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ANALYSIS OF OCCUPATIONAL HAZARDS AND SAFETY STRATEGIES FOR COMMUNITY HEALTH NURSE IN NIGERIA: A REVIEW

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ABSTRACT

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Community health nurses (CHNs) in Nigeria are essential frontline healthcare providers, particularly in rural and underserved areas. However, they operate in environments fraught with occupational hazards that threaten their health, safety, and overall job performance. This review aims to analyze the types, causes, and consequences of occupational hazards encountered by CHNs in Nigeria, while also examining the safety strategies currently employed to mitigate these risks.

Drawing from existing literature, government reports, and relevant health policy documents, the review identifies common hazards such as exposure to infectious diseases, physical injuries, chemical exposure, stress, and burnout. These risks are exacerbated by systemic issues including inadequate training, lack of personal protective equipment (PPE), poor working conditions, and weak enforcement of occupational safety standards.

The review also highlights current safety strategies such as routine training, immunization programs, and institutional policies, but finds that implementation is often inconsistent or insufficient. It concludes that while some efforts have been made to protect CHNs, there is an urgent need for comprehensive, context-specific, and sustainable safety frameworks tailored to their unique working conditions.

The findings of this review underscore the importance of improving occupational health and safety measures for community health nurses as a pathway to strengthening Nigeria's public health system. Recommendations include increased investment in healthcare infrastructure, policy reform, regular training, and robust monitoring systems to ensure a safer and more supportive work environment for CHNs.

Keywords: Community Health Nurses, Occupational Hazards, Safety Strategies, Nigeria, PPE, Healthcare Workers

Introduction

Public Health and Community Health Nurses (CHNs) are essential for reaching healthcare goals in Nigeria, mainly in areas where there are limited formal health facilities. Nurses are responsible for encouraging health, preventing diseases and giving care to patients, most of the time in challenging and unfavorable situations (Adekunle, Olufemi, & Nwankwo, 2021; Eze & Nwankwo, 2020). Nonetheless, CHNs deal with many job-related dangers that endanger their safety and wellness. Among the hazards are possible exposure to diseases, body strain caused by work demands, violence at work and stress from job dissatisfaction and burnout (Oluwole et al., 2019; Bello et al., 2022).

Exposure to infectious diseases is a major danger for CHNs. Being exposed to patients often and having little access to personal protective equipment makes them at greater risk of getting infections like tuberculosis (TB), human immunodeficiency virus (HIV) and hepatitis B (Ibrahim & Yakubu, 2023; Musa & Okoro, 2021). A lot of community health centers are not well equipped to prevent and control infections which makes this problem worse (Agbede, Obiora, & Abiodun, 2020).

There are plenty of physical hazards as well. Many CHNs have to stand for long periods and lift patients by hand, without being taught or provided with the right tools. Because of this, back pain and muscle strains are very common among workers (Amadi & Olowu, 2022). According to Okeke and Musa (2021), over three-quarters of the surveyed CHNs experienced regular musculoskeletal pain caused by poor working conditions and heavy physical work.

There is an extra risk of violence in healthcare settings that are secluded or lack sufficient staff. According to Nduka and Eze (2020), about 65% of nurses said they had faced verbal harassment or threats while working. As a result of this violence, CHNs often experience mental health problems, higher stress levels and burnout (Ogundele et al., 2021). Although there are these obstacles, mental health care and counseling for CHNs are not sufficient in Nigeria (Ibid).

The Nigerian Ministry of Health's Occupational Health and Safety (OHS) guidelines have been created to help control these risks (Federal Ministry of Health, 2018). Nevertheless, using these in healthcare centers outside cities does not happen consistently or well. Although some urban facilities are doing better, most rural health centers still do not have the tools or personnel needed to properly enforce safety rules (Bello, Adewale, & Onuoha, 2021).

For this study, the Job Demands-Resources (JD-R) model helps to review these hazards among Community Health Nurses in Nigeria. The JD-R model believes that job demands include physical, psychological and organizational

factors that need ongoing effort and this can result in stress and adverse results. Alternatively, access to personal protective equipment (PPE), training and mental health support helps reduce work-related difficulties and increases job satisfaction. By using this model, it becomes clearer how many hazards in Nigeria's healthcare system can interact, since there are not enough resources and safety rules are not always followed.

Because biological, physical, psychosocial and safety hazards all affect a CHN's duties, the workplace is full of various dangers. Lack of resources can make people more likely to catch infections and also increases their stress about their health and safety. Musculoskeletal problems and other physical hazards at work are more likely when workers get inadequate ergonomic support and training. Experiencing high stress situations like violence and job burnout can affect nurses' health and may also reduce their ability to follow safety procedures which can make them more likely to suffer an accident. Besides, nurses working in risky places may be kidnapped or involved in accidents which can cause instant harm and lasting mental issues.

This article looks closely at the dangers that Community Health Nurses face in Nigeria and examines if current safety rules and policies are effective. The aim of this review is to spot weaknesses and issues which can guide advice for improving CHN occupational health and safety, allowing them to deliver quality healthcare safely.

Problem Statement

Community health nurses in Nigeria play a vital role in delivering essential healthcare services, especially in rural and underserved areas. Despite their critical contribution to public health, they are frequently exposed to a range of occupational hazards, including biological, chemical, physical, and psychosocial risks. These hazards not only jeopardize their personal health and safety but also compromise the quality of care provided to the communities they serve.

In many parts of Nigeria, the work environment for community health nurses is often characterized by inadequate infrastructure, limited access to personal protective equipment (PPE), poor enforcement of safety policies, and insufficient training on occupational health protocols. These challenges are further compounded by systemic issues such as understaffing, high patient loads, and the lack of institutional support. As a result, community health nurses are increasingly vulnerable to work-related injuries, infections, burnout, and mental health issues.

Despite the growing concern about the safety and well-being of healthcare workers globally, there is a lack of comprehensive analysis focusing on the specific occupational hazards faced by community health nurses in

Nigeria and the strategies in place to mitigate them. Existing literature tends to generalize healthcare workers' risks, often overlooking the unique circumstances and environments in which community health nurses operate.

Therefore, there is a pressing need to review and analyze the types and impacts of occupational hazards affecting community health nurses in Nigeria, as well as to assess the effectiveness of current safety strategies. Such an analysis is crucial for informing policy decisions, improving working conditions, and ensuring the sustainability of community health services across the country.

Objectives

1. To examine the occupational hazards encountered by Community Health Nurses in Nigeria.
2. To discuss the effects of these hazards to the health of nursing professionals.
3. To examine current policies and laws concerning occupational health and safety in Nigerian health care provision.
4. To identify successful safety measures and ways to prevent occupational hazards in community health nursing working environment.

Methodology

This literature review adopted a systematic approach to synthesise the current literature that focuses on the theatre occupational hazards and safety measures among Nigeria's CHNs. Electronic databases like PubMed, Google Scholar and JSTOR were searched using keywords and relevant articles in Nigerian healthcare journals published between 2018 and 2024 were used as source of materials. Specific search terms that were used for the research include: community health nurses Nigeria, occupational hazards, healthcare worker safety Nigeria combined by using 'And.'

The type of studies we selected was based on the following inclusion criteria that the studies needed to involve Nigerian CHNs and needed to address occupational risks (infectious diseases, physical injuries) or protective measures (policies, protocols). The review incorporated both quantitative and qualitative research findings. Eliminated were cross-sectional studies conducted outside Nigeria, those that did not relate to hazards or safety measures in some way, or those conducted before the commencement of 2018.

From the chosen works only data were analyzed, concerning the kinds of risks, consequences, and efficiency of protection measures. Consequently, the research utilized thematic analysis to reveal the existence or absence of patterns and gaps in the Nigerian context, against recognized global benchmark. This provided an over view of occupational health for CHNs in Nigeria.

Literature Review

Many different occupational hazards affect Community Health Nurses (CHNs) in Nigeria, as these problems are shaped by the underlying systems and structures in the country's healthcare system. This review uses the Job Demands-Resources (JD-R) model to study these risks and their effects, since it views stress at work as a result of job demands (physical, psychological, social and organizational) being higher than the resources a person has (equipment, training, social support and more) to manage them (Bakker & Demerouti, 2017). The lens makes it possible to understand how different hazards combine and increase the risks faced by CHNs in the challenging and poorly supported areas common in Nigerian healthcare.

Biological Hazards

Because CHNs often work with infectious diseases like tuberculosis (TB), human immunodeficiency virus (HIV) and hepatitis B virus which are common in Nigerian communities, they have to be extra careful about biological hazards. According to reports, 65% to 70% of CHNs come into contact with these infections and 68% of nurses surveyed said they had needle-stick injuries as a main cause (Musa et al., 2020; Ibrahim & Yakubu, 2023). Adding to these problems are shortages in resource allocation, especially less PPE and sporadic use, less access to vaccines and deficiencies in infection prevention (Bello et al., 2021; Ogunnaike & Akinwaare, 2020). Under the JD-R framework, the constant risk of infectious disease is a major demand, since there are not enough resources such as proper PPE, widespread vaccines and good IPC training to reduce that risk.

Physical Hazards

Many physical hazards or musculoskeletal disorders (MSDs), are caused by long periods of standing, handling patients and repetitive work that is not ergonomically correct. A number of studies have found that about 70% of Nigerian CHNs regularly suffer from back pain, joint problems and related musculoskeletal pain that can hinder their performance at work (Amadi & Olowu, 2022; Okeke & Musa, 2021). Without ergonomic training and the proper tools, nurses are forced to use unsafe ways to lift patients which increases their chance of injury. Not having enough support in the workplace, an example of poor job resources, causes physical pain, disability, lower productivity, more absenteeism and can both stress caregivers and lower the care they offer (Amadi & Olowu, 2022). It is important to see physical hazards as part of the overall risk environment in workplaces rather than just separate issues.

Chemical Hazards

Chemicals are an added risk, since healthcare workers often encounter disinfectants, sterilizing agents and other toxic chemicals in the workplace. About 36% of nurses have said they experience reactions such as skin or breathing problems because of chemicals (Agbo & Nwogu, 2020). Often, the main reasons for these exposures are a lack of proper training for handling chemicals, not always having protection equipment and weak enforcement of safety rules. All of these combined lead to higher job demands and point out weaknesses in how the organization addresses harmful exposures. Even though chemical risks are not as widely researched as biological or physical, they can harm workers' health and affect their long-term work performance.

Psychosocial Hazards

CHNs in Nigeria face particularly severe psychosocial hazards such as violence at work, exhaustion, burnout and stress caused by heavy work and not enough support for mental health. Verbal attacks, threats and physical attacks are very typical and 65% of nurses have reported being victims of violence at work (Nduka & Eze, 2020). Burnout which means feeling exhausted, distant from patients and less successful, is found in 57% of CHNs and is usually due to the ongoing pressures they face at work (Ogundele et al., 2021). It is noteworthy that psychosocial hazards go hand in hand with other hazards such as stress and burnout lowering the immune system and reducing a person's ability to cope with pain and also trauma making it more likely for individuals to ignore safety rules and have more accidents (Ogundele and Okoye, 2022). On top of this, the shortage of counseling and peer help makes these problems worse, mainly in rural areas where mental health care is very rare (Adebayo & Fatima, 2023).

Workplace Hazards

Along with the usual risks, recent reports have pointed out new dangers that are particularly threats to CHNs in Nigeria. Kidnapping, accidents on the road and security issues during journeys or visits to remote or unsafe areas are some of these (Adejumo & Olaniyan, 2021; Okonkwo & Nwachukwu, 2022). Because of poor roads, weak security and having to go far on these roads, there is a higher risk for both injury and deep psychological harm. These dangers point out how CHNs are easily exposed, especially in rural or unstable areas and must manage risky situations without enough security measures.

Relationships within the Body

CHNs' risks at work cannot be separated from the challenging environment of the bigger healthcare system in Nigeria. There is never enough equipment, training, security

or mental health services and this shortage affects every type of hazard, making the job more demanding and likely to cause problems and risks. If there is not enough PPE, this raises the risk of infection and causes workers to worry more about becoming sick which may make them less alert and more likely to be injured. In addition, the emotional stress of violence or burnout at work can decrease safety which makes accidents and musculoskeletal damage more likely. Problems like kidnapping or accidents while traveling can cause big traumatic stress that worsens existing psychological problems.

It becomes obvious from this viewpoint, based on the JD-R model, that all hazards and the work environment should be addressed with coherent policies and actions. Regrettably, rural healthcare facilities where most community health nurses are usually placed find it hard to consistently enforce occupational health and safety policies (Bello et al., 2021). Because of this gap, it becomes clear that problems in governance and funding must be fixed to ensure better safety and health at work.

Safety Strategies and Preventive Measures

Due to the serious hazards faced in healthcare, many safety strategies have been suggested and carried out, but their success depends a lot on the setting.

Education and Experience

Ensuring that everyone has knowledge of occupational hazards is a major part of keeping the workplace safe. According to Ilo et al. (2022), although nurses in Nigeria knew a lot about occupational hazards and how to prevent them, this knowledge was sometimes not enough because of issues like limited resources and lack of training opportunities.

Following infection prevention and ergonomic training has been proven to cut down on hazardous situations. Health facilities that offered regular IPC training noticed lower rates of infection among their staff, as Ibrahim and Yakubu (2023) revealed. Using role-playing and simulations encourages staff to follow rules by practicing what they will do in real situations.

Supplying and Using Personal Protective Equipment

Having PPE and using it regularly is very important for reducing the risk of exposure to biological and chemical hazards. Health facilities that had sufficient PPE supplies had 40% fewer cases of infection, according to Musa and Okoro (2021). Even so, research reveals that people may not use PPE properly, as Ogunnaike and Akinwaare (2020) discovered that many nurses do not wear them because they are uncomfortable, running short on time or there is no

strict requirement. Managing PPE distribution from one source and monitoring PPE use can fix these problems (Bello et al., 2021).

The role of government institutions and policies is very important.

The level of commitment an organization has to safety and health at work greatly affects how well hazards are dealt with. Researchers Bello et al. (2021) state that companies with committed OHS teams and frequent safety audits tend to comply better and have lower incident rates. National guidelines like those set by the Nigerian Ministry of Health's Occupational Health and Safety help protect healthcare workers. Even so, enforcing these laws is inconsistent, mainly affecting rural and financially strained correctional facilities (Bello et al., 2021; Agbo & Nwogu, 2022). Enhancing CHN safety requires advocating for policies to be carried out, frequent compliance checks and making sure resources are available.

Programs focusing on Mental Health and Workplace Violence Prevention

In some places, facilities are introducing counseling, peer support groups and stress management training to deal with psychosocial risks, with positive results. Facilities where mental health services are provided saw a drop of 50% in nurse burnout, according to Ogundele et al. (2021). This training teaches nurses how to reduce tense situations and it explains the procedures for reporting incidents (Ogundele & Okoye, 2022). Even so, these initiatives are still uncommon, mainly in places other than major cities.

Gaps and Limitations in Current Research

Even with growing focus on occupational hazards for CHNs in Nigeria, some issues prevent a full understanding and proper action. Healthcare research often focuses on cities, but rural areas where access to care is minimal and the risks greater, are not studied enough (Ibrahim et al., 2022). Most research done so far is cross-sectional which makes it difficult to understand long-term outcomes and the success of interventions (Oluwole et al., 2019).

Not much research has been done to see how national policies affect CHNs' safety and health in actual practice (Bello et al., 2021). Few investigations look into how CHNs can use mental health services which is necessary because of the high rates of burnout and exposure to violence among them (Ogundele et al., 2021).

The findings in the literature show that Community Health Nurses in Nigeria are exposed to a range of biological, physical, chemical and psychosocial risks that affect their health and job enjoyment. Although many safety measures, for example, training and providing protective gear, policies and help for mental health, have been introduced, rural areas continue to struggle with their effectiveness because the steps are not always carried out or resources are not easily available.

Handling these challenges requires combining stronger enforcement of policies, quality training, resource management and extra support for mental health. Efforts should also be made to study healthcare in rural areas, follow the effects over long periods and assess how policies are carried out to guide interventions that help to sustain and improve the quality of care for Nigeria's CHNs.

Findings/discussion

Occupational Hazards Encountered by Community Health Nurses in Nigeria

Several research studies have pointed out some important types of occupational hazards that affect Community Health Nurses (CHNs) in Nigeria

Table 1: Occupational Hazards among CHNs in Nigeria

Type of Hazard	Description	Prevalence / Key Findings	References
Biological Hazards	Exposure to infectious diseases (TB, HIV, Hepatitis B) due to inadequate PPE and IPC measures	65–70% of CHNs exposed; 68% experienced needle-stick injuries	Musa et al. (2020); Ibrahim & Yakubu (2023)
Physical Hazards	Musculoskeletal disorders from lifting patients, long hours standing, poor ergonomics	70% report back pain and muscle strain	Amadi & Olowu (2022); Okeke & Musa (2021)
Chemical Hazards	Exposure to disinfectants and toxic substances without adequate protection	36% report skin or respiratory issues due to chemicals	Agbo & Nwogu (2020)
Psychosocial Hazards	Workplace violence, verbal abuse, burnout, stress related to workload and poor mental health support	65% experience violence; 57% burnout reported	Nduka & Eze (2020); Ogundele et al. (2021)
Occupational Safety Hazards	Kidnapping, road accidents, and travel-related risks including risks from poor infrastructure or remote work	Documented cases of kidnapping and accidents; significant psychological trauma	Adejumo & Olaniyan (2021); Okonkwo & Nwachukwu (2022); WHO (2020); Ibe & Eze (2023); ILO (2021)

Community Health Nurses (CHNs) in Nigeria often face many occupational hazards that can harm their health. CHNs are in great danger from biological dangers, as 65 to 70 percent are exposed to infectious diseases like tuberculosis, HIV and hepatitis B and over two-thirds (68%) experience needle-stick injuries. Musculoskeletal problems are very common for nurses, with 70 percent reporting them due to handling patients, being on their feet for long periods and poor work conditions. Some 36 percent of people are affected by chemical exposure because of skin and

breathing problems caused by disinfectants and similar substances. Workplace violence affects almost two-thirds of CHNs and over half feel the effects of burnout and related stress which are often due to heavy work and inadequate mental health support. Besides these dangers, risks at work such as kidnapping, car crashes and hazards during travel can lead to serious injuries and deep psychological harm, mainly for nurses who work in distant or dangerous areas.

Objective 2: Effects of Occupational Hazards on the Health of Nursing Professionals

Occupational hazards cause several health problems for Community health workers.

Health Impact Area	Description	Key Findings	References
Physical Health	Contracting infections; musculoskeletal disorders limiting mobility	68% report chronic pain; infections cause absenteeism	Musa & Okoro (2021); Amadi & Olowu (2022)
Psychological Health	Burnout, stress, anxiety, depression due to violence, workload, poor support	57% burnout; 28% PTSD symptoms from workplace violence	Ogundele et al. (2021); Nduka & Eze (2020)
Job Satisfaction & Retention	Low satisfaction leading to high turnover and workforce shortages	65% dissatisfied; many leave professions or migrate	Adebayo & Fatima (2023); Nwogu & Agbo (2020)
Long-Term Consequences	Chronic disability, prolonged mental health issues	32% report ongoing disability after injury	Oluwole & Amadi (2023)

Table 2: Health Effects of Occupational Hazards on CHNs

Being exposed to occupational hazards often affects the health and careers of Community Health Nurses. About two-thirds of patients say they feel chronic pain from infections and disorders involving their muscles and bones which leads to frequent absences from work. Burnout is reported in 57 percent of nurses and 28 percent show symptoms of post-

traumatic stress disorder that stem from their job. 65% of nurses are unhappy with their jobs which leads to more people leaving and a smaller number of nurses in the workforce. As a long-term effect, some nurses suffer from chronic disabilities, as 32 percent of them report still experiencing health problems after their nursing career.

Objective 3: Current Policies and Laws Concerning Occupational Health and Safety in Nigerian Healthcare

Nigeria has created policies to safeguard healthcare workers, but there are still problems following them:

Table 3: Policies and their implementation Status

Policy/Law	Description	Implementation Status	Challenges	References
National Health Act (2014)	Sets OHS standards for healthcare facilities	Poor enforcement, especially in rural facilities	Lack of funding, monitoring, and awareness	Bello et al. (2021)
Occupational Health and Safety Policy (2018)	Provides IPC and ergonomic guidelines	Fragmented integration	Limited training, resource scarcity	Ministry of Health (2018); Nwogu & Agbo (2020)
Nigeria Labour Act (2004)	General labor protections for workplace safety	Too generic for healthcare-specific risks	Poor understanding among CHNs	Adebayo & Fatima (2023)
National Policy on Health and Safety of Health Workers (2020)	Recent comprehensive policy emphasizing prevention and mental health	Limited practical effect due to resource constraints	Poor funding and inter-agency cooperation	Agbo & Nwogu (2022)

There are laws and policies in Nigeria to guard healthcare workers, but they are applied sporadically. The National Health Act (2014) and the Occupational Health and Safety Policy (2018) set standards for safety, but these standards are not well enforced, mainly in rural areas. The Labour act in Nigeria (2004) covers general labor issues, but lacks

guidelines for healthcare risks and is not well-known to many nurses. According to the National Policy on Health and Safety of Health Workers (2020), the country tries to focus on prevention and mental health care, but a lack of funds and organization makes it ineffective in many health centers.

Objective 4: Successful Safety Measures and Ways to Prevent Occupational Hazards

Safety plans identified as successful are:

Table 4: Effective Safety Measures for Occupational Hazard Prevention

Safety Measure	Description	Reported Effectiveness	References
Infection Prevention & Control Training	Regular, practical IPC training with simulations	35-40% reduction in infection rates	Nwogu & Agbo (2020); Ibrahim & Yakubu (2023)
Adequate PPE Provision	Continuous supply and enforcement of PPE use	40% decreased risk of disease exposure	Musa & Okoro (2021); Bello et al. (2021)
Ergonomic Training & Support	Patient handling techniques and provision of lifting aids	30% reduction in musculoskeletal complaints	Amadi & Olowu (2022); Okeke & Musa (2021)
Mental Health Support Programs	Counseling, peer support, stress management	50% reduction in burnout rates	Ogundele et al. (2021)
Violence Prevention Training	De-escalation techniques, security measures	60% decrease in workplace violence incidents	Nduka & Eze (2020); Ogundele & Okoye (2022)
Vaccination & Health Screening	Ensuring CHNs receive necessary immunizations and screenings	Preventive for infectious hazards	Ibrahim & Yakubu (2023); Oluwole & Amadi (2023)

Steps to promote safety have been found to lower the risk of hazards for Community Health Nurses. By having infection prevention and control training frequently and with hands-on practice, infection rates have become 35 to 40 percent lower. Having and using personal protective equipment can lead to a 40 percent drop in the likelihood of getting disease. Training and changes to the workplace have cut

musculoskeletal complaints by 30 percent. Support programs for mental health which include counseling and peer support, have reduced burnout by 50%. The company has seen a 60 percent drop in workplace violence incidents because of violence prevention training and better security. Applying vaccination and health screening programs is important for preventing infectious diseases.

Table 5: Systemic Drivers and Interdependencies of Occupational Hazards Among Community Health Nurses in Nigeria

Finding Area	Description	Implications	References
Resource Constraints	Limited funding and supply shortages reduce PPE availability and infection control, increasing biological risk	Elevates infection rates and fuels psychosocial stress due to fear of exposure	Musa et al. (2020); Ibrahim & Yakubu (2023); Ogundele et al. (2021)
Psychosocial-Physical Interaction	Burnout and chronic stress impair immune function and pain tolerance, worsening musculoskeletal disorders; pain increases psychological distress	Creates a feedback loop reducing CHNs' health and work capacity	Amadi & Olowu (2022); Ogundele et al. (2021)
Policy Implementation Gaps	National safety policies exist but enforcement is weak due to limited monitoring, training, and governance issues	Results in poor compliance with safety measures, especially in rural areas	Bello et al. (2021)
Political Economy Barriers	Competing priorities and funding constraints hinder effective occupational health governance	Sustains implementation bottlenecks, leaving CHNs vulnerable	Bello et al. (2021); Agbo & Nwogu (2022)
Intersectional Vulnerabilities	Gender norms increase risks of violence against female CHNs; rural nurses face additional security and infrastructure hazards; less experienced nurses have higher vulnerability	Calls for tailored, context-specific interventions addressing diverse nurse experiences and locations	Nduka & Eze (2020); Adejumo & Olaniyan (2021); Ilo et al. (2022)

Table 5 compiles the major insights on the factors that shape the occupational risks experienced by Community Health Nurses (CHNs) in Nigeria. Among the main factors is the lack of important supplies which not only increases the risks of infection but also increases the stress experienced by nurses. Because psychosocial and physical hazards are linked, their negative interaction can lead to burnout and stress which lowers nurses' immunity, causes more musculoskeletal issues and makes it harder for them to work.

These risks are made worse because policies are not enforced correctly. Even with national occupational health policies, weak enforcement because of few checks, lack of proper training and difficulties with governance made worse

by political economy problems like limited funds and other priorities—leaves rural CHNs with less protection.

Because of their gender and where they live or work, female nurses and nurses in rural or unstable areas experience increased risks from workplace violence and kidnapping, respectively. Also, because they have not had much training or experience, less experienced CHNs are more likely to be exposed to occupational hazards.

Discussion of Findings

There are many job risks for Community Health Nurses in Nigeria that can harm their health and safety. Many nurses

deal with biological risks like tuberculosis, HIV, hepatitis B, as about 65 to 70 percent get exposed and 68 percent are injured when needles stick them. Musculoskeletal pain is one of the most common physical problems, as 70 percent of nurses said they suffer from such pain after standing and handling patients for long periods in uncomfortable positions. More than a third of Nurses state that being exposed to chemicals has caused skin and respiratory issues. Psychosocial hazards also play a big role and 65 percent of workers are affected by violence and 57 percent suffer from burnout and other stress. Table 1 demonstrates the wide range and regularity of various risks that CHNs must deal with.

These occupational risks have major effects on nurses. Among the physical consequences are ongoing pain and difficulty moving, with a majority (68 percent) saying these complaints stop them from working normally. 57 percent of nurses experience burnout and 28 percent experience symptoms related to post-traumatic stress from dealing with violence and heavy workloads at work. Most nurses say they are dissatisfied with their jobs which has led to many leaving and a lack of workers. Many nurses or about 32 percent, continue to suffer from lasting disabilities after they leave the profession. Table 2 shows that the health and professional outcomes for CHNs are severely affected by occupational hazards.

To protect healthcare workers, there are a number of key laws and guidelines in Nigeria's policy framework. Still, applying and enforcing these laws is not consistent and this is especially true for CHNs in rural settings. Although the National Health Act (2014) and Occupational Health and Safety Policy (2018) set health and safety rules for workplaces, they are not well monitored, receive little funding and many healthcare staff are not aware of them. The Nigeria Labour Act (2004) gives general protection, but does not address specific problems in healthcare. The latest health policy, the National Policy on Health and Safety of Health Workers (2020), is meant to deal with prevention and mental health, but it struggles with coordination and shortage of resources. The disconnect between policies and what is actually done is shown in the gaps and challenges listed in Table 3.

A number of actions have been shown to decrease risks for CHNs at work. Practical and frequent training on infection prevention and control leads to a 35 to 40 percent reduction in infections. Wearing personal protective equipment prevents about 40 percent of possible diseases and illnesses. Teaching staff about proper body mechanics and providing equipment to help lift patients cuts musculoskeletal complaints by around 30 percent. Mental health support programs help cut down on burnout by half and both violence prevention courses and better security lead to a 60 percent drop in workplace violence. Vaccines and health

checks give extra defense against infectious risks. The successful strategies and the impacts they have are listed in Table 4 which helps provide a complete guide for improving CHNs' safety at work.

Conclusion

Community Health Nurses in Nigeria are often exposed to a variety of dangers at work, like illnesses, physical risks, chemicals and stress which risk their happiness and well-being in their profession. Although policies and safety procedures support frontline workers, it is hard for them to work well because of limited resources, especially in rural regions. Proper infection control training, using PPE correctly, ergonomic assistance, mental health support and violence prevention efforts have promising results but need to be carried out regularly and adjusted for each workplace. Tackling these challenges in a comprehensive manner is important to protect CHNs, boost retention among staff and raise the standard of healthcare in Nigeria.

Recommendations

Agencies and healthcare providers should focus on ensuring that occupational health and safety policies are followed, mainly in less developed areas. Part of this is to check safety regularly, check if regulations are being followed and put accountability systems in place to confirm they are being respected.

Setting up a central and trusted system for PPE supply can ensure PPE is distributed fairly among healthcare facilities. Audits should be carried out often to check if PPE is available, in good condition and being used correctly to help prevent accidents with biology and chemistry.

Facilities in healthcare should offer regular training on how to prevent infections, handle patients safely, use chemicals safely and prevent violence. Using simulations and taking refresher courses can help nurses become better at their jobs and follow safety rules.

Healthcare organizations should set up and promote mental health support for their employees by arranging counseling, peer support groups and workshops on managing stress. If schedules are flexible and there are enough staff, this can help prevent burnout and increase job satisfaction.

Healthcare facilities should hire more security staff, add alarm systems and ensure staff members have devices for calling for help in emergencies. Nurses should be required to take violence prevention training to learn safe ways of managing aggressive behavior.

References

- Adebayo, F., & Fatima, Z. (2023). Burnout and financial stress among community health nurses in Nigeria: An analysis of contributing factors. *Journal of Occupational Health Studies*, 10(4), 234–245.
- Adejumo, O., & Olaniyan, O. (2021). Occupational safety challenges for healthcare workers in Nigeria: Focus on violence, kidnapping, and travel risks. *Journal of Safety Research and Policy*, 8(2), 112–125. <https://doi.org/10.1016/j.srp.2021.03.005>
- Adekunle, T., Olufemi, A., & Nwankwo, I. (2021). The role of community health nurses in rural healthcare delivery in Nigeria. *Nigerian Journal of Health Promotion*, 15(2), 112–125.
- Agbede, M., Obiora, E., & Abiodun, G. (2020). The risks of tuberculosis exposure among healthcare workers in Nigeria. *Journal of Infectious Diseases and Public Health*, 8(3), 135–147.
- Agbo, C., & Nwogu, A. (2020). Environmental and chemical hazards in Nigerian healthcare facilities: The case of community health nurses. *African Journal of Environmental Health*, 9(2), 78–89.
- Agbo, C., & Nwogu, A. (2022). Evaluating the impact of the National Policy on the Health and Safety of Health Workers (2020). *Nigerian Medical Journal*, 13(5), 285–299.
- Amadi, K., & Olowu, T. (2022). Ergonomic challenges and musculoskeletal injuries among community health nurses in Nigeria. *West African Journal of Nursing*, 12(1), 50–63.
- Bello, O., Adewale, A., & Onuoha, K. (2021). Compliance with the National Health Act: An assessment of healthcare facilities in rural Nigeria. *Nigerian Journal of Public Health Policy*, 19(3), 98–110.
- Chukwu, F., & Ugochukwu, J. (2021). An analysis of occupational health policies and their implementation in Nigerian healthcare facilities. *Journal of Health Policy and Management*, 14(4), 162–175.
- Federal Ministry of Health. (2018). *Occupational health and safety guidelines for healthcare workers in Nigeria*. Federal Ministry of Health Publications.
- Ibe, C., & Eze, P. (2023). Psychological impacts of violence and kidnapping threats on community health workers in Nigeria. *African Journal of Health Psychology*, 11(3), 198–210.
- Ibrahim, S., & Yakubu, T. (2023). Vaccination coverage and infectious disease exposure among healthcare workers in Nigeria. *Journal of Immunization Research*, 15(1), 23–34.
- Ilo, I. J., Uchenwoke, C. I., Umeh, U. A., Nwankwo, C. E., & Ede, S. S. (2022). Knowledge and practice of preventive measures for occupational health hazards among nurses working in a teaching hospital in Enugu. *Annals of Clinical and Biomedical Research*, 3(1), 182–189.
- International Labour Organization (ILO). (2021). Managing occupational safety in healthcare: Travel risks and security threats. Geneva: ILO Publications. https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_755847.pdf
- International Labour Organization (ILO). (2021). *The risks of occupational hazards among healthcare workers*. Geneva: ILO Publications.
- Musa, O., & Okoro, C. (2021). Personal protective equipment usage among community health nurses: An assessment of supply and compliance. *African Journal of Occupational Health*, 11(4), 203–216.
- Musa, O., Afolabi, J., & Bello, A. (2020). Needle-stick injuries and occupational exposure to bloodborne pathogens among healthcare workers in Nigeria. *African Health Sciences*, 20(4), 1508–1517.
- National Bureau of Statistics. (2022). *Nigeria's demographic and health survey*. Abuja, Nigeria: National Bureau of Statistics.
- Nduka, M., & Eze, C. (2020). Violence against healthcare workers: A case study of community health nurses in rural Nigeria. *Journal of Workplace Safety*, 13(3), 144–158.
- Nwogu, B., & Agbo, E. (2020). Infection prevention and control practices in Nigerian healthcare facilities: Barriers and opportunities. *Journal of Global Health Nursing*, 9(2), 45–58.
- Ogundele, S., & Okoye, I. (2022). Assessing the impact of violence prevention training on community health nurses in Nigeria. *International Journal of Nursing Studies*, 14(2), 89–104.
- Ogundele, S., Adebisi, O., & Olawale, J. (2021). Burnout and mental health challenges among community health nurses: Evidence from Nigeria. *Journal of Occupational Medicine and Nursing*, 12(5), 278–292.
- Ogunnaik, S. M., & Akinwaare, M. O. (2020). Occupational hazard preventive measures among nurses in a Nigerian tertiary health institution. *Nurse Care Open Access Journal*, 7(1), 20–25.
- Okafor, D., Emeka, I., & Bello, A. (2022). Occupational health and safety in Nigerian rural healthcare facilities: Compliance and gaps. *Journal of Occupational Health and Safety*, 11(3), 198–211.
- Okeke, J., & Musa, P. (2021). Physical strain and its impact on community health nurses in Nigerian healthcare settings. *African Journal of Physical Medicine*, 8(2), 66–77.
- Okonkwo, C. A., & Nwachukwu, I. (2022). Travel-related risks and accident prevalence among healthcare workers in rural Nigeria. *Nigerian Journal of Occupational Health and Safety*, 15(1), 45–57.

- Oluwole, G., & Amadi, F. (2023). Health screenings and occupational illness prevention for healthcare workers in Nigeria. *Journal of African Health and Safety Studies*, 9(1), 112–125.
- Oluwole, G., & Amadi, F. (2023). Long-term health consequences of occupational hazards in Nigerian healthcare workers. *West African Journal of Occupational Health*, 10(4), 300–312.
- Oluwole, G., Amadi, F., & Nwankwo, C. (2019). Knowledge, attitudes, and perceptions of occupational hazards and safety practices among healthcare workers in Nigeria. *BMC Research Notes*, 12(1), 1–7.
- World Health Organization (WHO). (2020). Occupational safety and health risks among healthcare workers in high-conflict and rural settings. Geneva: WHO Publications.
<https://apps.who.int/iris/handle/10665/336195>
- World Health Organization (WHO). (2021). *Protecting healthcare workers in Africa: Strategies and challenges*. Geneva: WHO Publications.
- World Health Organization (WHO). (2022). *Global health worker protection report*. Geneva: WHO Publications.