)	98(27.2)		
Work schedule					
Flexible	38(18.7)	165(81.3)	203(56.4)	0.961	0.327
Rigid	36(22.9)	121(77.1)	157(43.6)		
Workload at work					
High	27(22.3)	94(77.7)	121(33.6)	2.988*	0.224
Moderate	43(18.8)	186(81.2)	229(63.6)		
Low	4(40.0)	6(60.0)	10(2.8)		
Physical working environment					
Supportive	60(22.1)	212(77.9)	272(75.6)	1.540	0.215
Unsupportive	14(15.9)	74(84.1)	88(24.4)		

*LR=likelihood ratio, **Statistically significant

Table 3 revealed that among the job types, nurses were the only significant predictors of sickness absenteeism (AOR: 2.7, 95% CI: (1.05, 6.83), P=0.038). Sickness absenteeism was 2.7 times higher among nurses than any other tertiary HCWs.

Similarly, high family obligation was also a significant predictor of sickness absenteeism (AOR: 2.1, 95% CI: (1.20, 3.53), P=0.009). HCWs who had high family obligations were 2.1 times more likely to experience sickness absenteeism than other HCWs.

Table 3: Binary logistic regression analysis of the determinants of sickness absenteeism among tertiary healthcare workers

Factors	Adjusted OR (95% Confidence Interval)	p-value
Job type		
Doctors	0.5(0.26-1.06)	0.074
Nurses	2.7(1.05-6.83)	0.038**
Health Assistant	0.8(0.35-1.84)	0.600
Laboratory technicians	0.4(0.18-1.02)	0.056
Administrative officers	1.8(0.38-8.30)	0.471
Others	1	
Family obligation		
High	2.1(1.20-3.53)	0.009**
Low	1	

**Statistically significant

Discussion

This study assessed the prevalence and determinants of sickness absenteeism among HCWs, so that preventive intervention may be recommended. A large proportion of the respondents had tertiary education which showed that the respondents were enlightened enough to contribute their informed opinion to the study.

This study revealed that about one-fifth of the respondents (21.0%) experienced sickness absenteeism. This finding is slightly higher than that of a study by Al-Shammari, et al., in Saudi Arabia which revealed sickness absenteeism prevalence of 16% and 9% for both contract and non-contract healthcare workers respectively.¹⁷ Although, the two studies used a cross-sectional study design, the prevalence in this present study was over 6 months as compared to the 2 years used by the other study.¹⁷ However, a study by Lar, et al., in Plateaus State, Northern Nigeria revealed a sickness absenteeism prevalence of

28.7% among healthcare workers.¹⁸ Additionally, another study carried out in a tertiary hospital in Ethiopia showed that the majority, 52.6% of the workers were absent during the preceding year.¹⁹ The low absenteeism prevalence in this present study relative to these studies may be because healthcare workers are better informed about how to maintain their health and are therefore less likely to fall ill. Working in a health institution also allows for early treatment of diseases before they become severe enough to prevent one from working. This might also be due to the issue of underreporting due to fears of administrative sanctions. There is usually an internal arrangement among these workers in which they cover up for each other when one is absent.

The main causes of sickness absenteeism in this study were malaria (51%), body pain (18%), diarrhea disease (5%) and childbirth issues (4%). This finding was consistent with studies by Mekonnen, et al.,¹⁹ and Johnson, et al.²⁰ which

showed that the causes of spells of sickness absenteeism were malaria, musculoskeletal issues, childbirth issues/maternity leave and diarrhea.^{19,20} These similarities may have occurred because the study areas were similar (sub-Saharan African countries). In contrast, a study carried out in Benin¹³ among hospital staff had a different finding which revealed that family problems accounted for 18.7%, attendance at examinations 12.7%, marriages and burials 5.2% and transportation problems 1.2% of absenteeism within the previous year.¹³ Similarly, research carried out in Jos State Specialist Hospital revealed that family responsibilities, attending to sick family members, and working long hours were the major factors that contributed to absenteeism.¹⁸ In our study, illness was the major contributory factor to absence from the workplace, which affected employees' ability to work effectively. Generally, the worker while playing the sick role is required to take time off to rest and receive treatment.

In this study, high family obligation was a significant predictor of sickness absenteeism prevalence as it showed a significant positive relationship. This might be due to the workload of providing basic needs (such as food, housing, clothing), high financial stress with increasing family dependents also coupled with high workload demand at work, all of which could result in sickness/injury and consequently absence from work. This is similar to a study conducted in a State Hospital in Plateau State in which parental responsibilities showed a positive correlation with sickness absenteeism.¹⁸ In contrast, a study carried out in South Africa, revealed there was no significant relationship between family obligation and sickness absenteeism.²¹ Most studies reported that SA was more prevalent in females than males.^{19,22,23} However, our study revealed no significant relationship between gender and SA prevalence which was not statistically significant. This was similar to a study done in Tehran and Bangladesh^{1,16} which showed that among health workers no significant difference in SA rates

between men and women.

In this study, job type showed a positive significant relationship with sickness absenteeism. The nurses were more likely to be absent from work than other HCWs which could have resulted from the complexity and stressful nature of their work. This can result in illnesses/diseases, and consequently absence from work which might be due to extra responsibility for relatively more educated and skilled workers in an era of brain drain, as also suggested by other studies.^{1,22} Similarly, Mollazadeh, et al., revealed that job type was the only factor that had a significant correlation with sickness absenteeism.¹ Similarly, Kivimaki, et al., found that physicians had lower rates of short-term and long-term sickness absence compared to the nurses in Finland.²⁴ In contrast, a study in the United Kingdom by Ritchie, et al., reported that medical staff and auxiliary staff had the highest rates and duration of absence.²²

Recall bias could have occurred while taking the history of sickness absenteeism, however, the period of recall was shortened to six months to reduce it.

Conclusions

This study concluded that about one-fifth of the respondents had one spell of sickness due to illnesses such as malaria, diarrhea, and body pains, which were the most common cause of sickness absenteeism from work. Furthermore, the two significant factors associated with sickness absenteeism were high family obligations and job type (commoner among nurses). Based on the results of this study, it is essential to proffer the following recommendations to foster positive change toward sickness absenteeism among health workers and hospital management. Regular assessment of absenteeism and its prevention should be carried out by hospital management. Due attention must be accorded to certain occupations (nurses) in terms of the prevention and early treatment of sickness and injuries.

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