

ASSESSMENT OF ATTITUDE AND SAFETY PRACTICE OF HEALTHCARE WORKERS ON OCCUPATIONAL HAZARDS IN TEACHING HOSPITALS IN NIGERIA

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Abstract

This study assessed the attitudes and safety practices of healthcare workers toward occupational hazards in teaching hospitals in Nigeria. A descriptive survey research design was used to examine the attitudes of healthcare workers across selected teaching hospitals, with a total population of 25,550 and a sample of 348 respondents selected through a multi-stage sampling technique. Data were collected using a structured questionnaire on attitudes toward occupational hazards and safety practices. The findings revealed that healthcare workers demonstrated a positive attitude toward occupational hazards, with a mean score significantly higher than the decision mean ($t = 99.791, p < 0.05$). Similarly, healthcare workers exhibited a positive attitude toward safety practices, as indicated by a significant test result ($t = 121.745, p < 0.05$). These results suggest that, despite exposure to various workplace risks, healthcare workers in Nigerian teaching hospitals maintain favourable attitudes toward occupational safety and hazard prevention. The study concluded that positive attitudes toward occupational hazards and safety practices exist among healthcare workers, though continued reinforcement is essential. It recommended strengthening institutional safety policies, continuous training, and health education initiatives to sustain and improve proactive safety behaviours among healthcare workers in teaching hospitals across Nigeria.

Key Words: Assessment, Attitudes, Safety Practice, Healthcare Workers, and Occupational Hazards.

Introduction

The attitude of healthcare workers towards occupational hazards significantly influences their behaviour, decision-making, and overall well-being in the workplace (Daniel, Utuh, & Nwaichi, 2020). Understanding these attitudes is crucial for creating effective interventions, promoting a culture of safety, and enhancing the overall work environment within healthcare settings. The attitude healthcare workers hold towards occupational hazards significantly impacts their behavior, workplace culture, and overall safety (Daniel, Utuh, & Nwaichi, 2020). By understanding the factors influencing attitudes and implementing strategies to foster positive perceptions, healthcare organizations can cultivate a culture that prioritizes safety, enhances well-being, and ensures optimal outcomes for both health workers and patients. Efstathiou, Spiegel, and Shipley (2021) reported that health care workers (HCWs') perception of the severity and likelihood of occupational hazards plays a vital role in shaping their attitude. Those who perceive higher risks are more likely to adopt precautionary measures. Direct experiences, such as personal exposure to hazards or witnessing incidents, can shape HCWs' attitudes, making them more vigilant or cautious. The quality and frequency of training, along with the level of awareness about occupational hazards, influence HCWs' understanding and attitude towards workplace safety. The prevailing culture within healthcare institutions, including leadership support, peer influence, and the perceived value of safety, can either reinforce positive attitudes or perpetuate complacency towards hazards.

According to Efstathiou, Spiegel, and Shipley (2021), health workers with a proactive attitude are proactive in identifying potential hazards, advocating for safety measures, and actively participating in safety initiatives. They view safety as a priority and are committed to minimizing risks. Health workers with a reactive attitude may acknowledge hazards but not take proactive measures unless prompted by an incident or directive. Their response is often triggered by immediate concerns rather than a proactive approach to prevention. Some health workers may develop a complacent attitude due to routine exposure to hazards, leading to a lack of urgency or diligence in adhering to safety protocols. This attitude can pose significant risks if not addressed timely. Attitudes towards occupational hazards influence health workers behavior, including adherence to safety protocols, utilization of Personal Protective Equipment (PPE), and compliance with safety guidelines. The collective attitudes of health workers contribute to the overall culture within healthcare settings. Positive attitudes foster a culture that prioritizes safety, while negative or complacent attitudes can undermine safety initiatives and increase vulnerability to hazards. Attitudes towards occupational hazards can impact health workers to health outcomes, with proactive attitudes potentially reducing the incidence of occupational injuries, illnesses, and stress-related conditions (Omar & Mohd-Nordin, 2021).

Statement of the Problem

It was observed by the researcher that health workers in teaching hospitals in Nigeria encounter numerous occupational hazards. These include exposure to blood-borne pathogens from body fluids and needle-stick injuries, as well as potential exposure to diseases like tuberculosis. Additionally, they are at risk of accidents such as slips, trips, and confrontations with violent patients or their relatives. Ergonomic challenges like heavy lifting and psychosocial stresses associated with shift work and job-related stress further compound their risks. Notably, needle-stick or sharps injuries are prevalent among healthcare workers across several Nigerian states, leading to a significant number of hepatitis C, hepatitis B, and HIV infections (Appiagyei, Nakua, Donkor, & Mock, 2021).

Over the past three decades, healthcare institutions worldwide have witnessed a significant increase in the scale, complexity, and diversity of practices, as well as the provision of equipment necessary for high-risk clinical procedures. In Nigeria, more than 1 million individuals serve as health workers in teaching hospitals. These health workers are expected to leverage the advanced equipment and facilities available in their institutions, including items like gloves, face masks, and personal hygiene equipment, to safeguard themselves from potential health risks associated with their work environments. However, their exposure to a myriad of hazards in varying degrees continues to pose challenges to their well-being (Aluko, Adebayo, Adebisi, Ewegbemi, Abidoye, & Popoola, 2016). Regrettably, despite management's awareness of these pressing issues, the occupational health and safety of healthcare workers remain inconsistent and, in certain cases, entirely overlooked (Orji, Fasubaa, Onwudiegwu, Dare, & Ogunniyi, 2018). It is on these premises that the researcher investigated the attitudes, and practices of occupational hazards and safety among healthcare workers in teaching hospitals in Nigeria.

Objectives of the Study

The objectives of this study is to assess:

1. The attitudes of healthcare workers towards occupational hazards in teaching hospitals of Nigeria.
2. The attitudes of healthcare workers towards safety practice in teaching hospitals of Nigeria.

Research Questions

The following research questions were raised to assist in the carry out the study:

1. What are the differences in the attitudes of healthcare workers towards occupational hazards in teaching hospitals in Nigeria?
2. What are the differences in the attitudes of healthcare workers towards safety practices in teaching hospitals in Nigeria?

Hypotheses

To achieve the objectives of this study the following hypotheses were formulated to guide the study:

HO₁: There is no significant difference in the attitudes of healthcare workers towards occupational hazards in teaching hospitals in Nigeria.

HO₂: There is no significant difference in the attitudes of healthcare workers towards safety practices in teaching hospitals in Nigeria.

Methodology

A descriptive research design of the survey type was employed for this study. Descriptive research is a type of research that describes a population, situation, or phenomenon as it exists, focusing on answering the how, what, when, and where questions of a research problem rather than the *why* (Gebieral, 2022). This design was chosen to enable the researcher to assess and describe the attitudes towards occupational hazards and safety practices among healthcare workers in teaching hospitals in Nigeria, with the aim of making generalizations within the study area.

The population of the study comprised twenty-five thousand, five hundred and fifty (25,550) healthcare workers in teaching hospitals across Nigeria (Federal Ministry of Health, 2023). The sample size for the study was three hundred and forty-eight (348) healthcare workers selected from the teaching hospitals. The sampling procedure adopted for the study was a multi-stage sampling technique. Gupta (2011) described multi-stage sampling as a sampling approach carried out in several stages. Similarly, multi-stage sampling involves sequential phases that typically include more than one sampling method (Njodi & Bwala, 2004; Alchemer, 2021). Therefore, the stages for sampling in this study were as follows:

Step I: Teaching hospitals in Nigeria are clustered in six (6) geopolitical zones in Nigeria, namely: North-Central, North-East, North-West, South-East, South-South, and South-West.

Step II: A simple random sampling technique was used to select one (1) teaching hospital each from six (6) geopolitical zones in Nigeria, making up a total of six (6) teaching hospitals for the study. This was done by involving all the names of the teaching hospitals in the six (6) geopolitical zones in Nigeria being written down on a piece of paper, put into a container, and mixed vigorously. Then chits are picked out of the container to select the sample group.

Step III: A simple random sampling technique was also used to select five (5) Departments from each selected teaching hospital; these include: Medicine, Surgery, Anaesthesia, Nursing, Laboratory, Physiotherapy, and Pharmacy.

Stage IV: The proportionate sampling technique was used to select ten percent (10%) of the respondents as the sample size from each of the five (5) most hazardous Departments in the randomly selected teaching hospitals. Bullen (2021) stated that a good maximum sample size is usually around 10% of the population, as long as this does not exceed 1000. The formula is given as: $N/100 \times 10$, where N=population.

Stage V: The respondents in each healthcare worker's department were selected using the availability sampling technique. The availability sampling technique (also known as convenience sampling) is a specific type of non-probability sampling method that relies on data

collection from population members who are conveniently available to participate in the study (Boxill, Chambers, & Wint, 2014).

A researcher designed structured questionnaire titled “Attitudes towards Occupational Hazards and Safety Practices among Healthcare Workers Questionnaire” (AOHSPHWQ) was used to obtain qualitative data from the selected respondents. The questionnaire consists of two sections (sections A& B); section A consists of 10-items on attitude of occupational hazards among healthcare workers of teaching hospitals in Nigeria; and section B consists of 10-items on attitude on safety practices among healthcare workers of teaching hospitals in Nigeria. A four-point modified Likert scale was scored as follows: strongly Agreed, 4 points. Agreed 3 points, disagreed 2 points, and strongly disagreed 1 point at a decision mean of 2.50. Therefore, any response with a mean score of 2.5 and above was regarded as having aware of whereas any response with a mean score of less than 2.5 is viewed as not having aware of occupational hazards and safety practices in teaching hospitals in Nigeria.

Seven hundred and eighty-seven (348) copies of the questionnaire were administered to the healthcare workers of a teaching hospital in Nigeria, with the help of four (4) research assistants, who were fully briefed on how to administer and collect the questionnaire from the respondents. Questionnaire forms were administered to healthcare workers in their respective departments. Moreover, the research assistant helps by reading and interpreting the questions in the questionnaire so that their responses tick appropriately. The instrument was collected back through the research assistants, and the exercise lasted for three (3) weeks. An inferential statistic of one sample t-test to test the following null-hypotheses on: Attitudes and practice of occupational hazards among healthcare workers in teaching hospitals in Nigeria;

Results

Hypothesis One: There are no significant difference in attitudes of healthcare workers towards occupational hazards in teaching hospital of Nigeria.

Table 1: Summary of one sample t-test on attitudes of healthcare workers towards occupational hazards in teaching hospital of Nigeria.

Variable	N	Mean	SD	SE	df	t	p
Attitudes towards Oc. Hazard	340	32.14	5.92	0.32	339	99.791	.000
Test mean	340	2.50					

t=99.791, df: 339; P<0.05

Table 1 revealed the summary of one sample t-test on the significant attitudes of healthcare workers towards occupational hazards in a teaching hospital in Nigeria. The table showed the calculated mean of 32.14, which is greater than the decision mean of 2.50. This means that healthcare workers in teaching hospitals in Nigeria have a positive attitude towards occupational hazards. The statistical computation of the sample t-test also indicated that there were significant attitudes of healthcare workers towards occupational hazards in teaching hospitals in Nigeria (t = 99.791, df = 339; P<0.05). Therefore, the hypothesis tested is rejected, because the p-value of .000 is less than the alpha-value of 0.05.

Hypothesis Two: There are no significant difference in attitudes of healthcare workers towards safety practice in teaching hospital of Nigeria.

Table 2: Summary of one sample t-test on attitudes of healthcare workers towards safety practice in teaching hospital of Nigeria.

Variable	N	Mean	SD	SE	df	t	p
Attitudes towards safety practice	340	32.66	4.95	0.26	339	121.745	.000
Test mean	340	2.50					

$t=121.745$, $df: 339$; $P<0.05$

Table 2 revealed the summary of one sample t-test on the significant attitudes of healthcare workers towards safety practices in teaching hospitals in Nigeria. The table showed the calculated mean of 32.94, which is greater than the decision mean of 2.50. This means that healthcare workers in teaching hospitals in Nigeria have a positive attitude towards safety practices. The statistical computation of the sample t-test also indicated that there were significant attitudes of healthcare workers towards safety practice in teaching hospitals in Nigeria ($t = 121.745$, $df = 339$; $P<0.05$). Therefore, the hypothesis tested is rejected, because the p-value of .000 is less than the alpha-value of 0.05.

Discussion of Findings

The findings of this study indicated that there were significant attitudes of healthcare workers towards occupational hazards in teaching hospitals in Nigeria ($t = 99.791$, $df = 339$; $P<0.05$). This finding is in agreement with the study of Erah, Chijioke, Uwaibi, and Okhawere (2020) on occupational hazards and safety measures among healthcare workers in a tertiary health institution in southern Nigeria. The results of the study indicated that most respondents (96.93%) had a positive attitude towards occupational hazards, with a few of them having poor safety measures to avoid injury in the workplace. It was concluded that the majority of health care workers, with the exception of medical doctors, have poor knowledge of occupational hazards and poor safety measures, though they may have a positive attitude. This finding is not in line with the study conducted by Folami and Olowe (2020) on the awareness, perception, and attitude of nurses towards the prevention of occupational health hazards in Lagos University Teaching Hospital. The result showed that the majority of respondents, 85 (93.4%), stated that poor compliance with universal precautions exposes nurses to occupational hazards. Lifting heavy objects and equipment is a factor that contributes to the occurrence of occupational health hazards among nurses (83, 91.2%). Most of the nurses had good awareness and a positive attitude towards the prevention of occupational health hazards.

The findings of this study show that there were significant attitudes of healthcare workers towards safety practices in teaching hospitals in Nigeria ($t = 121.745$, $df = 339$; $P<0.05$). This finding is in agreement with the study conducted by Aluko, Adebayo, Adebisi, and Egbemi (2018), which carried out a study on knowledge, attitudes, and perceptions of occupational hazards and safety practices among Nigerian healthcare workers. The results showed that over half of the respondents identified recapping used needles as a risky practice (70%) and recognized that effective hand washing prior to and after every clinical procedure prevents cross-infection (100%). Also, most respondents (96.2%) believed they were at risk of occupational hazards, while about two-thirds perceived the risk as high. Only 52.1% "always" complied with standard procedures, and most (93.8%) practice safe disposal of sharps, while those that did not (40%) generally implicated a lack of basic safety equipment. This finding is also in line with the study conducted by Gebreeyessus (2022) to determine knowledge, attitude, and practices on occupational health and safety principles among cleaners: the case of Tikur Anbassa Specialised Referral Hospital, Addis Ababa, Ethiopia. The result of the study showed that all cleaners had a favorable attitude towards safety principles. However, the knowledge of cleaners on occupational safety was so poor to the point that all of them did not even know the meaning of nosocomial infection. Almost all of the cleaners, 69 (98.6%), had not taken any reemployment training by the time of the interview. All of the cleaners' practices were not fully compliant with the universal precaution principles, and the major proportion, 37 (53%), of them had instances of needle-stick injuries ranging from one to four times. Furthermore, the waste in the hospital was located indiscriminately and in an uncovered container.

Conclusion

Based on the findings of this study, the following conclusions was drawn that healthcare workers at a teaching hospital in Nigeria have positive attitudes towards occupational hazards and safety practices.

Recommendations

1. Teaching hospitals should implement and enforce strict regulations to cultivate a conscientious attitude towards occupational hazards and safety protocols among healthcare workers across Nigeria. Such proactive measures will foster and elevate a positive mindset regarding occupational safety and best practices.
2. Health educators, in collaboration with non-governmental organizations and teaching hospital management, should arrange in-house health education sessions centered on occupational hazards and safety protocols. This endeavor seeks to foster and maintain a favorable attitude towards occupational safety practices among healthcare in teaching hospitals in Nigeria.

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