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Impact of shift work on employees' health and safety of hotel workers in a developing country

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The study examined the effects of shift work on employees' health and safety among hotel workers in Owerri, Imo State, Nigeria, focusing on shift type and shift duration. The study population comprised 303 hotel workers across the housekeeping, front office, kitchen, maintenance, and security departments. Data were collected using structured questionnaires and analyzed using descriptive statistics. Hypotheses were tested using Pearson Product-Moment Correlation Coefficient with the Statistical Package for Social Sciences (SPSS, version 27) at a 0.05 level of significance. Results showed that shift type significantly affects employees' health, with night and rotating shifts contributing to fatigue, sleep disturbances, and physical and psychological strain. Similarly, shift duration significantly influences employee safety, as extended working hours and inadequate rest periods increase the possibility of workplace accidents. The study recommends implementing balanced shift schedules, wellness programs, and regular safety training to mitigate the adverse effects of shift work. The findings provide context-specific insights for hotel management in Owerri to improve employee health, safety, and operational productivity.

Key words: Shift work, employee health, employee safety, shift type, shift duration.

INTRODUCTION

Shift work has become an essential part of the global hospitality industry, particularly in hotels that operate around the clock to meet the frequently changing needs of their guests in Owerri, Imo State. According to Stella et al. (2022) Hotels provide more than just a place to stay, they offer lodging, spaces for business meetings, and venues for personal events, ensuring that guests' professional and private needs are well taken care of. It contributes significantly to local economic development, job creation, and tourism promotion. To ensure continuous service delivery, hotel employees are routinely assigned to day, night, and rotating shifts. While this work arrangement improves organizational efficiency

and customer satisfaction, it also subjects employees to irregular working hours that vary from the typical daytime schedule. Such deviations have raised growing concerns about the impact of shift work on employee health and safety, particularly in labour-intensive service industries such as hospitality. While shift work improves organizational efficiency, it disrupts employees' typical daytime schedules, raising concerns about health and safety impacts. Supporting work-life balance, as noted by Nwagbala et al. (2024), can improve job satisfaction (Chinelo and Okafor, 2023), which is crucial in labour-intensive industries like hospitality. When managers actively support work-life balance, they can make a

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meaningful difference in employees' well-being and overall job satisfaction, which in turn strengthens workplace efficiency (Nwagbala et al., 2024).

Shift work is widely associated with disruptions to the human circadian rhythm, which regulates sleep wake cycles, hormonal balance, and other vital physiological processes. When hotel workers work night shifts or on rotating schedules, their biological clocks are often misaligned with natural daylight patterns leading to sleep deprivation and chronic fatigue (Rosemberg and Armijo, 2025). Empirical studies have shown that prolonged exposure to shift work increases the risk of physical health problems such as cardiovascular diseases, gastrointestinal disorders, metabolic syndromes, and weakened immune systems (Hunger and Seibt, 2022). In the context of hotel work, where employees are required to remain physically active and attentive for long hours, these health challenges can significantly reduce work capacity and overall well-being. According to Nwagbala et al. (2024) A positive attitude among employees often helps organizations reach their goals and emotional state of workers shapes how they respond to their work environment and different situations, which in turn influences their overall attitude. Attitude itself goes beyond outward behaviour, it is a psychological construct rooted in feelings and emotions. Research consistently shows that employee attitudes have a strong impact on organizational performance: when attitudes are negative, performance levels tend to decline (Nwagbala et al., 2024).

Beyond physical health concerns, shift work has substantial implications for employees' mental and psychological health. Irregular work schedules often interfere with family life, social interactions, and personal responsibilities, resulting in stress, emotional exhaustion, and social isolation (Underhill and Quinlan, 2024). Hotel workers in Owerri, who frequently alternate between shifts, may find it difficult to maintain stable sleep patterns or participate in social and community activities. Over time, this imbalance can lead to anxiety, depression, and reduced job satisfaction. Mental health challenges not only affect employees' quality of life but also impair concentration, decision-making, and emotional regulation, all of which are critical to effective service delivery in the hospitality industry. As pointed out in Chinelo and Okafor (2023). The primary driver of employee loyalty within an organization is their emotional attachment to it. Research consistently indicates that when employees feel a strong emotional bond with their workplace, organizations experience significantly lower turnover and absenteeism rates. Moreover, such attachment fosters higher levels of motivation, encouraging employees to engage more fully with their work and contribute meaningfully to organizational success (Chinelo and Okafor, 2023).

The safety dimension of shift work is another critical concern in hotel operations. Fatigue and reduced

alertness associated with night and extended shifts have been linked to higher rates of workplace accidents, mistakes, and injuries (Hsieh et al., 2025). In hotels, employees are often exposed to potential hazards such as slippery floors, sharp kitchen equipment, heavy lifting, electrical installations, and security risks. When workers are fatigued or cognitively impaired due to insufficient rest, the likelihood of accidents increases, posing risks not only to employees but also to guests. Studies have shown that shift workers are more prone to lapses in attention and slower reaction times, which compromise adherence to safety procedures and emergency response effectiveness (Bansal et al., 2025).

Nevertheless, despite the growing international literature on shift work and occupational health, there is little empirical evidence focusing on hotel workers in Owerri, Imo State, Nigeria. Many hotels lack comprehensive policies to mitigate the negative effects of shift work, such as structured scheduling, adequate rest periods, and health-care programs. This gap highlights the need for localized research into how shift work affects employee health and safety in Owerri's unique socioeconomic and organizational context. Understanding these effects is critical for developing evidence-based strategies to promote employee well-being, improve workplace safety, and ensure the long-term viability of the region's hospitality industry.

Statement of the problem

The hotel industry in Owerri, Imo State, Nigeria, operates on a continuous basis, so shift work is unavoidable. Employees are frequently required to work night shifts, extended hours, and rotating schedules to meet the needs of guests and ensure service efficiency. However, these work arrangements frequently disrupt normal sleep patterns and daily routines, subjecting hotel employees to physical and psychological stress. Despite the growing reliance on shift work in the hospitality industry, hotel management practices in Owerri tend to prioritize operational continuity over employee health and safety, resulting in working conditions that may negatively impact workers' well-being and job performance.

Prolonged exposure to irregular working hours has been linked to numerous health challenges, including chronic fatigue, sleep disorders, stress, cardiovascular problems, and mental health issues such as anxiety and depression. For hotel workers, whose duties require constant alertness, physical activity, and interpersonal interaction; these health problems can significantly reduce productivity and increase the risk of errors. Furthermore, fatigue resulting from shift work impairs concentration and reaction time, thereby increasing the likelihood of workplace accidents and injuries. In hotel environments where workers are exposed to hazards such as slippery floors, kitchen equipment, and security

risks, compromised alertness poses serious safety concerns for both employees and guests.

Despite the gravity of these health and safety risks, there is a notable lack of empirical research on the effects of shift work on hotel employees in Owerri, Imo State. Existing research in Nigeria has primarily focused on healthcare or industrial workers, leaving the hospitality sector understudied. This gap reduces the availability of context-specific evidence needed to inform effective workplace policies and interventions. As a result, hotel managers and policymakers lack adequate information to develop strategies for mitigating the negative effects of shift work while maintaining operational efficiency. This study seeks to address this gap by systematically examining the impact of shift work on the health and safety of employees in hotels in Owerri.

Objectives of the study

The broad objective of this study is to examine the relationship between shift work, health and safety of hotel workers in Owerri, Imo State, Nigeria. The specific objectives of the study are to:

1. Examine the relationship between shift type and the health of hotel workers in Owerri, Imo State, Nigeria.
2. Assess the relationship between shift duration and the safety of hotel workers in Owerri, Imo State, Nigeria.

Research questions

1. What is the relationship between shift type and the health of hotel workers in Owerri, Imo State, Nigeria?
2. Is there any relationship between shift duration and the safety of hotel workers in Owerri, Imo State, Nigeria?

Significance of the study

1. **Hotel management:** This study will benefit hotel management because it serves as a valuable guide in designing effective shift schedules that minimize health risks and enhance workplace safety. By identifying how shift type and shift duration affect employees, hotel managers can implement policies such as adequate rest periods, balanced shift rotations, and health-support programs that improve employee productivity and service quality. Reduced workplace accidents and improved employee health will also lower operational costs related to absenteeism and staff turnover.
2. **Hotel employees:** This study will create strong awareness of the health and safety risks associated with shift work. This awareness can encourage workers to adopt healthier coping strategies, such as improved sleep hygiene and stress management practices, thereby

enhancing their overall well-being and job satisfaction

3. **Government agencies and policymakers:** This study will provide evidence that can inform labour regulations and occupational health and safety standards in Nigeria's hospitality industry. Ultimately, the findings will support the development of safer working environments, improved employee welfare, and a more productive and sustainable hotel industry in Owerri, Imo State.

Scope of the study

The scope of this study focuses on examining the effects of shift work on the health and safety of hotel workers in Owerri, Imo State, Nigeria. Specifically, it investigates how shift type (day, night, or rotating shifts) and shift duration (number of hours worked per shift) influence employees' health (physical and mental well-being) and employee safety (workplace accidents, errors, and compliance with safety measures). This region is selected due to its significant role in the hospitality industry and the concern for the health and safety of hotel workers in Owerri due to the high demand for longer working hours.

Conceptual clarifications

Shift work on employees' health

Shift work refers to work schedules that fall outside of the traditional daytime hours, which frequently include night shifts, early morning shifts, or rotating shifts. While such schedules are necessary for uninterrupted service delivery in industries such as hospitality, healthcare, and manufacturing, they pose significant health risks to employees. One of the most commonly reported side effects of shift work is disruption of the body's circadian rhythm, which regulates sleep, hormonal secretion, and metabolic processes. Employees who work hours that do not correspond to their natural biological clocks frequently experience sleep deprivation and poor sleep quality, resulting in chronic fatigue and reduced physical functioning (Terauchi et al., 2024). Over time, this disruption has a negative impact on overall health and well-being. Shift work has also been strongly linked to various physical health problems. Stella et al. (2022) opined that Competition within the industry continues to intensify, prompting firms to adopt diverse strategies in order to remain competitive. In the global effort to meet rising market demands, scholars and researchers have increasingly turned their attention to the role of individual employees within organizations. This focus stems from the recognition that innovation in products and services originates from employees themselves, making their contributions central to organizational survival and growth (Stella et al., 2022).

Empirical studies indicate that employees engaged in long-term shift work are at a higher risk of cardiovascular diseases, hypertension, gastrointestinal disorders, and metabolic conditions such as obesity and diabetes (Ugwu et al., 2024). Irregular working hours often lead to unhealthy eating patterns reduced physical activity, and hormonal imbalance, which further increase susceptibility to these conditions. In labor-intensive sectors such as hospitality, where employees are required to remain physically active for extended periods, these health challenges can significantly reduce stamina, increase absenteeism, and lower productivity. According to Ezeanokwasa et al. (2023), organizations in emerging economies, such as Nigeria, are working extremely hard to achieve growth and sustain competitive advantage amid turbulent and rapid changes in the environment. A persistent challenge they face lies in the effective implementation of change initiatives and ensuring that such transformations translate into measurable improvements in performance. Scholars have highlighted that while change is essential for organizational survival; its success often depends on how well firms manage the complexities of adaptation and aligns these initiatives with performance outcomes (Ezeanokwasa et al., 2023).

Shift work has serious consequences for employees' mental and psychological health, in addition to its physical health effects. Irregular schedules disrupt social and family life, frequently causing stress, emotional exhaustion, anxiety, and depression (Jang, 2023). Sleep deprivation from shift work impairs cognitive functioning, including attention, memory, and decision-making ability. These mental health challenges have an impact not only on employees' quality of life but also on their ability to perform tasks effectively and safely. As a result, addressing the health effects of shift work is critical for improving employee well-being and maintaining organizational performance.

Shift type

Shift type is the classification of work schedules based on the time of day that employees are required to work. Day shifts, night shifts, and rotating shifts are all common shift types, each with its own set of challenges and implications for worker health and safety. Chang and Li (2022) posit that day shifts generally correspond to the body's natural circadian rhythm, allowing employees to maintain regular sleep and social schedules. In contrast, night shifts require employees to remain awake during hours when the body is biologically programmed to sleep, leading to disruptions in circadian rhythm and increasing the risk of sleep deprivation, fatigue, and related health issues (Hassanzadeh-Rangi et al., 2023). Rotating shifts, where employees alternate between day and night schedules, further complicate this misalignment, as the body struggles to adapt to constantly changing sleep-

wake cycles.

Boivin et al. (2022) postulated that night and rotating shifts are associated with an increased risk of physical and mental health problems. Employees working these shifts are more likely to develop cardiovascular problems, gastrointestinal disorders, and metabolic imbalances as a result of disrupted hormonal patterns and irregular meal times. Night and rotating shift workers are more likely to experience mental health issues such as stress, anxiety, and depression because their schedules interfere with social life, family interactions, and regular rest periods. As a result, the type of shift that an employee works can have a significant impact on their overall health and quality of life (Moreira and de Lucca, 2025).

In the hospitality industry, shift type has a direct impact on employee performance and workplace safety. Hotel employees working night or rotating shifts frequently report higher levels of fatigue, slower reaction times, and decreased concentration, which can increase the likelihood of workplace accidents and operational errors (Das and Palo, 2025). Furthermore, long-term exposure to irregular shift types can result in chronic health conditions and decreased job satisfaction, which can have an impact on organizational productivity. Understanding the impact of shift type is critical for hotel management in developing scheduling practices that reduce health risks while maintaining operational efficiency.

Shift duration

Shift duration is the total number of hours an employee works in a single work period. Employees in the hospitality industry, including hotels in Owerri, Imo State, may work shifts ranging from 8 to 12 h or more, depending on operational demands. The length of a shift has a significant impact on workers' physical and mental health, as well as their ability to complete tasks safely and efficiently. Longer shifts are associated with increased fatigue, decreased alertness, and impaired cognitive functioning, which can jeopardize both employee well-being and workplace safety (Bellacov et al., 2025).

Extended shift durations have been linked to a range of physical health problems, including musculoskeletal strain, cardiovascular stress, and metabolic disturbances. Employees working longer shifts often experience increased physical exertion with limited recovery time, which can exacerbate chronic health conditions such as hypertension, obesity, and gastrointestinal disorders (Seward et al., 2025). Furthermore, long working hours interfere with normal sleep patterns, leading to sleep deprivation, which intensifies fatigue and reduces immune system efficiency. In hotel settings, where employees are required to maintain continuous service standards, these health challenges can lower productivity

and increase absenteeism.

Long shifts have an impact not only on physical health but also on mental health and safety. Workers working long shifts are more vulnerable to stress, anxiety, and decreased concentration, which can lead to operational errors and an increased risk of accidents (Feeley et al., 2024). Kitchen staff, housekeeping personnel, and security officers working extended shifts, for example, may experience slower reaction times or lapses in judgment, increasing the risk of injury or safety violations. Effective shift duration management, such as implementing balanced scheduling and providing adequate rest breaks, is critical to mitigating these negative effects and promoting hotel employees' overall health, safety, and efficiency.

Health and safety

Health and safety in the workplace are critical dimensions of employee well-being and organizational productivity, particularly in sectors like hospitality, where employees are exposed to physical, mental, and operational stressors. Employee health encompasses both physical and mental well-being. Physical health refers to the absence of illness or injury and the ability to perform work tasks without undue strain, while mental health involves emotional and psychological stability, including stress management, resilience, and cognitive functioning (Lithy, 2025). In hotel settings, workers often perform physically demanding tasks, such as housekeeping, kitchen operations, and maintenance, which can lead to musculoskeletal issues, fatigue, and other health complications if not properly managed.

Employee safety refers to the measures, practices, and behaviors that prevent workplace accidents, injuries, or harm. In the context of hotel work, safety concerns can include slips and falls, cuts or burns in kitchen areas, handling hazardous cleaning chemicals, and risks associated with operating machinery or working in security roles (Shapoval et al., 2022). Safety is closely linked to employee health, as compromised physical or mental well-being increases the likelihood of accidents and errors. Shift work, especially night and extended shifts, has been associated with increased fatigue and reduced alertness, which can heighten safety risks for employees and guests alike.

Ensuring health and safety in the hospitality sector requires a combination of organizational policies, employee awareness, and preventive strategies. For example, providing structured shift schedules, adequate rest periods, health monitoring, and safety training can mitigate the negative effects of shift work (Polo-Peña et al., 2024). Prioritizing health and safety not only protects employees but also enhances service quality, reduces absenteeism, and promotes operational efficiency. Understanding the relationship between shift work,

health, and safety is therefore essential for hotel management in Owerri, Imo State, to create sustainable and supportive work environments.

Employee Health

Employee health refers to workers' overall physical and mental well-being, including their ability to perform tasks efficiently, deal with work demands, and maintain a high quality of life. Long hours, physically demanding tasks, and irregular work schedules are common in the hospitality industry, and they can have a negative impact on both their physical and mental health. Musculoskeletal disorders from prolonged standing or lifting, cardiovascular problems from stress and irregular routines, gastrointestinal issues, and fatigue caused by insufficient rest are all common physical health concerns associated with hotel work (Alcorn and Koo, 2025).

Shift work is a major contributor to employee health. Employees working night or rotating shifts frequently experience circadian rhythm disruption, which leads to poor sleep quality, chronic fatigue, and increased susceptibility to illness (Peters et al., 2026). Shift schedules can also disrupt eating habits, physical activity, and recovery time, potentially exacerbating health issues over time. Long-term exposure to such conditions has been linked to chronic diseases like hypertension, diabetes, and obesity, as well as mental health issues like stress, anxiety, and depression (Marin-Farrona et al., 2023).

Maintaining employee health is critical not only for individual well-being but also for organisational productivity and service quality. Employees who are in good health are more alert, energetic, and capable of performing their jobs safely and efficiently. Organizations, particularly hotels, can promote employee health by implementing balanced shift schedules, offering health screenings, promoting wellness programs, and providing access to mental health support (Wasike and Wabala, 2024). Ensuring employee is healthy reduces absenteeism, increases safety, and improves overall operational efficiency, making it an essential component of long-term hospitality management.

Employee safety

Employee safety refers to the policies, procedures, and working conditions that protect employees from accidents, injuries, and other occupational hazards while performing their duties. Hotel workers face a variety of safety hazards as a result of the physical nature of their jobs and the constant operational environment. Slips, trips, and falls on wet floors are common hazards, as are injuries from handling kitchen equipment, burns, chemical exposure, and the risks associated with lifting heavy

objects or operating machinery (Chen et al., 2025). Ensuring workplace safety is critical not only for protecting employees but also for maintaining high service standards and minimizing the organization's liabilities.

Shift work has a significant impact on employee safety. Employees working night shifts, extended hours, or rotating schedules often experience fatigue, reduced concentration, and slower reaction times, which increase the likelihood of accidents and errors (Mutegi et al., 2023). For example, fatigued housekeeping staff may be more prone to slips and falls, while kitchen or maintenance staff may mishandle equipment, leading to injuries. Additionally, cognitive impairments associated with sleep deprivation can compromise judgment and decision-making, further elevating safety risks in the hotel environment.

A safe workplace necessitates a combination of organizational strategies, employee education, and preventive measures. Hotels can improve safety by providing proper hazard identification training, implementing strict safety protocols, ensuring adequate rest periods between shifts, and fostering a safety-oriented culture (Bayram, 2022). Hotel management prioritizes employee safety not only to protect its workforce but also to improve operational efficiency, reduce absenteeism, and foster a positive work environment conducive to providing high-quality service.

Theoretical framework

This study is anchored on relevant theories that explain the relationship between shift work and employees' health and safety. The theoretical framework provides a foundation for understanding how work schedules influence workers' physical, mental, and safety outcomes in the hotel industry.

Circadian rhythm theory 1729

The theory of circadian rhythms, which posits that living organisms have an internal, self-sustained 24-hour biological clock, was first scientifically demonstrated in 1729 by French scientist Jean-Jacques d'Ortous de Mairan. The theory was primarily attributed to Franz Halberg, who is widely recognized as the father of chronobiology in 1950s. The theory explains that human biological processes operate on a natural 24-hour cycle, regulating sleep, alertness, hormone secretion, and metabolism. As posited by this theory, individuals are biologically programmed to be awake during the day and asleep at night. Shift work, especially night and rotating shifts, disrupts this natural rhythm, leading to circadian misalignment (Miike, 2025). Such disruption results in sleep deprivation, fatigue, and physiological stress, which

negatively affect employees' health. In the context of hotel workers in Owerri, irregular shifts interfere with normal sleep patterns, increasing vulnerability to illnesses and reducing alertness, thereby heightening safety risks.

Job Demand–Resources (JD-R) theory 2017

The Job Demand–Resources theory posits that job demands, such as long working hours, night shifts, and high workload, can lead to strain and burnout when not balanced with adequate job resources (Bakker and Demerouti, 2017). Job resources include rest breaks, supportive management, flexible scheduling, and health and safety policies. When hotel workers are exposed to high shift demands without sufficient resources, they are more likely to experience fatigue, stress, and reduced work engagement. This theory helps explain how excessive shift duration and unfavorable shift types can adversely affect employees' health and compromise workplace safety.

Fatigue risk theory 2011

The fatigue risk theory emphasizes that long working hours and insufficient recovery time increase fatigue, which impairs cognitive and physical performance. Fatigue impairs attention, reaction time, and decision-making ability, making workers more prone to accidents and errors (Gander et al., 2011). When applied to this study, the theory explains how hotel employees' extended shifts and night work can increase the risk of workplace injuries and unsafe behaviors, especially in environments that require constant vigilance and physical activity.

Logically, these theories collectively explain how shift work characteristics (shift type and shift duration) influence employees' health and safety outcomes. The Circadian Rhythm Theory explains the biological effects, the Job Demand–Resources Theory highlights organizational factors, and the fatigue risk theory explains the link between fatigue and safety outcomes. Together, they provide a strong theoretical foundation for examining shift work and employees' health and safety among hotel workers in Owerri, Imo State, Nigeria.

Empirical review

James et al. (2023) investigated the effects of shift-work schedules on the sleep, health, safety, and quality of life of police employees during the COVID-19 pandemic. A cross-sectional research design surveyed employees (N = 319) from a large, U.S. West Coast municipal police service during the fall of 2020. The survey was made up of a battery of validated instruments designed to assess

dimensions of health and wellness (such as, sleep, health, safety, and quality of life). Linear and ordinal regression models were used to test our research hypotheses. Regression is an appropriate technique for analyzing the ability of one or more independent variables to predict a dependent variable. Separate linear models were run for sleep quality, sleepiness, post-traumatic stress, depression, and anxiety. The study found that 77.4% of police employees had poor sleep quality, 25.7% had excessive daytime sleepiness, 50.2% had PTSD symptoms, 51.9% had depressive symptoms, and 40.8% had anxiety symptoms. Working night shifts significantly decreased sleep quality and increased excessive sleepiness. Furthermore, employees working night shifts were significantly more likely to report falling asleep at the wheel while driving home than employees working other shifts.

Alghamdi and Bahari (2025) explored Shift Work, Psychological Health Disorders, and Job Security among Nurses: A Cross-Sectional Study. Shift work is prevalent among nurses, often leading to adverse psychological effects, such as fatigue, depression, anxiety, and stress. Shift work, psychological health disorders, and job security among nurses in Saudi Arabia. Methods: This cross-sectional study included 163 nurses, recruited via convenience sampling. The participants completed an online questionnaire that assessed demographic variables, psychological disorders, fatigue, and job security. The data were analyzed using descriptive statistics as well as bivariate analyses to explore relationships between variables. Results: Most participants (73%) worked 12 h shifts, and 67.5% reported fair sleep quality. The results found significant correlations among shift work, fatigue, and common psychological disorders. Significant differences were also observed for fatigue ($p = 0.007$) and depression ($p = 0.008$). Both nationality ($p < 0.001$) and shift work ($p = 0.015$) were correlated with anxiety. Similarly, significant differences were found for nationality ($p = 0.001$) and shift work ($p = 0.002$) regarding stress.

Shriane et al. (2023) examined the Healthy sleep practices for shift workers: consensus sleep hygiene guidelines using a Delphi. The study utilized a Delphi methodology to determine expert opinion regarding the applicability of guidelines for shift workers, the appropriateness of the term "sleep hygiene," and to develop tailored guidelines for shift workers. The result showed that of the experts invited, 68 (44%) agreed to participate, with 55 (35%) completing the third (final) round. Most experts (84%) agreed that tailored guidelines were required for shift workers. Consensus was reached on all guidelines after three rounds. One additional guideline (sleep inertia) and an introductory statement were developed, resulting in a final set of 18 individual guidelines, termed "healthy sleep practices for shift workers. Brown et al. (2020) made update review on mental health consequences of shift work: an updated

review. Approximately 25% of employed individuals engage in shift work, which can substantially alter opportunities for restorative sleep. Being tired on the job can lead to safety risks in professions such as healthcare, first responders, manufacturing, and numerous others. In addition to the physical stress and health consequences of shift work, recent evidence links shift work to poor mental health outcomes. The current review examines the literature from 2016 onward, emphasizing the impact of shift work on mental health. The result showed that shift work is associated with considerable impacts on sleep, depressed mood and anxiety, substance use, impairments in cognition, lower quality of life, and even suicidal ideation.

Khan et al. (2020) investigated the prevalence of sleep and mental health issues, the role of chronotype, and the relationship between these variables in Australians. A cross-sectional study: Paramedics were invited to complete an online survey to assess stress, posttraumatic stress disorder (PTSD), depression, anxiety, daytime sleepiness, insomnia, sleep quality, shift-work disorder, bruxism, obstructive sleep apnea, narcolepsy, chronotype, fatigue, and well-being. The result showed that there were significantly higher levels of depression symptoms, anxiety symptoms, fatigue, PTSD symptoms, insomnia symptoms, narcolepsy, and substantially poorer sleep quality and general well-being than norms from the overall population of Australia and Western countries.

Gap in the literature

Though many studies have found that shift work harms employees' health and safety, the majority of these studies were conducted in developed countries and industries such as healthcare and manufacturing. There is little empirical evidence available on the hospitality industry in developing countries such as Nigeria. Furthermore, existing Nigerian studies rarely examined specific aspects of shift work, such as shift type and duration, in relation to employee health and safety. Moreover, there is a paucity of studies centered on hotel workers in Owerri, Imo State. This study, therefore, fills these contextual and empirical gaps by examining the effects of shift work on employees' health and safety among hotel workers in Owerri, Imo State, Nigeria.

MATERIALS AND METHODS

This study adopted a descriptive survey design. The design is considered appropriate because it allows for the collection of data from a representative sample of hotel employees so as to investigate the impact of shift work on employee health and safety. The study used both primary and secondary sources of data. To select 20 hotels in Owerri, Imo State, Nigeria, the study used a random sampling probability technique. The target population

Table 1. Relationship between the work shift type and the health of hotel workers in Owerri, Imo State, Nigeria.

Variable		Work shift type	Health of hotel workers
Work shift type	Pearson correlation	1	0.882**
	Sig. (2-tailed)		0.001
	N	303	303
	Pearson correlation	0.882**	1
Health of hotel workers	Sig. (2-tailed)	0.001	
	N	303	303

Source: SPSS version 27 outputs.

Table 2. Relationship between shift duration and the safety of hotel workers in Owerri, Imo state, Nigeria.

Variable		Shift duration	Safety of hotel workers
Shift duration	Pearson correlation	1	0.801**
	Sig. (2-tailed)		0.000
	N	303	303
	Pearson correlation	0.801**	1
Safety of hotel workers	Sig. (2-tailed)	0.000	
	N	303	303

Source: SPSS Version 27 outputs.

consisted of 303 employees from the selected 20 hotels in Owerri, Imo State, Nigeria. This includes employees from various departments, such as the front desk, housekeeping, food and beverage, kitchen, maintenance, and security, who are directly involved in shift work. The hypotheses were tested using the Pearson Product-Moment Correlation Coefficient in Statistical Packages for Social Science (SPSS version 27) at the 5% level of significance.

RESULTS AND DISCUSSION

Decision rule

This study's decision rule is based on a significance level of 0.05. The null hypothesis (H_0) is rejected if the calculated p-value (Sig.) is less than or equal to 0.05 ($p \leq 0.05$), indicating a statistically significant effect of shift work on employee health and safety. The null hypothesis will be accepted if the p-value is greater than 0.05 ($p > 0.05$), indicating that shift work has no significant effect on the health and safety of hotel employees in Owerri, Imo State, Nigeria.

Hypotheses testing

Hypothesis one

Ho: There is no significant relationship between shift type

and the health of hotel workers in Owerri, Imo State, Nigeria

Table 1 shows that there is a significant positive relationship between shift type and the health of hotel workers in Owerri, Imo State, Nigeria. Where, $r = 0.882$, $n = 303$, and p p-value of 0.001 ($p < 0.05$). Therefore, the study accepted the alternate hypothesis and concluded that there is a significant positive relationship between the work shift type and the health of hotel workers in Owerri, Imo State, Nigeria. This implies that work shift type significantly affects the health of hotel workers in Owerri, Imo State, Nigeria.

Hypothesis two

Ho: There is no significant relationship between shift duration and the safety of hotel workers in Owerri, Imo state, Nigeria.

Table 2 shows that there is a positive and significant relationship between shift duration and the safety of hotel workers in Owerri, Imo state, Nigeria. With $r = 0.801$, $n = 303$, and a p-value of 0.000 ($p < 0.05$). Therefore, the study accepted the alternate hypothesis and concluded that there is a positive and significant relationship between shift duration and the safety of hotel workers in

Owerri, Imo state, Nigeria. The analysis revealed that shift duration has a statistically significant effect on the safety of hotel workers, as the p-value obtained was less than 0.05. This indicates that longer working hours and extended shifts increase safety risks among hotel employees. Consequently, the null hypothesis (H_{02}) was rejected. Shift duration significantly affects the safety of hotel workers in Owerri, Imo State, Nigeria

Conclusion

This study examined the effect of shift work on employees' health and safety among hotel workers in Owerri, Imo State, Nigeria, with a specific focus on shift type and shift duration. The findings revealed that shift work is a critical factor influencing both the health and safety of hotel employees. Irregular and unfavorable shift schedules were found to disrupt workers' biological rhythms, increase fatigue, and expose employees to various health challenges, thereby affecting their overall well-being. The results further indicated that shift type significantly affects employees' health. Workers engaged in night and rotating shifts experienced higher levels of physical and psychological strain compared to those on regular day shifts. Similarly, shift duration was found to have a significant influence on employee safety and health.

RECOMMENDATIONS

1. Adopt balanced shift schedules: Hotel management in Owerri, Imo State, Nigeria, should implement shift schedules that minimize night and rotating shifts and ensure adequate rest periods between shifts. This will help reduce fatigue, prevent health problems, and improve overall employee well-being.
2. Enhance workplace safety and health programs: Hotels should encourage and provide regular safety training, health monitoring, and wellness programs to equip employees with the knowledge and resources to manage the physical and mental demands of shift work. This will reduce workplace accidents, promote a safer, healthier work environment, and improve productivity.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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