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# Perceived Occupational Health Problems Of Healthcare Workers In Teaching Hospitals, Rivers State

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## ABSTRACT

This study investigated the perceived occupational health problems among healthcare workers in teaching hospitals, Rivers State. A cross sectional research design was adopted with a population consisting of 3,673 healthcare workers in teaching health facilities in Rivers State. The sample size was 792. Simple random sampling technique was adopted. Data was collected using structured questionnaire with a reliability coefficient of 0.78 and analysis carried out using mean and One-Way Analysis of variance (ANOVA) at 0.05 alpha level. The finding of the study revealed that healthcare workers in teaching hospitals were exposed to physical health problems ( $3.24 \pm 0.76$ ), mental health problems ( $3.14 \pm 0.84$ ), and social health problems ( $3.32 \pm 1.25$ ). Specifically, the result showed that, to a high extent, the respondents were exposed to nosocomial infection ( $3.43 \pm 0.74$ ), musculoskeletal disorder ( $3.39 \pm 0.71$ ), bacterial infection ( $3.34 \pm 0.76$ ), viral infection ( $3.29 \pm 0.72$ ), and body fluids that can lead to skin infection ( $3.20 \pm 0.83$ ). Also, to a high extent, healthcare work exact stress on the brain of the workers ( $3.71 \pm 0.54$ ), mood swing is observed in the healthcare workers due to their exposure to numerous patients ( $3.29 \pm 0.84$ ), healthcare practices increases stress and anxiety among the workers ( $3.27 \pm 0.64$ ), and difficulties with their mental capabilities because of the nature of work ( $3.18 \pm 0.77$ ). Furthermore, the result showed that, to a high extent, attending to too many patients impairs behaviour ( $3.57 \pm 0.65$ ), family crisis is linked to unavailability of healthcare workers for the company of their family/relations ( $3.45 \pm 0.97$ ), working in the healthcare environment makes it difficult relating normally with others ( $3.33 \pm 0.94$ ), and deviant behaviour is linked to long time exposure to complex health cases in the teaching health institution ( $3.26 \pm 0.97$ ). It was concluded that healthcare practices can expose the workers to a myriad of occupational health problems. The management of the teaching health institutions should collaborate with safety professionals who will be engaged to identify the perceived physical health problem and proffer solutions for its control among the healthcare workers. Their mental health status should be checked and monitored at regular intervals as well.

**Keywords:** Health problem, Occupation, Perceived, Teaching Hospital.

## INTRODUCTION

Occupational health problems are inevitable in some work setting but differs in intensity, depending on the nature of work done and the time spent on such job. Healthcare workers in teaching hospitals face a myriad of health problems that can significantly impact their well-being. The physically demanding nature of the healthcare work, including tasks such as lifting and transferring patients, contributes to

occupational health conditions among healthcare workers (Alexopoulos et al., 2016). The Centre for Disease Prevention and Control (2021) noted that, occupational health problems occur at work or because of the kind of work someone do. In a report in Switzerland among healthcare workers, it was observed that 9.6% of the healthcare had occupational health problem. In Asia, work-related transmission of infection was highest among healthcare workers, with 22% of the occupational transmission of healthcare workers occurring in individual who work in the healthcare setting (Lan et al., 2020). In South America a study confirmed a high burden of occupational health disease among healthcare workers. In Egypt, North Africa, a report showed that 13.5% of healthcare workers tested positive for occupational infection (Kassem et al., 2020). In Nigeria, a random sample of 133 asymptomatic healthcare workers showed that 45% of them tested positive for infection result from exposure in the workplace (Olayanju et al., 2021). As healthcare institutions work towards creating healthier work environments, Moss et al. (2016) stated that, it becomes essential to integrate preventive measures towards conditions that expose them to social, mental and physical health problems.

Physical health problem is a prominent concern among healthcare workers. One prominent physical health concern is the high prevalence of musculoskeletal disorders such as back pain, musculoskeletal strain, and carpal tunnel syndrome among healthcare professionals (Alexopoulos et al., 2016). These physical ailments not only affect the quality of life for healthcare workers but can also lead to reduced productivity and increased absenteeism. In addition to physical health challenges, healthcare workers in teaching hospitals are susceptible to mental health issues, with burnout being a prevalent concern. The demanding and emotionally taxing nature of their responsibilities, coupled with long working hours, can contribute to high levels of stress and burnout. Burnout not only jeopardizes the mental well-being of healthcare workers but also has implications for patient care, as exhausted and emotionally drained professionals may be less effective in their roles, impacting overall healthcare delivery (Dewa et al., 2014). Moreover, Sexton et al. (2019) stated that, exposure to traumatic events in teaching hospitals, such as dealing with critically ill patients or medical emergencies, puts healthcare workers at risk of developing post-traumatic stress disorder (PTSD). The psychological toll of such events can have long-lasting effects on the mental health of healthcare professionals.

Mental health problems among healthcare workers in teaching hospitals are a critical and pervasive issue that demands comprehensive attention. The demanding nature of their work, coupled with exposure to high-stress situations and emotionally charged environments, places healthcare professionals at an increased risk of mental health challenges. The long working hours, the pressure to meet patient demands, and the emotional toll of dealing with critical and often traumatic situations contribute significantly to the development of burnout (Dewa et al., 2014; Moss et al., 2016). Reinke et al. (2017) noted that, stigma surrounding mental health issues in the healthcare profession further complicates the situation. Fear of judgment or professional repercussions may discourage healthcare workers from seeking help for their mental health concerns.

Social health problems among healthcare workers in teaching hospitals encompass a range of challenges that extend beyond the individual to affect interpersonal relationships, workplace dynamics, and the broader healthcare system. One significant social health concern is the erosion of work-life balance. The demanding nature of healthcare professions, especially in tertiary health institution settings, often leads to long working hours, irregular shifts, and high levels of job-related stress, contributing to a significant imbalance between professional and personal life. This imbalance can strain relationships with family and friends, resulting in social isolation and reduced overall social well-being among healthcare workers (Aluko et al., 2018). According to Shanafelt et al. (2015), in the context of social health, workplace culture and organizational dynamics play a pivotal role in shaping the experiences of healthcare professionals. High levels of hierarchical structure, lack of communication, and a perceived lack of support can contribute to a toxic work environment, adversely affecting social cohesion among healthcare workers. Organizational factors, including insufficient staffing levels and a lack of teamwork, can hinder effective collaboration and contribute to a sense of isolation, negatively impacting the social health of healthcare workers. To address these social health problems, interventions should focus on fostering a positive workplace culture that promotes open communication, teamwork, and mutual support.

Tertiary healthcare facilities in Rivers State is the highest cadre of healthcare, which often handle patients with severe and contagious illnesses, exposing healthcare workers to a higher likelihood of contracting infections such as influenza, tuberculosis, and blood-borne pathogens. This heightened risk not only poses a direct threat to the health of healthcare professionals but also underscores the importance of robust infection control measures and protective equipment to safeguard their well-being (Centers for Disease Control & Prevention, 2021). In addressing these health challenges, it is essential to recognize the interconnectedness of physical and mental health among healthcare workers. The demanding work environment and exposure to critical incidents can contribute to a cycle of stress, burnout, and mental health issues. Research by Moss et al. (2016) has shown that studies aimed at investigating the occupational health problems of healthcare workers is an essential component in ensuring the overall health and job satisfaction of healthcare workers.

More worrisome is the inattentiveness of the government to the health, safety and welfare of the workers in the tertiary healthcare institutions in the State, which is evidenced in the incessant industrial strike actions taken to draw the attention of the government, yet, to no avail. Also, there exist a gap, in that, several interventions and programmes organized to promote health are focused mainly on patients, with minimal or no attention on the health of the workers. Even in scholarly research relating to health problems, studies focusing on healthcare workers are scarce. Thus, this study focused on the perceived occupational health problems of healthcare workers. The following research questions were answered in this study:

1. What are the perceived occupational health problems among healthcare workers in tertiary health institution in Rivers State based on job specification?
2. What are the perceived occupational health problems among healthcare workers in tertiary health institution in Rivers State based on years of work experience?

**Hypotheses:** The following null hypotheses stated to guide the study were tested at 0.05 level of significance:

1. There is no significant difference in exposure to perceived occupational health problem among healthcare workers in tertiary health institution in Rivers State based on job specification.
2. There is no significant difference in exposure to perceived occupational health problem among healthcare workers in tertiary health institution in Rivers State based on years of work experience.

## **METHODOLOGY**

This study adopted the cross sectional study design. The study population comprised of 3,673 healthcare workers in teaching hospitals in Rivers State. The sample size for the study was 792 which was determined using Taro Yemen formula;  $n = N / 1+N(e)^2$ . The simple random sampling technique was adopted. The instrument for data collection was a structured questionnaire developed by the researcher titled: "Occupational Health Problems Questionnaire (OHPQ)". The instrument consisted of two sections A, and B. Section A focused on the demographic data of respondents such as gender, age, department, years of work experience and marital status while Section B assessed the occupational health problems with response options of very high extent, high extent, low extent and very low extent.

The instrument was validated by three (3) other experts in the Department of Human Kinetics, Health and Safety Education, Ignatius Ajuru University of Education, Port Harcourt. Their corrections, suggestions and professional inputs were effected to ensure face and content validity of the instruments before final administration was carried out. The reliability co-efficient of the instrument was 0.78. Data was collected by delivering the questionnaires to the respondents. The aim of the study and methods to be adopted were clearly explained to the respondents before the administration of the instrument. Questions asked about the study were answered. The researcher sought the consent of the respondents before delivering the questionnaire which were retrieved at a spot immediately after completion of the filling. Data was analyzed with the aid of the Statistical Package for Social Sciences (SPSS) version 25.0, using some statistical tools such as mean, standard deviation, and ANOVA at 0.05 level of significance.

**RESULTS**

The results of the study are shown below:

**Table 1: Mean and standard deviation showing job specification and exposure to occupational health problems among healthcare workers in tertiary health institution (N=747)**

Health problems	O&G (N=63)		Emerg. (N=364)		Burns (N=16)		Children (N=32)		Internal (N=18)		Surgery (N=122)		ENT (N=16)		ICU (N=116)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Physical	3.51	0.32	3.13	0.95	3.20	0.84	2.90	1.05	3.60	1.22	3.41	0.91	1.90	0.0	3.15	0.71
Mental	3.34	0.48	2.75	0.90	3.40	0.77	2.60	1.30	3.50	0.48	3.54	0.49	3.32	0.00	3.75	0.61
Social	3.22	0.49	3.07	0.81	3.66	0.84	3.55	0.65	3.55	1.02	3.24	0.77	3.66	0.48	2.86	0.86
<b>Grand mean</b>	<b>3.35</b>	<b>0.43</b>	<b>2.98</b>	<b>0.88</b>	<b>3.42</b>	<b>0.82</b>	<b>3.02</b>	<b>1.00</b>	<b>3.55</b>	<b>0.91</b>	<b>3.39</b>	<b>0.72</b>	<b>2.96</b>	<b>0.16</b>	<b>3.25</b>	<b>0.72</b>

Table 1 showed the mean and standard deviation showing job specification and exposure to occupational health problems among healthcare workers in teaching hospitals. The result showed that, based on job specification, all categories of job specification had high extent values which were greater than the criterion mean of 2.50. However, high extent of exposure to occupational health problems was found more among those who were in internal medicine unit (3.55±0.91), followed by those in the burns unit (3.42±0.82), surgery (3.39±0.72), and O & G (3.35±0.43). Thus, based on job specification, occupational health problem was more among those in internal medicine, burns and surgery unit.

**Table 2: Mean and standard deviation showing years of work experience and extent of exposure to occupational health problems among healthcare workers in tertiary health institution (N=747)**

Health problems	<5yrs (N=469)		5-10yrs (N=177)		>10yrs (N=101)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Physical	3.18	0.64	3.23	0.27	3.27	0.57
Mental	3.33	0.33	3.26	0.47	3.48	0.15
Social	2.62	0.94	2.86	0.23	3.18	1.53
<b>Grand mean</b>	<b>2.98</b>	<b>0.88</b>	<b>3.35</b>	<b>0.43</b>	<b>3.42</b>	<b>0.82</b>

Table 2 presents the mean and standard deviation showing years of work experience and occupational safety practice among healthcare workers in teaching hospitals. The result showed that, based on years of work experience, all categories had high extent values which were greater than the criterion mean of 2.50. However, high extent of exposure to occupational health problems was found more among those who had worked for more than 10 years (3.42±0.82), followed by those 5-10 years (3.35±0.43), and those who worked for <5 years (2.98±0.88). Thus, based on years of work experience, occupational health problem was more among those who had worked for longer years.

**Table 3: Analysis of Variance (ANOVA) showing significant difference between job specification and extent of exposure to occupational health problems among healthcare workers in tertiary health institution in Rivers State**

Sources of variance	Sum of squares	df	Mean sum of squares	F-value	p-value	Decision
Between group	46.32	7	6.61	102.30	0.00*	H <sub>0</sub>
Within group	47.80	739	0.06			Rejected
Total	94.12	746				

\*Significant. p<0.05

Table 3 shows the One-Way ANOVA of significant difference between job specification and extent of exposure to occupational health problems among healthcare workers in tertiary health institution in Rivers State. The findings of this study shows that there is a statistically significant difference between job specification and extent of exposure to occupational health problems among healthcare workers [F(7,

739) = 102.30;  $p < 0.05$ ]. The post hoc test of multiple comparison shows that health problems was significantly different in all category of job specification. Therefore, the null hypothesis which stated that there is no significant difference between job specification and extent of exposure to occupational health problems among healthcare workers in tertiary health institution in Rivers State was rejected.

**Table 4: Analysis of Variance (ANOVA) showing significant difference between years of work experience and extent of exposure to occupational health problems among healthcare workers in tertiary health institution in Rivers State**

Sources of variance	Sum of squares	df	Mean sum of squares	F-value	p-value	Decision
Between group	12.40	2	6.20	56.47	0.00*	$H_0$
Within group	81.71	744	0.11			Rejected
Total	94.12	746				

\*Significant.  $p < 0.05$

Table 4 shows the One-Way ANOVA of significant difference between years of work experience and extent of exposure to occupational health problems among healthcare workers in tertiary health institution in Rivers State. The findings of this study shows that there is a statistically significant difference between years of work experience and extent of exposure to occupational health problems among healthcare workers [ $F(2, 746) = 56.47$ ;  $p < 0.05$ ]. The post hoc test of multiple comparison shows that health problem was significantly different in all category of years of work experience. Therefore, the null hypothesis which stated that there is no significant difference between years of work experience and extent of exposure to occupational health problems among healthcare workers in tertiary health institution in Rivers State was rejected.

### DISCUSSION OF FINDINGS

The finding of the study in Table 1 revealed that the extent of exposure to physical health problems among healthcare workers in tertiary health institution in Rivers State was high. The respondents were exposed to nosocomial infection, musculoskeletal disorder, bacterial infection, viral infection, and body fluids that can lead to skin infection. The result is anticipated because healthcare workers are in most times having physical contact with patients, suffering different diseases which could infect them if adequate safety precautions are not observed by the healthcare workers. The result gives credence to that of Ugwu et al., (2017) whose study among healthcare workers in southeastern Nigeria showed that the workers were exposed to physical health problems. The result of this study is in agreement with that of Valuckiene et al. (2016) which reported that, healthcare practices could have adverse physical effects, such as the probability of cancer occurrence due to changes. The study also corroborates that of Health Safety Environment (2016) which showed that a substantial proportion of healthcare workers had physical health problem such as musculoskeletal disorders. The study gives credence to that of Covens et al. (2012) which showed that physical effects due to healthcare activities exposure are evident, such as illness and musculoskeletal issues. The finding of this study is keeping with that of Rajan (2014) whose study in India which showed the workers were exposed to physical health problems. The finding of this study is in keeping with that of Mukhtad et al. (2018) in Lybia showed physical health problems such as low back pain, shoulder pain, arm pain and leg pains was associated with the healthcare work. The similarity between the present study and the previous ones might be due to the similar design used, as they both adopted the descriptive research design to unveil the health problems among healthcare workers.

The result in Table 2 revealed that the extent of exposure to mental health problems among healthcare workers in tertiary health institution in Rivers State was high. Specifically, the result showed that, to a high extent, healthcare work exact stress on the brain of the workers, mood swing is observed in the healthcare workers due to their exposure to numerous patients, healthcare practices increases stress and anxiety among the workers, and difficulties with their mental capabilities because of the nature of work. The finding is not surprising because the healthcare activities is mentally demanding and in a situation

like that of Rivers State where there are only two public teaching hospitals, serving the public; there is disproportionate ratio of healthcare workers to patients which overburden or over labour them both physically and mentally. This would contribute to their exposure to mental health problems suffered as a result of their work. The result of this study is in agreement with that of Valuckiene et al. (2016) which reported that, healthcare activities could have adverse mental effects, and such as mental retardation and malformation. The result of the study is in line with that of Parikh et al. (2017) whose study among British healthcare workers showed that mental health problems were evidence due to healthcare activities such as: stress, anxiety, and loss of concentration due to ray disturbance on the brain. The result of this study is in line with that of Ugwu et al. (2017) whose study among healthcare workers in southeastern Nigeria showed that the workers were exposed to mental health problems of which the most prominent was stress and anxiety. The finding of this study corroborates that of Health Safety Environment (2016) which showed that a substantial proportion of healthcare workers had mental health problem such as stress, anxiety and depression. The similarity between the present study and the previous ones might be due to the similar population used, as the both studies were carried out among healthcare workers.

The study in Table 3 revealed that the extent of exposure to social health problems among healthcare workers in tertiary health institution in Rivers State was high. The result showed that, to a high extent, attending to too many patients impairs behaviour, family crisis is linked to unavailability of healthcare workers for the company of their family/relations, working in the healthcare environment makes it difficult relating normally with others, and deviant behaviour is linked to long time exposure to complex health cases in the tertiary health institution. The result of the study is in line with that of Parikh et al. (2017) whose study among British healthcare workers showed that healthcare workers were exposed to social health problems. The result of this study is in line with that of Ugwu et al. (2017) whose study among healthcare workers in southeastern Nigeria showed that the workers were exposed to social health problems. The result of this study is also in consonance with that of Durrani et al. (2020) which showed that exposure to radiation could have some damaging social health effects and cause many of social health problems in any workers exposed to radiations. The finding of this study is in tandem with that of Ogenyi et al. (2018) which showed that among healthcare workers, social health problems are observed. The similarity between the present study and the previous ones might be due to the homogeneity of the study population.

## **CONCLUSION**

It was concluded that healthcare practices can expose the workers to a myriad of occupational health problems and impact the health of the workers negatively if adequate safety measures are not put in place.

## **RECOMMENDATIONS**

Based on the findings of the study, the following recommendations were made:

1. The management of the teaching hospitals should incorporate safety professionals to the teaching hospitals who will be engaged in identifying the physical health problem and proffering solutions for its control among the healthcare workers.
2. The tertiary health institution board chairman should not limit the duties of mental health physicians and nurses to patients alone, but to the workers also. Their mental health status should be checked and monitored at regular intervals as well.
3. The healthcare workers should provide a balance for their work and external relationships, both to friends and families.
4. The ministry of health should constitute a safety team or committee whose duty will be to constantly organize training for the healthcare worker on work safety and also to visit such facilities for safety inspection from time to time.

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