



## OCCUPATIONAL HEALTH AND SAFETY PRACTICES AMONG HEALTHCARE WORKERS IN SELECTED HEALTH FACILITIES IN DELTA SOUTH SENATORIAL DISTRICT

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### Abstract

The healthcare workers working in healthcare facilities are one group of workers that are highly exposed to occupational and safety hazards in their jobs. This study was designed that find out the occupational health and safety practices of health care workers in HCFs in Delta South Senatorial District. The study adopted the descriptive survey research design. The population of the study comprised 2500 from which a Sample of 96 (43 males and 53 females) were randomly selected from three major healthcare facilities (General Hospitals and health centres) from tress major towns in Delta South Senatorial District Area (one from each senatorial district). The purposive and simple random sampling techniques were applied for the sample selection. Structured questions on a 4-point scale of "always, sometimes, occasional and never) was used as an instrument for data collection. Content and face validity methods were adopted to validate the Instrument used. The reliability of the instrument was established at 0.77. Data collected were analyzed with percentage, mean and t-tests. Findings from the study revealed that the level of physical health practices among the health care workers was high, but the level no social health, mental health and safety practices was poor. It was revealed that putting on hand gloves for the clinical procedure, wearing neat clothes while handling patients and safe handling and disposal of sharp objects (physical health); wearing nose/face ask when on duty and quarrelling with patients who disobey clinical protocol /procedures, ensuring floor are dry before walking and working on it and avoid talking when carrying out routine clinical procedures were common health and safety practices often carried out among health care workers in health care facilities in Delta South Senatorial District. A conclusion was drawn and recommendations were made amongst others that workplace health and safety practices should be intensified as they contribute towards workers' commitment to safety policy (ies) and reduce the rate of workers' exposure to occupational hazards, injuries and accidents.

**Keywords:** Occupational Health and Safety, Practices, Healthcare, Workers, Facilities, Senatorial District

### Introduction

The workforce in the healthcare industry is among the largest in the world, making up more than 12% of all working people worldwide (Goniewicz et al., 2012). Nigeria boasts one of the biggest workforces in Africa, with around one-third of its workforce being employed in the healthcare sector (WHO, 2015). Health professionals carry out their jobs in increasingly dangerous workplace environments. Stonerock (2014) claimed that despite the dangers in their workplaces- hospitals, clinics, and laboratories-the workers in this sector must provide high-quality healthcare services. According to studies, healthcare workers' (HCWs') tasks expose them to a variety of dangers (Manyele et al. 2018; Nsubuga & Jaakkola, 2015). This includes injuries caused by sharp objects, infections, stress, assaults by patients or family members, allergies, back pain, and other musculoskeletal problems. (Goniewicz et al., 2015; Andersen et al., 2012). Despite the numerous hazards associated with this hazardous vocation, governments, management, and regulators continue to disregard healthcare occupational settings. Workplace hazards increase the risk of illness and death for healthcare professionals. Loss of skilled medical personnel has a detrimental influence on the already inadequate healthcare offered in developing countries such as Nigeria. Health professionals who are ill or injured at work face a variety of effects, including financial loss, bodily injury, and psychological disorders such as stress and despair. These have a detrimental impact on workers, their families, and the country as a whole.

It is critical to identify factors connected to occupational risks among HCWs to develop an occupational health and safety policy and system that will promote HCW productivity and well-being. Healthcare facilities (HCFs) are institutions that provide clinical, surgical, psychiatric, and/or counselling services, as well as treatment to the sick,

injured, and well. (Editors of American Heritage Dictionaries, 2019). HCFs employ approximately 59 million people globally and provide a variety of services to patients and clients. Stoneroc (2014) classifies them as high-risk and hazardous workplaces. Healthcare facilities, like other high-risk industries, represent a significant danger to the health and safety of their personnel due to their high degree of exposure to hazardous chemicals. Hazards are intrinsic properties of substances, agents, energy sources, or circumstances that may have unfavourable impacts; risk, on the other hand, is the possibility that a hazard may cause harm to "life, health, and the environment."

Occupational hazards are workplace activities that have the potential to cause or increase the risk of disease or injury (Ford & Tetrick, 2011). Workplace/occupational safety refers to the practice of protecting employees' health and safety on the job, regardless of occupation, whereas occupational health is the control of hazards in the workplace to achieve an acceptable level of risk. (Oluwagbemi, 2011). Occupation-related morbidity and mortality are considerable among exposed workers, making occupational health and safety a key concern. Ajayi et al. (2006) estimate that around 400,000 new instances of occupational illnesses are identified each year, with an estimated 100,000 individuals dying as a result of these ailments. Because diverse types and degrees of workplace hazards exist, this affects workers in a variety of jobs. According to studies, the industries with the highest risk of occupational hazards include farming, general contracting, steel, car, truck driving, and nursing. Bell and colleagues (2013). In the last three decades, human capital foundations (HCFs) in Nigeria have experienced growth in terms of size, sophistication, and variety, as stated by Oluwagbemi (2011). Additionally, they have difficulties in maintaining the equipment and best practices that are necessary to carry out high-risk clinical procedures. However, front-line healthcare workers (HCWs) provide a problem for healthcare facilities (HCFs) in terms of preserving their health and well-being. (Oluwagbemi, 2011). HCWs may be put in situations where they are exposed to risks that have the potential to seriously affect their health and quality of life, as well as having a cumulative impact on their immediate and extended families. This can occur while they are performing their statutory tasks. As a consequence of this, health and safety workers (HCWs) are required to have the same degree of protection against dangers in the workplace as workers in other high-risk industries, such as construction or mining.

Physical, biological, mechanical, ergonomic, chemical, and psychosocial risks were the six categories that the World Health Organization (2012) used to classify HCF dangers. Studies conducted in the past have demonstrated that healthcare workers (HCWs) have among the highest rates of occupational diseases and accidents across all industries, even though these rates may be decreased or eliminated. The most significant dangers that healthcare workers (HCWs) face are those that are transmitted by blood, including HIV, Hepatitis B, and Hepatitis C. According to Ford et al. (2011), potential dangers include aches and pains in the back and neck, weariness, stress, allergic reactions to latex materials, chemical spills, radiation exposure, and patient assault. Healthcare workers' negligence and carelessness, a lack of protective aids and equipment, a staffing shortage, an excessive workload, a disregard for basic safety and hygiene regulations, and a lack of operational knowledge of modern healthcare equipment are some of the factors that contribute to occupational illnesses and injuries in healthcare facilities (Amosu et al., 2011). Other factors include employees' lack of knowledge about how to operate modern healthcare equipment. After receiving this information, the Centers for Disease Control and Prevention (CDC) in the United States developed standard precautions (SPs) to prevent occupational exposures and control infectious materials in healthcare facilities (Molinari, 2003; Centres for Disease Control, 2019). It has been demonstrated that adhering to the SP guidelines is an effective method for reducing the number of occupational diseases and injuries that occur among healthcare workers in healthcare facilities (Ayalu et al., 2013).

OSH stands for Occupational Safety and Health. According to the ILO (2018), Occupational Safety and Health (OSH) is a field that addresses the avoidance of work-related illnesses and injuries, along with safeguarding and enhancing the well-being of employees. According to the ILO's definition, the EU framework for occupational safety and health (OSH) adopts a broad perspective, accounting for both technical safety and the overall prevention of illness, which includes social relationships, work organization, working conditions, and the impact of environmental factors. In the past, OSH concentrated on the clear connection between job dangers and unfavourable consequences like illness or injury. The nature of work has changed, and it is now recognized that outside variables (such as pandemics, chronic illnesses, and socioeconomic environments) can affect an employee's safety, health, and overall well-being. As a result, a more comprehensive approach to OSH is required. Schulte et al. responded to this need by extending the scope of OSH both "horizontally" and "vertically." (Schulte et al., 2019).

The objectives of occupational health and safety, according to the International Labour Organisation (ILO) and the World Health Organisation (WHO), are as follows: reducing employee turnover caused by health problems at work; protecting employees from hazards that could harm their health (Assaf & Alswalha, 2016); and ensuring that all workers, regardless of their profession, enjoy the best possible physical, mental, and social health (Yeh, 2014; Falola et al., 2014; Pryor & Capra, 2012).

All those whose major goal is to maintain health are classified as healthcare workers.

Healthcare professionals deal with a variety of issues at work, such as stress, aggression, latex allergies, back injuries, and needle stick injuries. As much as miners or construction workers need protection from these working hazards, so do healthcare workers (HCWs). Yet HCWs are sometimes perceived as "immune" to illness or injury because part of their work description is to tend to the sick and injured. First and foremost are their patients. They frequently face pressure to put their patients' professions ahead of their well-being. Safeguarding the health of medical personnel indeed has the extra advantage of enhancing patient care and the stability of the healthcare system. One of the riskiest work situations for healthcare professionals is where they give patient care (Moore & Kaczmarek, 2010).

Biological, chemical, physical, ergonomic, psychological, and other occupational dangers (WHO, 2018) endanger the lives and well-being of healthcare workers. In the health industry, tuberculosis, hepatitis B and C, HIV/AIDS, and respiratory diseases (coronaviruses, influenza) are the most prevalent occupational infections of concern.

According to NIOSH (2020), there are many different risks that healthcare personnel must deal with on the job, such as:

- Physical
- Chemical
- Biological
- Mental
- Ergonomic
- Psychosocial

" Key signs of an organization's culture and commitment to ensuring a safe workplace include the provision of proper nurse staffing levels, the maintenance of safe equipment, and the promotion of safe work practices." said the American Organization for Nurses' workplace safety position statement. An unsafe workplace increases the risk of work-related illnesses and injuries, which frequently lead to problems with one's health, finances, and mental state. Occupational injuries brought on by dangerous working conditions hurt the healthcare organization through higher expenses and a decreased capacity to deliver services. One of the main causes of nurses quitting their jobs and contributing to the growing nursing shortage is known to be occupational dangers. Policy and Guidelines for Occupational Health and Safety in the Health Sector, 2010). According to Yusuf and Metiboba (2012), job commitment is a psychological condition that defines an employee's ties with the organization and influences their choice to stay or leave the organization. Consequently, a person's attitude or orientation toward the company that binds them to it is referred to as their job commitment. Three elements make up a worker's commitment to their work: their willingness to put in effort on behalf of the company; their acceptance of the company's objectives and core values; and their desire to stick with the company (Ogaboh et al., 2018). According to several studies (Jaros, 2017; McMahon, 2007; Meyer & Herscovitch, 2001; Ogaboh et al., 2018; Sundas et al., 2009; Yusuf & Metiboba, 2012), employees are thought to perceive this commitment on three bases, or mindsets that influence behaviour. Positive emotional attachment to the company is known as affective commitment (Meyer et al., 1993). According to Ogaboh et al. (2018), continuation commitment is thought to stem from the perceived costs of quitting the company, such as forfeiting profit-sharing and pension plans.

The following are some broad guidelines for preventing hazardous workplaces:

1. Company culture and management policies that involve employee participation and encourage them to take responsibility;
2. Company codes of conduct and guidelines that view employees as important success factors rather than just cost factors;
3. Work organization that allows employees to balance job demands with their skills and to control their own work and social support;

Given the aforementioned guidelines and the necessity of concentrating on the avoidance of occupational illnesses and injuries, businesses ought to incorporate an Occupational Safety and Health (OSH) Management system into their overall management framework. The goal of this system is to manage the company's OSH risks and create and implement OSH policies. (ISO 45001:2018).

As previously mentioned, risk assessment is carried out to determine the kind of OSH measures that should be implemented in the workplace and whether any actions are necessary. Such OSH control mechanisms must be grounded in good practices and current organizational and/or technical understanding. According to Harms-Ringdahl (2011), the following hierarchy should be followed while implementing control measures:

There are two categories of preventive measures:

1. (1) technical or engineering measures; and
2. (2) organizational or administrative measures.

Protection measures should prioritize group actions and, if they are deemed impractical or ineffective, take into account alternative individual actions. Consequently, safety precautions consist of:

1. collective measures.
2. Individual measures.

Reducing the degree of any injury to employees and the public, as well as damage to facilities is the goal of mitigation measures. Here are a few instances: The following are included: a fire extinguishing system, emergency procedures, evacuation planning, alert systems (alarms, flashing lights), exercises and drills, emergency procedures testing, and a return-to-work plan.

Guidelines have been devised to prevent healthcare workers from being exposed to bloodborne infections and other occupational dangers. These include teaching medical staff how to manage exposures, utilize technology safely, and follow protocols. Moreover, governments have been directed by the World Health Organization (WHO) to switch to the sole use of safety injection devices by 2020 [WHO, 2015].

### **Statement of the Problem**

HCWs' occupational vulnerability is one of the factors endangering the standard of healthcare delivery in developing nations like Nigeria. The majority of workers affected by this problem are medical doctors, nurses, and nursing assistants. Healthcare workers' exposure to and susceptibility to occupational health hazards at healthcare facilities has a significant impact on their morbidity and mortality rates. This implies a rise in the departure of qualified healthcare workers, which hurts the nation's healthcare system on all levels—financially, physically, and mentally. These affect the workers, their families, and the country as a whole negatively. The majority of research on occupational hazards among healthcare workers (HCWs) concentrated on particular job titles within the healthcare delivery system; however, none of these studies—that the researcher was aware of at the time of the study—focused on the occupational health and safety practices of healthcare workers in the Delta South Senatorial District's healthcare facilities. In light of this, the necessity for this study emerged, stating that it was necessary to determine the occupational health and safety practices of healthcare professionals employed in Delta South Senatorial District facilities.

### **Aim and Objectives of the Study**

The purpose of this study was to investigate the occupational health and safety practices among healthcare workers in healthcare facilities in Delta South Senatorial District. The objectives of the study are to:

- i. ascertain the physical health practices of health care workers in health care facilities in Delta South Senatorial District.
- ii. determine the social health practices of health care workers in health care facilities in Delta South Senatorial District
- iii. identify the safety practices of health care workers in health care facilities in Delta South Senatorial District.

### **Research Questions**

For the study, the following research questions were raised.

- i. What are the physical health practices of healthcare workers in healthcare facilities in Delta South Senatorial District?
- ii. What are the social health practices of healthcare workers in healthcare facilities in Delta South Senatorial District?

- iii. What are the safety practices of healthcare workers in healthcare facilities in Delta South Senatorial District?

### Hypotheses

The following null hypotheses are generated to be tested at 0.05 significance.

Ho1: There is no significant difference between male and female health workers' physical health practices in health care facilities in Delta South Senatorial District.

Ho2: There is no significant difference between male and female health workers' social health practices in health care facilities in Delta South Senatorial District.

Ho3: There is no significant difference between male and female health workers' safety practices in health care facilities in Delta South Senatorial District.

### Methodology

This study employed the use of descriptive survey research design to investigate the occupational health and safety practices of healthcare workers in the selected healthcare facilities in the Delta South Senatorial District Area. The population of the study covered all staff and members of public healthcare facilities in Delta South Senatorial District. Specifically, the population size of 2,500 covered all the hospitals in Delta South Senatorial District (Delta State Hospital Management Board (DSHMB), 2022). The sample size for the study comprised 96 respondents (Health Care Workers). The sample size was determined using Taro Yamane's formula. Simple random sampling techniques and purposive sampling strategies were used in the sample process. This allowed the researchers to conclude at random and without regard to subjective standards. Only healthcare professionals, including physicians, nurses, pharmacists, laboratory scientists, physiotherapists, health record officers, health attendants, and cleaners, were chosen through the technique of purposive sampling. Depending on their roles inside the hospital, the employees were divided into two categories: clinical (such as doctors, nurses, pharmacists, laboratory scientists, and health assistants) and non-clinical (such as cleaners, engineers, physiotherapists, and health information workers). To ensure that every member of the research population had an equal and independent chance of being chosen, the simple random procedure was used. Through the first contact method, it was accepted.

A structured questionnaire tagged "Occupational Health and Safety Practices of Health Workers Questionnaire (OHASPOHWQ)" was used to gather data from the respondents in the study. The questionnaire consisted of three sections. Section "A" focused on respondents' biodata, section B consisted of relevant information on "occupational health practices" and section C, Safety practices". The instrument was designed on a four (4) - points Likert Scale (Always = 4, Sometimes = 3, Occasional = 2 and Never = 1. The structured questionnaire was validated through the content validity method by two research experts which included the researcher's supervisor and a specialist from the health care sector. The structured item was given to them alongside the study objectives and research questions for proper checking and scrutiny items of organization, coherence, relevance and wordiness. Items found unsuitable for the study were removed, and corrections were effected from which the final drafting was made for administration. The reliability of the instrument was established with the test-retest method and correlated with the Pearson Product Moment Correlation Coefficient. From the correlation, the coefficient value of the instrument was established at 0.77 which was considered reliable. Copies of the validated instrument were administered by the researcher to the respondents in the different sample healthcare facilities by the researcher and two trained research assistants from the health care sector. The instrument was administered to the respondents individually and was retrieved from them immediately after they had been duly responded to. To address each study issue, copies of the retrieved questionnaire were carefully examined, sorted, and analyzed using percentages and frequency counts. The hypotheses were then assessed using z-test statistics at 0.05 significance.

**Data Presentation and Analysis****Socio-demographic characteristics of respondents**

Variable	Option	Frequency	Percentage (%)
<b>Gender</b>	Male	43	44.8
	Female	53	55.2
<b>Experience</b>	0-5 years	34	34.5
	6 -10years	36	37.5
	11- 15 years	23	24.0
	16 years above	3	3.1
<b>Area</b>	Warri	32	33.3
	Isoko	32	33.3
	Patani	32	33.3

From the demographic data presented in the table above, it was found that out of the total 96 participants, 43 males and 53 female healthcare workers were randomly selected from three major healthcare facilities (Warri, Isoko and Patani General Hospitals/ Health Center) in Delta South Senatorial District. 34 (34.5%) of participants had 0 -5 years of experience, 36 (37.5%) had 6 - 10 years experienced, 23 (24%) had 11-15 years experienced while 3 (3.1%) had 15 years and above working experience in health care facilities. 32 of the respondents were selected randomly from each of the healthcare centres.

**Research Questions 1:** What are the social health practices of healthcare workers in healthcare facilities in Delta South Senatorial District?

**Table 2: Analysis of Physical health practices among healthcare workers in HCFs**

S/N	Physical health practices of healthcare workers in HCF	A	S	O	N	Mean	Remark (Practice)
1.	Wash hands after each clinical procedure	13	34	23	26	2.35	Moderate
2.	Wash hands with antibacterial materials	13	31	32	20	2.38	Moderate
3.	Wear neat clothes while handling patient	35	41	12	9	3.08	Often
4.	Disinfect materials before use	9	44	32	11	2.53	Often
5.	Recapping used needles	6	12	45	33	1.91	Poor
6.	Vaccination against tetanus and the hepatitis B virus.	25	27	21	23	2.56	Often
7.	Putting on gloves when doing standard clinical procedures	45	22	20	9	3.07	Often
8.	Use latex gloves	14	34	31	17	2.94	Sometime
9.	Safe handling and disposal of sharp objects.	35	34	21		3.02	Often
	<b>Total Mean</b>					<b>23.84</b>	
	<b>Grand mean</b>					<b>2.65</b>	<b>High</b>

**Key:** A=Always, S=Sometimes, O=Occasionally, N=Never,

Table 2 shows the physical health practices among healthcare workers in healthcare facilities in Delta South Senatorial District. From the mean analysis in the table, it was found that the mean values of items 3, 4, 6, 7, 8, & 9 (3.08, 2.53, 2.56, 3.07, 2.94 & 3.02) respectively were higher than the mean benchmark (2.5). This indicated the physical health practised among the health care workers in the health care facilities in Delta South Senatorial District. Putting on gloves when doing standard clinical procedures was however found to be the physical health practice often practised among health care workers, followed by wearing neat clothes while handling patients and safe handling and disposal of sharp objects (45, 35 & 35) respectively. Conversely, it was observed from the mean analysis that washing hands after each clinical procedure (2.35), washing hands with antiseptic materials (2.38) and recapping used needles (1.91) were not physical health practices commonly adopted among the healthcare workers in the study area. On the whole, it was found that the grand mean value (2.65) which is greater than the criterion mean value (2.5) was observed. This indicated that the level of physical health practices among the healthcare workers in healthcare facilities in Delta South Senatorial District Area was high.

**Research Question 2:** What are the social health practices of healthcare workers in healthcare facilities in Delta South Senatorial District?

**Table 3: Analysis of social health practices among healthcare workers in HCFs**

S/N	Social health practices of health care workers in HCF	A	S	O	N	Mean	Remark
1.	Keep myself distant from the patient while administering treatment	5	17	45	29	1.98	Poorly
2.	Take part in regular and pre-placement staff training on safety procedures.	13	36	24	23	2.41	Sometime
3.	Touching/maintaining body contact with patient and others	3	21	42	30	1.97	Poorly
4.	Wear a nose & facemask whenever I am with the patient at the Health centre	23	23	35	15	2.56	Often
5.	Avoid touching the patient with a bare hand or body	15	26	34	21	2.37	Moderate
6.	Wear protective equipment to avoid body contact with the patient and another colleague	17	24	35	20	2.4	Moderate
7.	Avoid prolonged standing while on duty	20	21	24	31	2.31	Moderate
8.	Quarrel patients who disobey clinical protocol or procedures	25	29	21	26	2.66	Often
9.	Attend to patients or customers anyhow based on urgency and need.	13	31	32	20	2.39	Moderate
	<b>Total Mean</b>					<b>21.05</b>	
	<b>Grand Mean</b>					<b>2.34</b>	<b>Poor</b>

**Key:** A=Always, S=Sometimes, O=Occasionally, N=Never,

Table 3 shows the mean analysis of the social health practices among healthcare workers in their occupational environment (HCFs). From the mean analysis presented in the table, it was found that the mean values for items 4 & 8 (2.56) were higher than the criterion mean value of 2.5 indicating a high level of social health practices. It, therefore, means that wearing a nose/face when on duty and quarrelling with patients who disobey clinical protocol /procedures were the common social health practices often done among healthcare workers in healthcare facilities in Delta South Senatorial District. Similarly, it was observed from the responses and analysis that one keeps oneself distant from the patient while administering treatment (1.98), touching/maintaining body contact with patient and others (1.97) and attending to patients or customers anyhow based on urgency and need (2.39) were negative health practices which were occasionally practiced among the health care workers in health care facilities in the study area. Take part in regular and pre-placement staff training on safety procedures. (2.41), avoiding touching patients with bare hands or bodies (2.37) and avoidance of prolonged standing while on duty (2.31) were positive social health practices that were also occasionally practiced among the healthcare workers in healthcare facilities in Delta South Senatorial District. Summarily, it was found that the grand mean value (2.34) observed was less than the criterion mean value (2.5) indicating poor social health practices among the healthcare workers in healthcare facilities in Delta South Senatorial District.

**Research Question 3:** What are the safety practices of healthcare workers in healthcare facilities in Delta South Senatorial District?

**Table 5: Analysis of safety practices among healthcare workers in HCFs**

S/N	Safety practices of healthcare workers in HCF	A	S	O	N		Remark
1.	Dispose of sharp and other hazardous objects safely in the assigned place or location	38	23	19	26	2.97	Often
2.	Recapping used needles	6	12	45	33	1.91	Poor
3.	Comply with standard procedures	19	26	31	20	2.46	Moderate
4.	Wear PPE when at work	18	23	37	18	2.43	Moderate
5.	Ensure the floor is dry before walking and working on it	29	37	23	7	2.92	Often
6.	Avoid talking when carrying out routine clinical procedures	32	24	25	15	2.76	Often
7.	<b>Total Mean</b>					<b>15.45</b>	
	<b>Grand mean</b>					<b>2.56</b>	<b>Moderate</b>

**Key:** A=Always, S=Sometimes, O=Occasionally, N=Never,

Table 5 shows the mean analysis of safety practices among health workers in healthcare facilities in Delta South Senatorial District. From the mean analysis presented in the table, it was observed that the mean values of items 1, 5 & 6 (2.97, 2.92 & 2.76) respectively were higher than the criterion mean value of 2.5. This shows that disposing of sharp and other hazardous objects safely in an assigned place or location (2.97), ensuring floors are dry before walking and working on and avoiding talking when carrying out routine clinical procedures were common safety practices often carried out among healthcare workers in health care facilities in Delta South Senatorial District. Similarly, it was observed from the analysis that complying with standard safety procedures (2.46) & wearing PPE when at work (2.43) were good safety practices occasionally carried out by the healthcare workers in healthcare facilities in Delta South Senatorial District.

### Hypotheses

For the study, the following null hypotheses are generated to be tested at 0.05 significance.

H01: There is no significant difference between male and female health workers' physical health practices in health care facilities in Delta South Senatorial District.

**Table 6: t-test of the difference between male and female healthcare workers' health practices among health care workers in HCFs n = 96**

Gender	N	Mean	SD	t-cal.	t-crit	Df	Sig	Decision
Male	43	2.1	6.1					
Female	53	3.2	6.91	0.82	1.98	94	0.05	Ho accepted

From the t-test analysis in the table, it was found that the t-test calculated value of 0.82 was less than the t-test critical value of 1.98 under degree of freedom 94 at 0.05 significant value. Thus, the null hypothesis stated was accepted. This means that there is a significant difference between male and female healthcare workers in the health practices among healthcare workers in healthcare facilities in Delta South Senatorial District.

H02: There is no significant difference between male and female health workers' social health practices in health care facilities in Delta South Senatorial District.

**Table 7: t-test of differences in social health practices between male and female health care workers in HCFs**

Variable	N	Mean	SD	t-cal.	t-crit	Df	Sig	Decision
Male	43	3.72	6.06					
Female	53	1.24	7.18	2.26	1.98	94	0.05	Ho Rejected



From the t-test analysis in the table, it was found that the t-test calculated value of 2.26 was higher than the t-test critical value of 1.98 under degree of freedom 94 at 0.05 significant value. Thus, the null hypothesis stated was rejected. This means that there was no significant difference between male and female healthcare workers in the social health practices in healthcare facilities in Delta South Senatorial District.

H03: There is no significant difference between male and female health workers' safety practices in health care facilities in Delta South Senatorial District.

**Table 8: t-test of differences in safety practices between male and female healthcare workers safety practices in HCFs. n = 96**

Gender	N	Mean	SD	t-cal.	t-crit	Df	Sig	Decision
Male	43	3.81	6.05					
Female	53	1.31	7.17	1.85	1.98	94	0.05	Ho Accepted

From the t-test analysis in the table, it was found that the t-test calculated value (1.85) was less than the t-test critical value (1.98) under degree of freedom 94 at 0.05 significant value. Thus, the null hypothesis stated was accepted. This means that there is a significant difference between male and female healthcare workers' safety practices in healthcare facilities in Delta South Senatorial District.

### Discussion

Findings from the study in research question 1 revealed that the level of physical health practices among the health care workers in the health care facilities is high. It was discovered that putting on gloves when doing standard clinical procedures was however found to be the physical health practice often practised among health care workers, followed by wearing neat clothes while handling patients and safe handling and disposal of sharp objects respectively. On the other hand, it was observed from the mean analysis that washing hands after each clinical procedure, washing hands with antiseptic materials and recapping used needles were physical health practices not commonly adopted among the healthcare workers in the study area. The above physical health practices were demonstrated similarly between the male and female health care workers as indicated in hypothesis one analysis ( $p > 0.05$ ) indicating no significant differences. This study's findings supported that of Aluko et al. (2016). Recapping used needles is a risky practice that predisposes healthcare workers to occupational hazards; therefore, most respondents to their study on the knowledge, attitudes, and perceptions of occupational hazards and safety practices among Nigerian healthcare workers avoided doing so at work. The aforementioned authors also observed in their research that all respondents understood the need to properly wash their hands following any medical procedure to avoid cross-infection.

The study's findings both supported and refuted Oluwagbemi's (2011) observation that HCWs are exposed to a range of hazards that may vary depending on their job description or level of education, which in turn affects how much occupational health care they take. Compared to the findings of Aluko et al. (2016) and Akpororue et al. (2021), which indicated that putting on gloves when performing standard clinical procedures is practised by 279 (96.2%) respondents in their study, the findings of the study on hand washing after every clinical procedure contradicted those findings. Furthermore, correct body alignment during clinical operations is practised by 242 (77.2%) of the respondents, and safe disposal of injection needles and sharps is practised by 272 (93.8%) of the respondents. According to the findings of the study, which were derived from research question 2 and hypothesis 2, the most common social health practices that are frequently adopted by healthcare workers in healthcare facilities in Delta South Senatorial District are wearing nose/face ask while on duty and arguing with patients who disobey clinical protocol or procedures. Yusuf and Metiboba (2012) verified that attitudes displayed toward his organization, which help to bind the employee to the organization, may be utilized to describe an employee's dedication to their work. This finding is comparable to what Yusuf and Metiboba (2012) discovered. In the same vein, it was observed from the responses and analysis of this study that negative health practices such as keeping oneself distant from the patient while administering treatment (1.98), touching or maintaining body contact with the patient and others (1.97), and attending to patients or customers in any way based on urgency and need (2.39), were practices that were occasionally carried out by health care workers in health care facilities located in the study area.

In terms of safety practices, the findings of the study revealed that the following are common safety practices that are frequently carried out by healthcare workers in healthcare facilities in Delta South Senatorial District: ensuring

that the floor is dry before walking and working on it, avoiding talking while carrying out routine clinical procedures, and disposing of sharp and other hazardous objects safely in the assigned place or location (2.97). The findings of Aluko et al. (2016) are also supported by this finding. The findings demonstrated that 52.1% of respondents "always" followed standard procedures, and that the majority of them (93.8%) safely disposed of sharps objects. Forty percent of respondents did not generally blame a lack of basic safety equipment for their failure to do so. It was also found from the analysis that the health care professionals in health care institutions in Delta South Senatorial District occasionally carried out appropriate safety practices such as adhering to standard safety procedures (2.46) and wearing personal protective equipment (PPE) when they were at work (2.43). Taking this into consideration, it is clear that the healthcare personnel in the facilities that are located in the Delta South Senatorial District have inadequate safety measures.

### Conclusion

Healthcare facilities are one of the most hazardous working environments where workers are highly exposed to risks that pose a threat to human health. For public organizations to succeed, it is crucial to manage occupational health and safety policies and their respective effects on public sector commitment. According to this study, healthcare professionals in the Delta South Senatorial District Area had high levels of physical health practices; however, their levels of social, mental, and safety practices were lower for male and female healthcare workers, respectively. Therefore, developments in the fields of health, safety, and systems must be backed by a comprehensive body of knowledge. This has helped to improve work sustainably in terms of safety and health outcomes, particularly in Nigeria and around the world. It follows that to maintain and support employees' comprehension of the occupational health and safety strategies and practices required for the best possible performance in the healthcare industry, efforts should be focused on classifying and continuously evaluating workplace performance and practices in terms of health and safety practices.

### Recommendations

Based on the above findings, the following recommendations were made:

1. Workplace health and safety practices should be intensified as they contribute towards workers' commitment to safety policy (ies) and as well reduce the rate of workers' exposure to occupational hazards, injuries and accidents.
2. Organizational commitment to health and safety procedures in healthcare facilities should be strengthened through workplace health and safety management.
3. Policies that encourage safety behaviours and reduce exposure to risks have to be institutionalised and made mandatory by all HCFs. These include giving out the safety gear, regularly and pre-placing staff members with safety training, and adequately reinforcing staff members' capacity and competency through exercises..
4. The government ought to guarantee that the safety training and exercise protocols are tailored to address new and sector-specific safety concerns, based on evidence.

### References

- Ajayi, A. D., Garba, S. N., Abdul, A. J., & Mfuh, A. (2006). Use of protective devices and occupational hazards among nurses in ABUTH, Zaria. *West Afr J Nurs*, 17(1), 14.
- Akpororue, O. S., Omotayo, O. A. & Akaka, A. A. (2021). Occupational health and safety practices and public sector commitment of Lagos State Health Service Commission (LSHSC)., Lagos State, Nigeria. Occupational and Health and safety practice material. 59 -74.
- Aluko, O.O., Adebayo, A. E., Adebisi, T. F., Ewegbemi, M. K., Abidoye A. T. & Popoola B. F.(2016). Knowledge, attitudes and perceptions of occupational hazards and safety practices in Nigerian healthcare workers. *BMC Research Notes* volume 9, Article number: 71(1): 31 -35
- Amosu, A. M., Degun, A. M., Atulomah, N. O. S., Olanrewju, M. F., & Aderibigbe, K. A. (2011). The level of knowledge regarding occupational hazards among nurses in Abeokuta, Ogun State, Nigeria. *Current research journal of biological sciences*, 3(6), 586-590..
- Andersen, L. L., Clausen, T., Mortensen, O. S., Burr, H., & Holtermann, A. A (2012). prospective cohort study on musculoskeletal risk factors for long-term sickness absence among healthcare workers in eldercare. *International Archives of Occupational and Environmental Health.*;85(6):615– 622.
- Assaf, A. M., & Alswalha, A. (2016). Environmental impacts of working conditions in paint factories workers in the Hashemite Kingdom of Jordan. *European Scientific Journal*, 9(8), 37-45.

- Ayalu A, Reda, S.B., Amae, D., Alemayehu, A., Belachew, T., Tiyou, A., & Deribe, K. (2011). Knowledge and attitudes of caregivers of HIV-infected children towards antiretroviral treatment in Ethiopia. *Patient Educ Couns*;85(2):89–94.
- Bell, J. L., Collins, J. W., Tiesman, H. M., Ridenour, M., Konda, S., Wolf, L., & Evanoff, B. (2013). Slip, trip, and fall injuries among nursing care facility workers. *Workplace health & safety*, 61(4), 147-152.
- Centers for Disease Control (2019). Mycobacterium tuberculosis transmission in a health clinic–Florida,. *MMWR*;38:263–4.
- Delta State Hospital Management Board (DSHMB) (2022). *Hospital management records*. Asaba.
- Editors of the American Heritage Dictionaries (2019). *The American Heritage Student Science Dictionary, New up ed. Houghton Mifflin Harcourt*. p. 384.
- Falola, H. O., Ibidunni, A. S. & Olokundun, M. (2014). Incentives packages and employees’ attitudes to work: a study of selected government parastatals in Ogun State South-West, Nigeria. *International Journal of Research in Business and Social Science*, 3(1), 234- 241.
- Ford, M. T, Tetrick, L. E. (2011). Relations among occupational hazards, attitudes, and safety performance. *J Occup Health Psychol*. 16(1):48–66.
- Goniewicz M, Włoszczak-Szubzda A, Niemcewicz M, Witt M, Marciniak- Niemcewicz A, Jarosz M. J. (2012). Injuries caused by sharp instruments among healthcare workers international and Polish perspectives. *Annals of Agricultural and Environmental Medicine*;19(3):523– 527.
- Goniewicz, M., Włoszczak-Szubzda, A., Niemcewicz, M., Witt, M., Marciniak-Niemcewicz, A., & Jarosz, M. J. (2012). Injuries caused by sharp instruments among healthcare workers–international and Polish perspectives. *Annals of Agricultural and environmental Medicine*, 19(3), 523– 527.
- Harms-Ringdahl, L. (2011, unpublished). Analysis of barriers and safety functions. Chapter 11, draft version, May 2011.
- Health and Safety Professionals Alliance (HaSPA). (2017). *The core body of knowledge for generalist OHS professionals*. Tullamarine, VIC., Safety Institute of Australia.
- ILO – International Labour Organisation (2018), *Introduction to Occupational Health and Safety*. Retrieved 13th May, 2022 from [www.Google.com](http://www.Google.com)
- ILO – International Labour Organisation (2018), *Introduction to Occupational Health and Safety*. Retrieved 13th May, 2022 from [www.Google.com](http://www.Google.com)
- Jaros, S. (2017). *Meyer and Allen model of organizational commitment: Measurement Issues*. The Icfai University Press.
- Manyele, S. V. Ngonyani, H.A.M., & Eliakimu, E. (2018). The status of occupational safety among health service providers in hospitals in Tanzania. *Tanzania J Health Res*. 10 (3), 159–65.
- McMahon, B. (2007). *Organizational commitment, relationship commitment and their association with attachment style and locus of control*. M.Phil. Thesis of the School of Psychology, Georgia Institute of Technology.
- Meyer, J. P. & Herscovitch, L. (2001). Commitment in the workplace: toward a general model. *Human Resource Management Review*, 11(2), 299-326.
- Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78(4), 538-551.
- Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78(4), 538-551.
- Molinari, J. A. (2003). Infection control: it’s evolution to the current standard precautions. *J Am Dent Assoc*.;134(5):569–74.
- Moore Jr., R. M, & Kaczmarek, R. G. (2010). Occupational hazards to health care workers: Diverse, ill-defined and not fully appreciated. *American Journal of Infection Control*;18(5):316–327.
- NIOSH (2020). NIOSH List of Hazardous Drugs in Healthcare Settings, 2020. <https://www.cdc.gov/niosh/docket/review/docket233c/pdfs/DRAFT-NIOSH-Hazardous-Drugs-List-2020.pdf>
- Nsubuga, F. M., & Jaakkola, M. S. (2015). Needle stick injuries among nurses in sub-Saharan Africa. *Tropical Medicine and International Health*.;10(8):773-781.
- Occupational Health and Safety Policy and Guidelines for the Health Sector (2010), *Ministry of Health/Ghana Health Service, Ghana*. p. 68. <http://www.moh-ghana.org/UploadFiles/Publications/OHS%20Policy%20&%20Giudelines%20for%20Health%20Sector140204090745.pdf>. Accessed 15 June 2015.

- Ogaboh, A. A. M., Nkpoyen F., & Ushie, E. M. (2018) Career development and employee commitment in industrial organizations in Calabar, Nigeria: *American Journal of Scientific and Industrial Research*, 1(2), 312-327.
- Ogaboh, A. A. M., Nkpoyen F., & Ushie, E. M. (2018) Career development and employee commitment in industrial organizations in Calabar, Nigeria: *American Journal of Scientific and Industrial Research*, 1(2), 312-327.
- Oluwagbemi B. (2011). *Themes and issues in occupational health and safety*. 2nd ed. Bangalore: Vertex Media Limited; 2011.
- Pryor, P., & Capra, M. (2012). The core body of knowledge for generalist OHS professionals. *Safety Institute of Australia Ltd (SIA)*.
- Schulte, P.A., Delclos, G., Felknor, S.A., & Chosewood, L.C., (2019). Toward an Expanded Focus for Occupational Safety and Health: A Commentary. *Int. J. Environ. Res. Public Health* , 16, 4946.
- Stonerock, T. (2014). Professional Burnout. *Recent Developments in Theory and Research*, London and New York
- Sundas, W., Noor, F., & Shamim, A. S. (2009). Study on relationship between organizational commitment and its determinants among private sector employees of Pakistan. *International Review of Business Research Papers*, 5(3), 399-410.
- World Health Organization (2015). WHO guideline on the use of safety-engineered syringes for intramuscular, intradermal and subcutaneous injections in health-care settings: 1–32.
- World Health Organization (2018). Health workers: health worker occupational health. who.int. [http://www.who.int/occupational\\_health/topics/hcworkers/en/](http://www.who.int/occupational_health/topics/hcworkers/en/). Accessed November 25.
- Yeh, Y. P. (2014). Exploring the impacts of employee advocacy on job satisfaction and organizational commitment: Case of Taiwanese airlines. *Journal of Air Transport Management*, 36(3), 94-100.
- Yusuf, N., & Metiboba, S. (2012). Work environment and job attitude among employees in a Nigerian work organization. *Journal of Sustainable Society*, 1(2), 36-4.