

The Reality Of Physical Conditions And Occupational Health And Safety Programs From The Perspective Of Night Shift Workers In Hospitals: A Field Study At Ben Nasser Bashir Hospital In El Oued.

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Article Submitted: July 19, 2024

Accepted for Publication: October 12, 2024

Published Online: October 14, 2024

Abstract

The current study aims to investigate the reality of physical conditions and occupational health and safety programs from the perspective of night shift workers at a sample of health sector workers at Ben Nasser Bashir Specialized Hospital for Mother and Child in El Oued. The exploratory descriptive method was employed, with an examination of a sample consisting of 236 employees. A scale measuring physical conditions and occupational health and safety programs was used, and the results were analyzed using SPSS V22 to verify the hypotheses. The study concluded that the reality of physical conditions and occupational health and safety programs is inadequate, according to the perspectives of night shift workers at Ben Nasser Bashir Specialized Hospital for Mother and Child in El Oued.

Keywords: physical conditions, occupational health and safety programs, night shift.

Introduction:

Physical conditions in workplaces are considered one of the essential factors affecting the health and safety of workers, especially in the healthcare sector, where workers face a variety of hazards. Night shift workers in hospitals are among those most exposed to challenges related to physical conditions, as they work during unusual hours that impact their mental and physical health. Therefore, it is necessary to provide occupational health and safety programs, which include a set of policies and procedures designed to protect workers and ensure a safe working environment, such as risk assessments, providing appropriate training, and implementing safety standards. With the increasing reliance on night shift workers to meet patient needs, it becomes crucial to reveal the reality of physical conditions and occupational health and safety programs from the perspective of night shift workers by analyzing the various aspects of this study at Ben Nasser Bashir Hospital in El Oued.

Problem Statement: In the current competitive business environment, employee comfort and well-being are essential factors that influence their commitment and performance levels. Working conditions have become a vital element in measuring employee productivity today; no organization can achieve maximum performance levels unless all its employees are committed to its goals. This can be achieved by improving working conditions and monitoring them closely due to daily changes, considering them an integral part of the management process. An organization's ability to face challenges resulting from the dynamic nature of working conditions heavily depends on how effectively it manages its human resources. Employees are considered a crucial source for achieving quality and productivity, so organizations focus on enhancing employee performance rather than relying solely on financial aspects. A satisfied and diligent employee is seen as the organization's capital, and this is achieved by improving working conditions (Babatunde & Ayodele, 2018). Among these conditions are physical conditions, which are an important aspect affecting an individual's work and have garnered the attention of many scholars who strive to improve and adapt them for workers. "There is no doubt that the circumstances surrounding us while performing a task significantly affect how well we accomplish it and the speed with which we can complete it. Some of these conditions can facilitate our performance, while others can hinder it" (Gabek et al., 2012, p. 841). Physical conditions refer to the surrounding environment at the workplace, such as noise, temperature, and humidity, which assist the worker in performing their tasks to the fullest without fatigue, exhaustion, or any other illness. If these conditions are provided in an appropriate manner that is globally agreed upon, they can enhance the worker's comfort and prevent occupational accidents.

The physical aspects of the workplace have a direct impact on productivity, comfort, focus, job satisfaction, morale, and the occupational health and safety of workers (Sarode & Shirsath, 2014). Health is a positive concept encompassing social and personal aspects in addition to physical capabilities. The World Health Organization defines health not just as the absence of disease but as a state of complete physical, mental, and social well-being. According to a joint definition of

occupational health adopted by the International Labor Organization and the World Health Organization, "Occupational health should aim to promote and maintain the highest degree of physical, mental, and social well-being of workers in all occupations, prevent workers from being harmed due to their working conditions, protect them from hazards arising from harmful health factors, and ensure that workers are in a working environment that is compatible with their physiological and psychological capacities. In short, work should be adapted to the individual, and each individual should have their role" (Tawiah & Baah, 2011).

Hospitals, with their staff, buildings, and equipment, require preventive measures and the provision of occupational health and safety, given the potential dangers that the buildings, staff, patients, or visitors may face. Since workers deal daily with numerous medical cases and use many devices in providing healthcare, exposing them to the risks of those machines or making them vulnerable to infectious diseases, it is imperative for them to use protective measures and be in places that provide them with safety. These measures may include what hospital workers wear, the tools they use, or the equipment available in workplaces that contribute to their protection and provide them with security and safety (Abdel-Maaz, 2008, p. 2). This was highlighted in Saadani's (2023) study titled "Assessment of Preventive Measures and Tools Used in Hospitals and Their Impact on Psychological Stress," which found a relationship between the availability of preventive measures and tools used in hospitals and psychological stress. Similarly, Abdel-Maaz's (2008) study titled "Assessment of Preventive and Safety Measures Used in Gaza's Government Hospitals and Their Impact on Employee Performance" concluded that the availability of preventive and safety measures increases employee productivity and positively affects their performance. The lack of guidelines or regulations governing the use of preventive and safety measures negatively impacts employees' commitment to using them. Additionally, Ibrahim's (2015) study titled "Effectiveness and Impact of Implementing Occupational Safety and Health Procedures on Employee Performance in Khartoum Teaching Hospital" found that providing suitable conditions enables employees to perform better and with higher productivity, and that employee productivity will improve significantly with the redesign of occupational health and safety programs. Increased attention to implementing these programs leads to improved employee performance.

Although night work in hospitals is essential, it can, in some cases, cause problems or lead to negative outcomes, such as the conflict between the body's biological rhythm and the individual's social condition. The human body operates under a biological system known as the circadian rhythm, meaning that the body becomes active during daylight and its functions relax during the darkness of night to restore its energy and strength for the next day's activities (Bouhafs, 2004, p. 53). Based on the above, this study aims to understand the reality of physical conditions and occupational health and safety programs from the perspective of night shift workers in hospitals, focusing on a field study at Ben Nasser Bashir Hospital in El Oued.

Importance of the Study: The main points framing the importance of the current study include:

1. Providing a database on physical conditions and occupational health and safety programs for night shift workers in hospitals.
2. This study addresses an important gap in the field of professional research, given the scarcity of studies focusing on the physical environment and occupational health and safety programs for night shift workers in hospitals.
3. The results of the research can be used to find solutions and treatments that can elevate the physical environment and occupational health and safety programs for night shift workers in hospitals.

Objectives of the Study: The current study aims to identify the reality of physical conditions and occupational health and safety programs from the perspective of night shift workers in hospitals, focusing on a field study at Ben Nasser Bashir Hospital in El Oued.

Study Terminology:

The current study adopts the following terms:

Physical Conditions: Abdul Rahman Aissawi defines it as "the physical conditions surrounding the work, such as temperature, cold, humidity, lighting, ventilation, and noise... which should be conducive to help the worker increase productivity and improve it while reducing fatigue, boredom, and exhaustion..." (Ward Berqad & Naoui, 2014, p. 135). Operationally, it refers to the total scores obtained from the responses of night shift workers to items measuring their attitudes towards the prevailing physical conditions at Ben Nasser Bashir Hospital – El-Oued.

Occupational Health and Safety Programs: Although there are many definitions of occupational safety, they seem to aim at understanding the content and substance of occupational safety. All these definitions are attempts to create a comprehensive framework for occupational safety and security programs to define that content and substance. Occupational safety is merely a collection of procedures and systems aimed at protecting lives and facilities and ensuring their safety while maintaining the highest possible productivity under all conditions. The term "industrial safety" or "industrial security" may be used interchangeably with "occupational safety," even though these terms imply that the risks are limited to the industry alone, while there is no work in the face of technological advancement free from its own risks, whether it is agricultural or service work (Mishali, 2010, p. 89).

Operationally, it refers to the total scores obtained from the responses of night shift workers to items measuring their attitudes towards the availability of occupational health and safety procedures at Ben Nasser Bashir Hospital – El-Oued.

Night Shift Workers: This includes any activity that extends from 10 PM until 5 AM, which can fall under rotating or fixed hours (Abdouni et al., 2010, p. 113).

Operationally, it refers to any work performed by employees of various ranks that extends from 4 PM (16:00) until 8 AM (08:00) the following day.

Study Procedures:

Study Boundaries:

- **Spatial Boundaries:** The study was conducted at the specialized hospital for mothers and children Ben Nasser Bashir in El-Oued, across its various departments.
- **Temporal Boundaries:** The study was conducted during the academic year 2023 - 2024.
- **Human Boundaries:** This includes doctors and nurses working at the specialized hospital for mothers and children Ben Nasser Bashir in El-Oued, across its various departments.

Study Method: The current study utilized a descriptive method suitable for the nature of this research, as this method describes what exists and is concerned with identifying common and prevailing practices... Descriptive research is not limited to collecting and organizing data, but it also involves a degree of interpretation of that data. By describing the phenomenon under study, analyzing its data, illustrating the relationships between its components, and discussing the opinions surrounding it and the processes it involves and the effects it produces (Mursi, 1994, p. 270).

This method is also manifested in studying the correlation between variables, as correlational studies describe the degree of relationship between variables quantitatively, since the purpose of data collection is to determine the degree to which quantitative variables are related to each other, with the degree of relationship expressed by the correlation coefficient (Abu Allam, 2004, p. 231).

Sample of the Study: It is a part of the original community that contains some elements selected from it in a specific manner for the purpose of studying the characteristics of the original community (Al-Sarifi, 2005, p. 186).

The sample was selected randomly from doctors, nurses, and professional workers at the specialized hospital for mothers and children Ben Nasser Bashir in El-Oued, with equal opportunities for all individuals. A total of 270 questionnaires were distributed, and 250 were retrieved afterward. Then, 14 questionnaires were discarded due to incomplete responses from the sample individuals.

Sample Characteristics: The sample of the current study consisted of 236 employees distributed according to the following characteristics:

- **By Gender:** It was observed that the number and percentage of females were higher than those of males, with the number of males being 74 (31%), compared to 162 females (69%).
- **By Profession:** The number of nurses was 156 (66%), the number of doctors was 44 (19%), while the number of professional workers was 36 (15%).
- **By Professional Experience:** Professional experience was divided into three categories as follows:
 - From 1 to 5 years: 47 (20%).
 - From 6 to 12 years: 83 (35%).
 - From 13 to 30 years: 106 (45%).

Study Tools:

- **Questionnaire on Physical Conditions and Occupational Health and Safety Programs:** The design and modifications of the questionnaire were based on previous literature and studies by Gnaim Shahrazad and Bouabidi Lamia (2023), which includes two dimensions that align with achieving the goals of our current study. It is distributed as follows:
 - **Dimension One:** Physical Conditions consists of 7 items numbered from 1 to 7.
 - **Dimension Two:** Occupational Health and Safety Programs consists of 11 items numbered from 8 to 18.

The five-point Likert scale was used, which provides five responses for each statement in the questionnaire, determining the level of agreement with them. The responses are assigned numerical weights representing the degree of agreement with the statement, with scores in the order of (1, 2, 3, 4, 5).

- **Psychometric Properties of the Study Tool:** The validity and reliability were relied upon to calculate the psychometric properties of the study tool as indicated in the study by Gnaim Shahrazad and Bouabidi Lamia (2023). The

validity was calculated based on internal consistency, which was 0.778 for the physical conditions dimension and 0.696 for the occupational health and safety programs dimension. The combined values were significant at the 0.01 level, indicating that the questionnaire has a high degree of validity, making it suitable for use.

As for reliability, the Cronbach's Alpha equation was used, yielding values of 0.910 for the physical conditions dimension and 0.900 for the occupational health and safety programs dimension, indicating that the questionnaire also possesses a high degree of reliability.

Presentation and Discussion of Study Results:

• **Results of Normal Distribution Test:** To verify the objectivity of the study results, the normal distribution test was employed. This test is used to determine whether the data follows a normal distribution, which in turn affects the selection of the required tests for hypothesis testing. The following table summarizes the key results.

Table No. (01): Normal Distribution Test of the Data

Shapiro-Wilk		Study Questionnaire
Sig	value Z	Total Questionnaire
0.120	0.821	

Source: Prepared by the researchers based on the outputs of SPSS 22.

From the table above, we find that the significance level for the study questionnaire is (0.120), which is greater than (0.05). Thus, the data of the studied sample follows a normal distribution, leading us to conclude that the data from the study questionnaire is normally distributed. Therefore, it is necessary to rely on parametric tests to answer the hypotheses.

Results of the Study Question

Text of the study question: What is the reality of the physical conditions and occupational health and safety programs from the perspective of night shift workers in hospitals? - A field study at Ben Nasser Beshir Hospital in El Oued.

Table No. (02): Normal Distribution Test for Data

Questionnaire Dimensions Mean Standard Deviation

Physical Conditions 2.06 0.819

Occupational Health and Safety Programs 2.37 0.516

Source: Prepared by the researchers based on the outputs of SPSS 22.

From the table above, we find that the mean value for the physical conditions dimension is (2.06), which falls into an unsuitable range, and the standard deviation is (0.819). Meanwhile, the mean value for the occupational health and safety programs dimension is (2.37), which also falls into an unsuitable range, with a standard deviation of (0.516).

Discussion:

Based on the findings presented in the previous table, we observe that the reality of the physical conditions and occupational health and safety programs is completely unsuitable from the perspective of night shift workers in hospitals. This indicates that the hospital at night is not characterized by the calm that would help you complete your work; instead, it is often filled with annoying noises, especially since the hospital includes a maternity ward and a section for young children, leading to constant movement and continuous noise, as well as sounds from medical devices that intensify the clamor. Moreover, emergency cases are frequent as it is the only hospital that caters to mothers and children in the state, receiving patients even from outside the state. All of this increases congestion, and the interactions of visitors also contribute to creating a non-quiet environment. Additionally, there are frequent malfunctions of air conditioning units, with some not functioning at all, and since the hospital is located in southern Algeria, which experiences high temperatures during summer and frequent power outages, the temperature is often unstable and unsuitable for work. The various odors in the hospital related to medications and others can sometimes be strong, contributing to an uncomfortable atmosphere. Additionally, there may be smells resulting from food or some medical procedures, complicating the situation further.

The hospital suffers from a lack of personal protective equipment such as gloves, masks, and protective clothing, which are essential to protect individuals from infections and contagious diseases, especially after the COVID-19 pandemic. There is also a lack of maintenance for many medical devices, some of which remain unmaintained for long periods, exceeding months. Alarm systems are only operational in certain areas. Additionally, night shifts are very long, running

from 4 PM to 8 AM the following day, totaling 16 hours, in contrast to morning shifts from 8 AM to 4 PM. The complete absence of a health and safety committee means that employees are unaware of its existence or functions. Furthermore, the nature of work in hospitals, especially at night, often exposes workers to attacks or assaults from patients' companions or visitors. All these factors make it challenging to concentrate and complete work effectively under such conditions.

The findings of this study are consistent with the results of studies by Saadani (2023), Boudissa & Khalfan (2020), Hajj Said et al. (2020), Rahimi & Ben Rabi (2018), and Bouharoud & Gourine (2020).

Recommendations and Proposals:

Based on the findings of the current study, the researchers recommend the following:

- Increasing attention to physical conditions and occupational health and safety programs, which in turn contribute to improving the institution's performance and achieving its objectives, especially since the nature of the tasks of doctors and paramedical staff necessitates providing all health and occupational safety requirements.
- The necessity of establishing a dedicated unit in the hospital that focuses on occupational health and safety programs, follows up on their implementation, monitors them, and documents all related activities.
- Supporting all workers in health institutions with the latest reports and scientific research in the field of occupational health and safety and providing opportunities for their participation and training.

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