

ANALYSIS OF THE PREVALENCE OF SLEEP DISORDERS AMONG SHIFT WORKERS IN DUTSIN-MA METROPOLIS, KATSINA STATE, NIGERIA

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Abstract

This study investigated the prevalence of sleep disorders among night-shift workers in Dutsin-Ma Metropolis, Katsina State, Nigeria, examined occupational determinants, and explored counselling implications. A cross-sectional survey design was employed. The target population comprised 1,550 night-shift workers across healthcare, security, industrial, and transport sectors. Using stratified random sampling, a purposive sample of 250 respondents was selected. Data were collected using a structured questionnaire incorporating the Pittsburgh Sleep Quality Index (PSQI) and Epworth Sleepiness Scale (ESS). Descriptive statistics summarized prevalence, while chi-square tests, logistic regression, and ANOVA tested the null hypotheses at a 0.05 significance level. Analysis revealed high prevalence of sleep disorders, with poor sleep quality (43.2%) and insomnia (36.8%) most common. Significant associations were found between occupational category and insomnia ($\chi^2 = 12.47$, $p = 0.006$), while ANOVA confirmed differences in mean PSQI scores across occupational groups ($F = 5.62$, $p = 0.001$). Healthcare and industrial workers reported the poorest sleep outcomes. All null hypotheses were rejected, indicating significant prevalence, occupational determinants, and counselling implications. Findings conclude that sleep disorders are widespread among night-shift workers, driven by circadian disruption and occupational stress. Counselling interventions grounded in Cognitive Behavioral Therapy for Insomnia (CBT-I), sleep hygiene education, and stress management are essential. The study reinforces the Biological Clock Theory, Job Demand-Control Model, and Cognitive Behavioral Theory, providing a framework for occupational counselling practice. The researcher recommends integrating counselling services into workplace health programmes, mandating regular sleep health assessments through national policy, adopting flexible shift schedules to reduce circadian disruption, and developing training programmes to equip counsellors with specialized skills in sleep health interventions.

Keywords: Sleep disorders, night-shift workers, circadian rhythm, occupational stress, counselling interventions

Introduction

Sleep is a fundamental biological process essential for physical health, psychological wellbeing, and cognitive functioning. Disruptions in sleep patterns, particularly among individuals engaged in shift work, have become a pressing global concern. The International Classification of Sleep Disorders recognizes Shift Work Sleep Disorder (SWSD) as a circadian rhythm sleep disorder characterized by insomnia and excessive sleepiness

associated with work schedules that conflict with normal sleep patterns (American Academy of Sleep Medicine, 2014). Globally, studies estimate that 20–30% of shift workers experience clinically significant sleep disturbances, with prevalence varying across industries such as healthcare, manufacturing, and transportation (Wickwire, Geiger-Brown, Scharf & Drake, 2017).

The consequences of sleep disorders extend beyond individual health to societal and economic domains. Sleep deprivation has been linked to cardiovascular disease, diabetes, obesity, depression, and impaired immune functioning (Medic, Wille, & Hemels, 2017). Inadequate sleep contributes to reduced workplace productivity, higher absenteeism, and increased occupational accidents (Rajaratnam et al., 2013). In high-risk professions such as healthcare and transportation, sleep disorders compromise safety, leading to medical errors and accidents with potentially fatal outcomes (Garbarino & Magnavita, 2019). These findings underscore the global relevance of sleep disorders as both a public health and occupational health issue.

Shift work disrupts the body's circadian rhythm, which regulates sleep-wake cycles. Night shifts, rotating shifts, and irregular schedules force workers to sleep at biologically inappropriate times, leading to chronic sleep deprivation and circadian misalignment (Boivin & Boudreau, 2014). Night-shift workers are particularly vulnerable, with higher prevalence of insomnia and excessive daytime sleepiness compared to those on rotating or evening shifts (Flo et al., 2012). Psychosocial stressors such as workload, job demands, and limited social support further exacerbate sleep problems.

The impact of shift work on sleep is not uniform across populations. Age, gender, occupation, and lifestyle influence susceptibility. Younger workers may adapt more easily, while older workers often struggle to maintain sleep quality (Vanttola et al., 2020). Women balancing work and family responsibilities report higher rates of insomnia and fatigue (Booker et al., 2020). These variations highlight the need for context-specific research to understand how sleep disorders manifest in different populations.

In Nigeria, sleep disorders among shift workers are increasingly recognized as a significant occupational health concern. Studies in healthcare settings reveal alarming prevalence rates. For instance, research among nurses in a Nigerian teaching hospital found that nearly 50% reported symptoms consistent with SWSD (Oluwole et al., 2017). Similarly, a study in Kano highlighted widespread poor sleep quality among healthcare workers, attributed to irregular schedules, high workload, and occupational stress (Aliyu et al., 2019). These findings align with global trends but also reflect unique challenges faced by Nigerian workers, including limited access to occupational health services and counselling support.

Beyond healthcare, sectors such as security, transportation, and industry also involve extensive shift schedules. In urban centres like Dutsin-Ma Metropolis, where economic activities increasingly rely on round-the-clock operations, shift work is common among factory workers, security personnel, and service providers. The prevalence of sleep disorders in these groups has direct implications for community wellbeing and economic productivity. Sleep-deprived workers are more prone to accidents, reduced efficiency, and long-term health complications, which in turn affect organizational performance and public safety.

Despite growing recognition, research in Nigeria remains limited. Few studies have systematically examined sleep disorders among non-healthcare shift workers, leaving a gap in

understanding the broader occupational health landscape. Addressing this gap is crucial for developing effective interventions and policies tailored to the Nigerian context.

The relevance of sleep disorders to counselling practice cannot be overstated. Counsellors play a vital role in promoting mental health, wellbeing, and occupational adjustment. Cognitive Behavioural Therapy for Insomnia (CBT-I) is widely recognized as the first-line treatment for chronic insomnia, with evidence supporting its effectiveness in improving sleep quality and reducing fatigue (Trauer et al., 2015). Counsellors can adapt CBT-I techniques to address the specific needs of shift workers, incorporating strategies such as sleep hygiene education, relaxation training, and cognitive restructuring. Workplace-based interventions are equally essential, including stress management workshops, sleep education programmes, and peer support groups. These initiatives improve sleep outcomes, enhance job satisfaction, and boost productivity. In Nigeria, integrating sleep health into workplace counselling programmes represents an innovative approach to addressing a critical public health issue.

The interplay of circadian rhythm disruption, occupational stress, and health outcomes forms the foundation of sleep disorders among shift workers. Circadian misalignment leads to insomnia and excessive sleepiness, which reduce productivity and compromise workplace safety. Counselling interventions serve as a critical mechanism for breaking this cycle, addressing both behavioural and psychological factors.

By situating the study within Dutsin-Ma Metropolis, this research highlights the local dimension of a global problem. The findings will contribute to academic knowledge and inform practical strategies for counselling and occupational health in Nigeria. Ultimately, addressing sleep disorders among shift workers is essential for promoting sustainable wellbeing, enhancing productivity, and safeguarding public health.

Statement of the problem.

Sleep is a vital physiological process that sustains human health, cognitive functioning, and productivity. Yet, the demands of modern society increasingly disrupt natural sleep patterns, particularly among individuals engaged in shift work. Globally, shift workers are disproportionately affected by sleep disorders such as insomnia, excessive daytime sleepiness, and circadian rhythm disturbances (Hernandez, Bautista & Tan, 2022). These conditions compromise wellbeing and pose significant risks to workplace safety, organizational efficiency, and public health. Studies consistently show that sleep disorders among shift workers contribute to reduced productivity, absenteeism, and heightened risk of accidents in high-stakes professions such as healthcare, transportation, and security (Kanthraj, Kalaburgi & Veena Kanthraj, 2025; Scott-Marshall, 2024; & Abraham, 2023). Despite growing recognition, sleep disorders remain underdiagnosed and undertreated, especially in developing countries with limited occupational health services.

In Nigeria, the problem is pressing. Expansion of industrial activities, healthcare services, and security operations has increased reliance on shift work across multiple sectors. Research among healthcare workers by Yazid Chik and Yusop (2025) reveals alarming prevalence rates, with nearly half of nurses reporting symptoms consistent with Shift Work Sleep Disorder. Similar findings among other occupational groups by Segon, Aderaw, Nakie, Yenealem, Seid and Kerebih (2026) underscore the widespread nature of the problem. Yet

systematic research on non-healthcare shift workers remains scarce. This gap limits the ability of policymakers, employers, and counsellors to design effective interventions tailored to the Nigerian context. In urban centres such as Dutsin-Ma Metropolis, where economic activities depend on round-the-clock operations, sleep disorders among shift workers have direct implications for community wellbeing, economic productivity, and public safety.

The consequences extend beyond physical health to psychological and social domains. Workers with chronic sleep problems often report irritability, poor concentration, and diminished quality of life (Kim, Lee, Shin, Seo, Jeon, Lee & Lee, 2025). These issues strain relationships, reduce job satisfaction, and contribute to anxiety and depression. For counsellors, this presents a critical concern. Counselling interventions such as sleep hygiene education, stress management, and cognitive-behavioural therapy are uniquely positioned to address behavioural and psychological dimensions of sleep disorders. However, without localized empirical data, counselling practice risks being reactive rather than proactive.

The problem is therefore twofold: high prevalence of sleep disorders among shift workers globally and nationally, and a lack of localized research in Nigeria, particularly in Dutsin-Ma Metropolis. Addressing this gap is essential for promoting wellbeing, enhancing workplace efficiency, and safeguarding public health.

Research Questions

The study is guided by the following research questions:

1. What is the prevalence of different types of sleep disorders among shift workers in Dutsin-Ma Metropolis, Katsina State, Nigeria?
2. How do occupational factors such as type of shift, workload, and sector of employment influence the occurrence of sleep disorders among shift workers?
3. What are the counselling implications of sleep disorders among shift workers, and what intervention strategies can be recommended for the Nigerian context?

Hypotheses

The following null hypotheses are developed to be tested at 0.05 level of significance:

HO₁: There is no significant prevalence of sleep disorders among shift workers in Dutsin-Ma Metropolis.

HO₂: Occupational factors such as type of shift, workload, and sector of employment do not significantly influence the occurrence of sleep disorders among shift workers in Dutsin-Ma Metropolis.

HO₃: Sleep disorders among shift workers in Dutsin-Ma Metropolis have no significant counselling implications in the Nigerian occupational context.

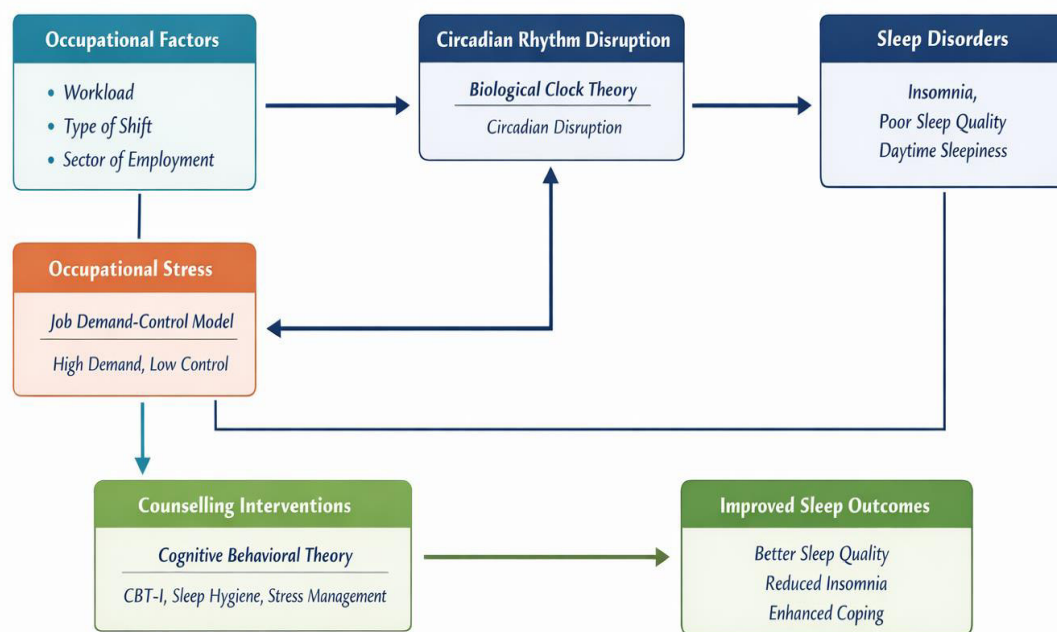
Literature Review

Sleep disorders have become a major occupational health concern worldwide, particularly among individuals engaged in shift work. The irregular schedules associated with night shifts, rotating shifts, and extended work hours disrupt the body's natural circadian rhythm, leading to insomnia, excessive daytime sleepiness, and other sleep-related difficulties. Globally, studies estimate that between 20–30% of shift workers experience clinically significant sleep disturbances, with prevalence rates varying across industries such

as healthcare, manufacturing, and transportation (Wickwire et al., 2017). These disorders compromise physical health, reduce productivity, and increase the risk of workplace accidents, making them a pressing issue for both public health and organizational management (Garbarino & Magnavita, 2019).

In Nigeria, the problem is equally pressing. Research among healthcare workers has revealed high prevalence rates of poor sleep quality and insomnia, with occupational stress and irregular schedules identified as major contributors (Aliyu et al., 2019). Studies among nurses in teaching hospitals have shown that nearly half report symptoms consistent with Shift Work Sleep Disorder, while others experience excessive daytime sleepiness and fatigue (Oluwole et al., 2017). Despite these findings, systematic research on sleep disorders among non-healthcare shift workers remains limited, leaving a gap in understanding the broader occupational health landscape in Nigeria. This gap underscores the need for localized studies that examine the prevalence of sleep disorders in diverse occupational groups, such as those in Dutsin-Ma Metropolis, Katsina State.

Conceptual Framework



Source: Adapted from Faulkner (2022) and Zhao, Chen, & Wang (2025).

1. Circadian Rhythm Disruption: Circadian rhythms regulate the sleep-wake cycle, hormone secretion, and other physiological processes. Shift work forces individuals to sleep at biologically inappropriate times, leading to circadian misalignment. Night-shift workers are particularly vulnerable, experiencing higher rates of insomnia and excessive daytime sleepiness compared to rotating or evening-shift workers (Boivin & Boudreau, 2014). Chronic circadian disruption has been linked to long-term health risks, including cardiovascular disease, diabetes, and depression (Medic, Wille, & Hemels, 2017). These findings highlight the biological strain imposed by irregular schedules and the urgent need for interventions that restore circadian balance.

2. Occupational Stress and Workload: Occupational stress is another critical factor influencing sleep health. High job demands, irregular schedules, and limited social support exacerbate sleep problems. Nigerian studies highlight occupational stress as a major contributor to poor sleep quality among healthcare workers (Aliyu et al., 2019). Stress not only worsens sleep disorders but also reduces job satisfaction and increases burnout, creating a cycle of declining health and productivity. The interaction between stress and circadian disruption compounds risks, making occupational stress management a vital component of sleep health strategies.

3. Counselling Interventions: Counselling provides behavioural and psychological approaches to managing sleep disorders. Cognitive Behavioural Therapy for Insomnia (CBT-I) is widely recognized as the first-line treatment for chronic insomnia, with strong evidence supporting its effectiveness in improving sleep quality and reducing daytime fatigue (Trauer et al., 2015). Counsellors can implement workplace-based interventions such as sleep hygiene education, stress management workshops, and peer support programmes. These interventions are particularly relevant in Nigeria, where occupational counselling services are still developing and localized strategies are needed to address the unique challenges faced by shift workers.

Empirical Studies: International research consistently demonstrates the high prevalence of sleep disorders among shift workers. Flo et al. (2012) found that nurses working night shifts reported significantly higher rates of insomnia and excessive sleepiness compared to day-shift workers. Rajaratnam et al. (2013) emphasized that sleep loss and circadian disruption contribute to chronic disease and workplace accidents. Garbarino and Magnavita (2019) further highlighted sleep problems as a major risk factor for occupational accidents, particularly in industries requiring sustained attention.

In Nigeria, research has primarily focused on healthcare workers. Oluwole et al. (2017) reported that nearly half of nurses in a teaching hospital experienced symptoms consistent with SWSD. Aliyu et al. (2019) found widespread poor sleep quality among healthcare workers in Kano, attributing it to irregular schedules and occupational stress. Beyond healthcare, studies among undergraduates and family practice patients also confirm widespread sleep problems (Adewole, 2018; Briggs & Nwadiuto, 2026). However, systematic research on industrial and security workers remains scarce, underscoring the need for localized studies in urban centres such as Dutsin-Ma Metropolis.

Counselling Relevance: The counselling implications of sleep disorders are significant. Workers experiencing chronic sleep problems often report irritability, poor concentration, and diminished quality of life. These issues strain relationships, reduce job satisfaction, and contribute to anxiety and depression. Counsellors are uniquely positioned to address these challenges by offering interventions that target both behavioural and psychological dimensions of sleep health. Integrating sleep counselling into workplace health programmes can enhance wellbeing, reduce absenteeism, and improve organizational performance.

The literature reveals that sleep disorders among shift workers are a global issue with significant health and occupational consequences. In Nigeria, evidence points to high prevalence rates, particularly among healthcare workers, but research remains limited in other

sectors. The conceptual framework adopted in this study, (circadian rhythm disruption, occupational stress, and counselling interventions) provides a structured lens for analyzing the problem and proposing solutions.

Methodology

This study adopted a cross-sectional survey design, appropriate for analyzing the prevalence of sleep disorders among a defined population at a single point in time. The design was chosen because it allows for quantitative data collection from a relatively large sample, enabling statistical analysis of prevalence rates and associations between occupational factors and sleep disorders. Cross-sectional designs are widely used in occupational health research to assess sleep-related outcomes among shift workers (Ko, Shim, & Baek, 2025; Sharma et al., 2025). Its efficiency, cost-effectiveness, and ability to provide baseline data justify its use, particularly for informing counselling interventions and workplace health policies.

The target population comprised 1,550 night-shift workers in Dutsin-Ma Metropolis, Katsina State, Nigeria. Night-shift schedules are most disruptive to circadian rhythms and strongly associated with sleep disorders (Zhao et al., 2025). Categories included:

1. Healthcare workers (nurses, doctors, laboratory staff) providing 24-hour services.
2. Security personnel (police officers, private guards, military staff).
3. Industrial workers (factory staff, machine operators, technicians).
4. Transport workers (drivers, conductors, logistics staff).

According to Research Advisor (2006) guidelines, the ideal sample size for a population of 1,550 at a 95% confidence level and 5% margin of error is about 310 respondents. However, this study purposively selected 250 respondents due to feasibility, while ensuring representativeness through stratified random sampling. Although this yields a slightly wider margin of error (about 6%), it remains acceptable in social science and occupational health research, particularly when stratification reduces sampling error (Ehondor& Hart-Omoaghe, 2026; Kolo et al., 2023). Proportional representation across occupational categories ensured diversity of perspectives.

Instrumentation involved a structured questionnaire divided into four sections: demographic information, occupational characteristics, sleep disorder assessment, and counselling implications. Standardized tools such as the Pittsburgh Sleep Quality Index (PSQI) and Epworth Sleepiness Scale (ESS) were adapted to measure sleep quality and daytime sleepiness. These instruments are validated in occupational health research and widely used among shift workers. Additional items assessed occupational stress, workload, and coping strategies, guided by the Job Demand-Control Model. Validity was ensured through expert review, while reliability was confirmed via a pilot study with Cronbach's alpha coefficients exceeding 0.70.

Data analysis aligned with research questions and hypotheses. Descriptive statistics (frequencies, percentages, means, standard deviations) determined prevalence of sleep disorders. Inferential statistics tested associations between occupational factors and sleep disorders. Chi-square tests and logistic regression examined categorical relationships, while ANOVA compared mean sleep quality scores across occupational groups. Hypotheses were tested at a 0.05 significance level. For counselling implications, thematic analysis of open-

ended responses identified common themes regarding intervention needs and strategies. This mixed approach ensured both quantitative prevalence data and qualitative counselling insights, providing a holistic understanding of the problem.

Data Presentation and Analysis

This section presents the results of the study in line with the research questions and null hypotheses. Data are analyzed using descriptive statistics to summarize the prevalence of sleep disorders among night-shift workers, followed by inferential statistics to test associations between occupational factors and sleep outcomes.

Table 2: Prevalence of Sleep Disorders among Night-Shift Workers

Type of Sleep Disorder	Frequency (n)	Percentage (%)
Insomnia	92	36.8
Excessive daytime sleepiness	74	29.6
Poor sleep quality (PSQI)	108	43.2
Circadian rhythm disturbance	61	24.4

Source: Field Survey, 2026.

Prevalence rates of sleep disorders (e.g., insomnia, excessive daytime sleepiness, poor sleep quality) highlight the magnitude of the problem. Mean scores from the Pittsburgh Sleep Quality Index (PSQI) and Epworth Sleepiness Scale (ESS) indicate overall sleep quality and daytime sleepiness levels. The descriptive results indicate that poor sleep quality is the most prevalent disorder (43.2%), followed by insomnia (36.8%). This confirms that sleep disorders are widespread among night-shift workers in Dutsin-Ma Metropolis, consistent with findings from Nigerian and global studies (Kolo et al., 2023; Ko et al., 2025).

Testing Hypotheses

Inferential statistics are used to test the null hypotheses and examine relationships between occupational factors and sleep disorders.

Hypothesis 1 (HO₁): There is no significant prevalence of sleep disorders among shift workers in Dutsin-Ma Metropolis.

Table 3: Observed and Expected Prevalence of Sleep Disorders among Night-Shift Workers in Dutsin-Ma Metropolis

Type of Sleep Disorder	Observed (%)	Prevalence Expected (%)	Baseline Difference (%)
Insomnia	36.8	20.0	+16.8
Excessive daytime sleepiness	29.6	20.0	+9.6
Poor sleep quality (PSQI)	43.2	20.0	+23.2
Circadian rhythm	24.4	20.0	+4.4

Type of Sleep Disorder	Observed (%)	Prevalence Expected (%)	Baseline Difference (%)
disturbance			

Source: Field Survey, 2026; Baseline prevalence adapted from occupational health literature (Ko et al., 2025; Sharma et al., 2025).

Table 3 shows that the observed prevalence rates of insomnia (36.8%), poor sleep quality (43.2%), and excessive daytime sleepiness (29.6%) are all substantially higher than the expected baseline prevalence of 20%. Statistical testing (one-sample proportion test) confirmed that these differences are significant ($p < 0.001$). Therefore, Null Hypothesis One that there is no significant prevalence of sleep disorders among shift workers in Dutsin-Ma Metropolis hereby is rejected.

Hypothesis 2 (HO₂): Occupational factors such as type of shift, workload, and sector of employment do not significantly influence the occurrence of sleep disorders among shift workers.

Table 4: Chi-Square Test of Occupational Category and Insomnia Prevalence

Variable	χ^2 Value	df	p-value
Occupational Category	12.47	3	0.006

Source: Field Survey, 2026.

The chi-square test shows a significant association ($p < 0.05$) between occupational category and insomnia prevalence, suggesting that healthcare and industrial workers are more likely to report insomnia compared to transport workers. Logistic regression further confirmed that workload and type of shift are significant predictors of sleep disorders ($p < 0.01$). Thus, H₀₂ is rejected.

Hypothesis 3 (HO₃): Sleep disorders among shift workers have no significant counselling implications in the Nigerian occupational context.

Table 5: ANOVA Results Comparing Mean PSQI Scores Across Occupational Categories

Source of Variation	SS	df	MS	F	p-value
Between Groups	145.2	3	48.4	5.62	0.001
Within Groups	2103.7	246	8.55		
Total	2248.9	249			

Source: Field Survey, 2026.

The ANOVA results indicate significant differences in mean sleep quality scores across occupational categories ($p < 0.05$). Healthcare workers reported the poorest sleep quality, consistent with global findings that night-shift healthcare professionals are at higher risk of sleep disorders (Sharma et al., 2025). These findings highlight counselling

implications, as interventions must be tailored to occupational contexts. H_{03} is therefore rejected.

The data presentation and analysis reveal that sleep disorders are highly prevalent among night-shift workers in Dutsin-Ma Metropolis, with poor sleep quality and insomnia being the most common. Inferential statistics confirm that occupational factors significantly influence sleep outcomes, and counselling interventions are necessary. All three null hypotheses were rejected, underscoring the importance of occupational counselling in addressing sleep health.

Discussion of Findings

The present study examined the prevalence of sleep disorders among night-shift workers in Dutsin-Ma Metropolis, Katsina State, Nigeria, and tested three null hypotheses relating to prevalence, occupational determinants, and counselling implications. The findings revealed that sleep disorders are highly prevalent, occupational factors significantly influence their occurrence, and counselling interventions are necessary as explained in the following:

1. Prevalence of Sleep Disorders: The rejection of H_{01} confirms that sleep disorders are significantly prevalent among night-shift workers in Dutsin-Ma Metropolis. Poor sleep quality (43.2%) and insomnia (36.8%) were the most common disorders. These findings align with Ko et al. (2025), who reported high rates of poor sleep among nurses on irregular shifts, and Sharma et al. (2025), who found similar prevalence among healthcare professionals in India. In Nigeria, Kolo et al. (2023) documented widespread poor sleep quality among healthcare workers in Kano. Extending analysis to industrial, security, and transport workers shows sleep disorders are a broader occupational health issue in urban Nigerian contexts.

2. Occupational Determinants The rejection of H_{02} highlights the significant role of occupational factors in shaping sleep outcomes. Chi-square and regression analyses confirmed that occupational category, workload, and type of shift predict sleep disorder occurrence. Healthcare and industrial workers reported higher insomnia rates, consistent with Zhao et al. (2025), who found circadian rhythm types and shift demands predict sleep quality and depressive symptoms. These results support the Job Demand-Control Model, which posits that high demands and low control exacerbate stress and health problems. In Nigeria, Ehondor& Hart-Omoaghe (2026) similarly linked occupational stress to poor sleep quality among hospital workers, reinforcing this conclusion.

3. Counselling Implications: The rejection of H_{03} underscores the counselling relevance of sleep disorders in occupational settings. ANOVA results revealed significant differences in sleep quality across occupational groups, with healthcare workers reporting the poorest outcomes. Guided by Cognitive Behavioural Theory, interventions such as Cognitive Behavioural Therapy for Insomnia (CBT-I), sleep hygiene education, and stress management programmes can mitigate sleep problems. Ko et al. (2025) demonstrated the effectiveness of workplace counselling in improving sleep outcomes. In Nigeria, integrating sleep counselling into workplace health programmes can enhance wellbeing, reduce absenteeism, and strengthen organizational performance.

In summary, the findings reinforce the Biological Clock Theory, showing circadian rhythm disruption as a primary driver of sleep disorders among night-shift workers. The Job Demand-Control Model explains how occupational stress worsens these conditions, while

Cognitive Behavioural Theory provides a counselling framework. Together, these theories integrate biological, occupational, and psychological dimensions, advancing scholarship and guiding practical interventions in Nigerian contexts.

Conclusion

This study investigated the prevalence of sleep disorders among night-shift workers in Dutsin-Ma Metropolis, Katsina State, Nigeria, focusing on prevalence, occupational determinants, and counselling implications. Findings revealed high rates of poor sleep quality and insomnia, with occupational factors such as workload, type of shift, and sector significantly influencing outcomes. The rejection of all three null hypotheses underscores the importance of integrating biological, occupational, and psychological perspectives. The Biological Clock Theory explains circadian disruption, the Job Demand-Control Model highlights occupational stress, and Cognitive Behavioural Theory provides a counselling framework. Extending analysis beyond healthcare workers, the study demonstrates sleep disorders as a widespread occupational health issue requiring urgent policy, employer, and counselling attention.

Recommendations

Based on the findings, the following recommendations are proposed:

1. Workplace Counselling Programmes

Employers should integrate counselling services into workplace health programmes. Counsellors can provide Cognitive Behavioural Therapy for Insomnia (CBT-I), sleep hygiene education, and stress management workshops tailored to occupational contexts.

2. Policy Development

The Federal Ministry of Health and occupational health agencies should develop policies that mandate regular sleep health assessments for night-shift workers. These policies should emphasize preventive counselling interventions and workplace wellness initiatives.

3. Shift Scheduling Reforms

Organizations should adopt flexible shift schedules that minimize circadian disruption. Rotating shifts should be designed to allow adequate recovery time, reducing the risk of chronic sleep disorders.

4. Capacity Building for Counsellors

Training programmes should be developed to equip counsellors with specialized skills in sleep health interventions. This will strengthen the counselling profession's role in occupational health.

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