

Mini Review

Healthcare Employees' Occupational Health and Safety Conditions in Saudi Arabia; A Mini Literature Review

Alsharari ASD^{1*} and Parentela GM²¹Head Nurse ER, Tubarjal Hospital, Ministry of Health, Tubarjal, Saudi Arabia²Assistant Professor, King Saud University, Riyadh, Saudi Arabia***Corresponding author:** Abdullah Suwailem

Alsharari, Head Nurse - ER, Tubarjal Hospital, Tubarjal City, Aljouf Region, Saudi Arabia

Received: September 22, 2022; **Accepted:** October 26, 2022; **Published:** November 02, 2022**Abstract**

Healthcare workers face several threats when they practice their daily work. These factors can impact their occupational health and safety and negatively impact patient health care by reducing quality health care in the health sector. The purpose of this study is to provide a mini-review of the previous studies about some factors that can considerably impact occupational health and safety for the healthcare team. These factors are physical and psychological aspects. The authors individually completed a literature review for this article via an independent study followed by a collaborative discussion. The authors researched available sources to provide some results about these factors and how they can reduce the level of occupational health and safety for the health team provider and the safe and sound delivery of quality care for the patient. The results of this mini-review indicated that the physical and psychological aspects of the health team workers significantly impact the level of occupational health and safety, which can dramatically affect patient care. Therefore, early and proper educational courses and stress roles are necessary to reduce or even eliminate these factors, which cause negatively influence the occupational health and safety of the staff the patient care, as well as increase the burden on the health organization. This requires a multidisciplinary management approach to meet occupational health and safety requirements. Future research should concentrate on these factors to increase the health care provider's awareness about maintaining their occupational health and safety during their duty and examine some policy that helps reduce these impacts.

Keywords: Health care workers; Factors impact; Occupational health and safety; Saudi Arabia; Review article

Introduction/Background

Healthcare employees confront a variety of obstacles that might affect their everyday job. Maintaining workplace health and safety is one such difficulty. Most establishments that provide healthcare services believe a safe workplace to be essential in ensuring the safety and quality of services offered to patients. Understanding the elements that affect workplace safety and health can help you attain workplace safety. It is vital to raise healthcare professionals' awareness of the barriers to achieving optimal occupational and health protection in the workplace to guarantee full knowledge of how to deal with these variables when they arise. Occupational Health and Safety (OHS) aims to develop and maintain a high level of physical, mental, and social health for employees and safeguard healthcare professionals from hazardous causes while on the job. OHS also attempts to establish a work environment tailored to employees' psychological and physiological capacities (Amponsah-Tawiah & Dartey-Baah, 2011). As a result, this study will explain and detail several elements that may significantly impact the OHS of Saudi Arabian healthcare professionals. This study will explore these issues by reviewing prior research done in Saudi Arabia and the consequences of these studies, such as the impact of physical and psychological aspects on OHS. Finally, this study will recommend reducing the risks and hazards that healthcare employees may face in their regular job.

Methodology

Database Searching

Database searching was conducted via access to the KSU e-library. I used the keyword to find my topic about health safety and occupational health safety for health workers. I used an advanced search through KSU e-LIBRARY, searched on the title and abstract, and read the relevant topic by reading the abstract to know about my case.

Inclusion and Exclusion Criteria

This article focuses on the factors that can significantly impact the occupational health and safety of the healthcare worker, so we include all studies that have talked about these factors. Also, we included the article and research, which are not more than five years, so most of our studies we concentrate on being not more than two years conducted, not old. Finally, we are looking at a survey conducted in Saudi Arabia.

Study Characteristics

All journal articles were examined for the status of publications, especially the quartiles ranking of the journals via SJR, and all were found to be within q1, q2, and q4.

Assessment of Risk of Bias

Ethical approval and participation consent are not applicable since this research does not include experimentation on animals or

human subjects, so there is no need to assess the risk of bias.

Aim of Review

The purpose of the review is to identify the factors that can considerably impact reducing the level of occupational health and safety for the healthcare worker according to the immediate past publications.

Results and Discussion

Impact of Psychological Factors

Burnout is thought to have a psychological effect on the OHS of healthcare workers. According to Majrabi and Alasmee (2021), Burnout is a psychiatric condition that manifests as a long-term response to continuous interpersonal pressures at work. Researchers intended to explore how exhaustion, resiliency, and safety culture influenced staff nurses; from June through August 2018, 119 nurses were randomly selected using convenience sampling. Emotional weariness, depersonalization, and personal achievement were all examined in the study. According to the findings, 45.6% of nurses expressed increased emotional tiredness, 35.5% reported a high level of depersonalization, and only 15.9% reported a high level of personal success. The study found that the findings strongly suggested the prevalence of these burnout characteristics, which have a detrimental impact on nurses' and patients' safety and resilience and OHS [8].

In a study [7], the researchers determined the effect of the COVID-19 epidemic on doctors' mental health. A cross-sectional and survey-based strategy was utilized in the study. Five hundred twenty-nine physicians from various locations in Saudi Arabia were included in the study's sample. Regarding the study's findings, the researchers divided the participants into high-risk workplaces like the ER, ICU, and COVID-19 isolation wards and low-risk workplaces linked to COVID-19 exposure. Around 70% of those who participated worked in a COVID-19-designated healthcare facility. The data revealed that the most prevalent sensations among physicians were a concern, isolation, and fear: 67.5% (357) had worry feeling, 56.9% (310) had a sense of isolation, and 49.7% (263) had fear feeling. Physicians over the age of 60 were less likely to feel alone. Furthermore, female doctors were more likely to suffer worry and stress during the COVID-19 outbreak. At the same time, physicians who had previously been exposed to similar stressful situations were less likely to acquire dread and anxiety. The COVID-19 outbreak has substantially impacted doctors' mental health in Saudi Arabia. Physicians' psychological reactions to the epidemic were predicted by their age, gender, and experience in similar stressful situations.

Anxiety was quantified based on demographic variables in research by Al Mutair et al. [4], which intended to quantify anxiety among healthcare teams during the COVID-19 pandemic in Saudi Arabia. For the study, a cross-sectional survey was used to collect a convenient sampling method of 650 healthcare workers. According to the data, 283 (43.5%) experienced concern, 188 (28.9%) experienced medium anxiousness, and 179 (27.5%) suffered severe anxiety throughout the pandemic. Gender, nationality, and sleep were the demographic characteristics influencing anxiety levels. According to the findings, male participants were less likely than female participants to experience a high level of anxiety. Regarding nationality, the study found that anxiety was higher among Saudi

participants than non-Saudis. Finally, people who experienced sleep difficulties before the COVID-19 pandemic had higher anxiety levels than those who did not. These data suggest that anxiety levels differed based on demographic characteristics throughout the pandemic, affecting healthcare personnel's OHS.

Sultan et al. [9] investigated the psychological impact of its factors on healthcare professionals in Saudi Arabia's western area. Email, Twitter, and WhatsApp distributed the study questionnaire, and 283 out of 305 replies were full, allowing for analysis. 17.3% of the subjects tested positive for depression, 26.2 percent for anxiety, and 17.4% for stress, according to the research [9]. As a result, nurses experience much higher stress, anxiety, and depression than doctors. Individuals who felt COVID-19 significantly influenced their living standards also reported higher stress, worry, and depression levels. According to Sultan et al. (2022), a decrease in psychological well-being was common among healthcare personnel during the pandemic crisis. On the other hand, those who got mental health help had much lower stress, anxiety, and sadness [9]. Thus, the findings revealed that introducing mental health interventions might significantly reduce the mental health load on healthcare workers, thereby assisting in maintaining OHS for health professionals throughout the pandemic.

Impact of Physical Factors

Physical impacts contribute to OHS violations, and violence is one physical element. Abuse and violence have become widespread and disturbing issues in the health industry, according to Alshahrani et al. (2021), with healthcare personnel being more prone to violence than other professions. [5] studied workplace violence and abuse in an emergency health service setting to estimate the prevalence of workplace violence against healthcare personnel. The researchers used a descriptive cross-sectional technique and data from multiple emergency rooms in Saudi Arabia and the United Arab Emirates to conduct their research; a questionnaire was issued to healthcare personnel, and 492 responded. According to the findings, 20.9 percent of participants had been physically assaulted at work, and 32.2 percent were drawn to a weapon. Most interviewees (76.6%) said they had been verbally abused or bullied by a patient or a patient's family, while roughly 22% said they had been emotionally abused. Eighty-three percent of respondents said there was a favorable policy and process for reporting workplace violence, followed by taking no action against abuse (19 percent) [5]. To avoid exploitation in the health field, strict rules must be established in the workplace.

Nurses are more vulnerable to violence [6]. Shamlan et al. (2017) estimated the prevalence of verbal abuse of nurses at the university's King Fahd Hospital in Khobar, Saudi Arabia. The study comprised 391 nurses and employed a cross-sectional technique. According to Al-Shamlan et al. (2017), 30.7% of nurses have been subjected to verbal abuse, with most victims choosing not to report the incident for fear of negative consequences. According to the responses, male and emergency room nurses are more likely to be abused than other nurses. They specified methods for reporting workplace abuse and violence (Al-Shamlan et al., 2017). For the first time, [1] sought to fill information gaps concerning variables connected to needlesticks and other sharps injuries in Saudi Arabia. The study employed a cross-sectional approach; 450 dental assistants were randomly selected from 40 private dental clinics in Jeddah, KSA. According to

Table 1: Summary of Articles Used.

Studies	Research country	Design	Participants	Major findings (Direct quote from manuscript)
[1]	Jeddah, Saudi Arabia	Cross-sectional study	450 dental assistants recruited from 40 randomly selected private clinics in Jeddah, Saudi Arabia	In private dental clinics, 29.8% of dental assistants (25.6–34.2%) had at least one NSI. Lack of knowledge of infection control procedures and disease transmission, non-compliance with hepatitis B virus vaccination protocol, and attending 12 or fewer patients daily all increased the risk of NSIs ($p < 0.05$); adjusted odds ratios (95 percent CI) were 1.87 (1.18–2.97), 1.89 (1.05–3.41), and 1.63 (1.03–2.56), respectively. Dental assistants in 45.8% of clinics without an infection control unit had a higher NSI rate (aOR = 2.28, 95% CI 1.45–3.57).
[2]	Saudi Arabia	Cohort study	116-registered rehabilitation nurses (97-female, 19-male, mean age = 39.6-years)	The perceived knowledge score significantly improved (95% CI; $t = 4.691$; $p < 0.001$; Cohen's $d = 0.72$) at 6-month follow-up (mean \pm SD = 81.6 ± 18.2) from its baseline score (mean \pm SD = 68.2 ± 19.2). Likewise, the prevalence score of OBP markedly reduced from 71.5% (baseline) to 65.0% (6-month follow-up).
[3]	Jeddah, Saudi Arabia at King Abdulaziz University Hospital	A cross-sectional study design	a convenience sample of 234 nurses recruited	HCPs have greater knowledge (48.2%) than attitude when considering the "excellent" level in the particular topic (33.8%). Females (aOR: 1.55; 95 percent CI: 1.15–2.09; $p = 0.004$), those with a Diploma (aOR: 2.51; 95 percent CI: 1.64–3.83; $p < 0.001$), and those with 7–10 years' experience (aOR: 1.47; 95 percent CI: 1.01–2.15; $p = 0.045$) were more likely than their peers to have insufficient knowledge. The Ministry of Health (MOH) website was the most favored source of information among the sources (76%). HCPs' knowledge and attitudes on COVID-19 were consistent throughout all of Saudi Arabia's regions.
[4]	Saudi Arabia	Across-sectional	650 participants	GAD-7 data indicated that during the COVID-19 pandemic, 43.5 percent, 28.9%, and 27.5 percent of healthcare professionals in Saudi Arabia reported mild, moderate, and severe anxiety, respectively. Age, health specialization, country, and sleeping difficulties prior to COVID-19 were all linked to anxiety levels.
[5]	Several ER departments in Saudi Arabia and United Arab Emirates	a descriptive cross-sectional study	495 completed the questionnaire with 70% response rate. More than 90% of the respondents were in the 20–39 y/o bracket with an approximated equal gender distribution.	20.9% of the respondents stated that they were physically attacked and 32.3% were attacked with a weapon. Most of the respondents (75.6%) reported that they were verbally abused or bullied by patients or relatives of patients. Staff responses to emotional abuse varied among respondents with the most frequent response of "told the person to stop" (22%), followed by "took no action" (19%). Further, 83.3% of respondents stated that there was an existing policy and procedure guidelines for reporting work place violence while 30.1% reported that they had not used any of these measures.
[6]	A university hospital, Eastern Province, Saudi Arabia	A cross-sectional study	391 nurses	Approximately three out of ten nurses suffered verbal abuse in the year leading up to the research (30.7 percent). The victims did not disclose the occurrences in the vast majority of instances, mostly because they thought that reporting would generate no good effects. Male nurses, nurses in the emergency department, and nurses who stated that their company had processes for reporting violence were more exposed to workplace verbal abuse, according to a logistic regression study.
[7]	Saudi Arabia	A cross-sectional study	529 physicians from various regions in Saudi Arabia.	Worry (357, 67.5 percent), isolation (301, 56.9%), and dread were the most prevalent sensations described by doctors throughout the epidemic (263, 49.7%). During the COVID-19 pandemic, physicians over the age of 60 were less likely to feel isolated (OR = 0.08, 95 percent CI = 0.01–0.96, $P = 0.05$), female physicians were more likely to experience fear (OR = 2.96, 95 percent CI = 1.20 – 7.27, $P = 0.02$) and worry (OR = 2.87, 95 percent CI = 1.23 – 6.69, $P = 0.02$), and physicians with prior exposure to similar traumatic events were.
[8]	The Jazan hospital Saudi Arabia	A cross-sectional study	with 119 nurses from the Jazan hospital between June and August 2018 was used.	45.6 percent of participants reported high levels of emotional weariness, 36.5 percent reported high levels of depersonalization, and 15.9% expressed high levels of personal success. Burnout and its many manifestations have a significant impact on patient safety and resilience.
[9]	The western region of the Kingdom of Saudi Arabia	a cross-sectional online survey study	283 health care workers	17.3 percent of those who took part in the study tested positive for depression, 26.2 percent for anxiety, and 17.3 percent for stress. Compared to physicians, nurses reported much higher levels of sadness, anxiety, and stress. Depression, anxiety, and stress were dramatically reduced in those who got mental health treatment. Those who believed COVID-19 had a substantial influence on their quality of life reported considerably higher levels of despair, anxiety, and stress.
[10]	Nurses at King Abdulaziz Medical City, Riyadh, KSA	a cross-sectional questionnaire design	Ninety-four nurses participated in this study.	The majority of them (63.8 percent) said their lower back, shoulders (50 percent), and upper back had caused them pain in the previous 12 months (48.9%). Twenty-four (25.5%) of those who said they had low back pain said it affected their job and leisure activities.

the survey, three out of 10 dental assistants in private dental clinics suffered at least one needle stick or other sharps injury. According to Al Dakhil et al. (2019), insufficient awareness of infection control

procedures and a lack of commitment to infection control protocols for vaccination were strongly linked to an elevated incidence of needle sticks and sharps injuries. Furthermore, dental professionals

in 45.8 percent of the total dental units lacked access to an infection prevention and control unit—, which was linked to a higher incidence of needle sticks and sharps injuries. As a result, healthcare personnel's OHS may be jeopardized.

Work-related musculoskeletal illnesses are more common among nurses than in other health professions, according to Tariah et al. (2020). [10] wanted to find out how common work-related musculoskeletal problems are among Saudi Arabian nurses and what role occupational teams might play in raising awareness of these conditions. A cross-sectional questionnaire was employed in the study, and 94 nurses participated. A sample size of 234 nursing staff was gathered to use a cross-sectional technique. According to the findings, fifty percent had experienced shoulder discomfort, and 48.9 percent had experienced upper back discomfort. Low back pain has limited 25 percent of participants' job and leisure activities. As a result, it is critical to raise OHS awareness among nurses about the serious physical injury that can arise from work-related musculoskeletal problems [10]. Almaghrabi and Alsharif [3] conducted similar research at King Abdulaziz University Hospital in Saudi Arabia to determine the prevalence of Low Back Pain (LBP) and related risk factors among nurses. A cross-sectional strategy was used to recruit a convenience sample of 234 nurses. According to the findings, LBP was found to be more prevalent in 82.9%, the prevalence of LBP lasting one week was 53.6 percent, and the yearly prevalence of LBP was 85.5 percent. According to Almaghrabi and Alsharif (2021), manual lifting of patients was a significant contributor to LBP over the previous 12 months; nurses who worked in surgical wards thus had a greater incidence of LBP. Because of LBP, around a quarter of the individuals had changed jobs. According to Almaghrabi and Alsharif (2021), this conclusion suggests that governments should take special initiatives to decrease the obstacles and burdens caused by LBP in nurses.

Healthcare professionals might reduce Occupational Back Pain (OBP) with more awareness and education. Alghadir et al. [2] investigated the impact of work-related safety and health recommendations on knowledge and prevalence among Saudi Arabian rehabilitation nurses. One hundred sixteen rehabilitation nurses from Saudi Arabia participated in the cohort research. The study found that rehabilitation nurses' knowledge ratings had dramatically improved after a six-month follow-up. In line with this, within six months of nurses attending ergonomics training, the prevalence of OBP dropped from 71.5 percent to 64 percent. As a result, rehabilitation nurses should increase their understanding of occupational safety and health requirements, regulate OBP, and conduct training to minimize OBP prevalence, according to Alghadir et al. (2021).

Summary and Conclusion

A sense of safety in the workplace is deemed vital to provide

exemplary healthcare services to customers, and OHS is a prerequisite for delivering high-quality patient care. As a result, this article reviewed prior research to discover elements that impact OHS, including physical and psychological characteristics and the amount of expertise of healthcare personnel. Based on this analysis, several recommendations for reducing the harmful effects of these variables on OHS were suggested. A rigorous role should be created for healthcare employees to offer a safe and healthy work environment. Regular OHS training should also be developed to ensure that healthcare practitioners fully grasp the issues that might harm their OHS.

References

1. Al Dakhil L, Yenugadhati N, Al-Seraihi O, Al-Zoughool M. Prevalence and associated factors for needlestick and sharp injuries (NSIs) among dental assistants in Jeddah, Saudi Arabia. *Environmental Health and Preventive Medicine*. 2019; 24.
2. Alghadir AH, Al-Abbad H, Buragadda S, Iqbal A. Influence of Work-Related Safety and Health Guidelines on Knowledge and Prevalence of Occupational Back Pain among Rehabilitation Nurses in Saudi Arabia: A 6-Month Follow-Up Study. *International Journal of Environmental Research and Public Health*. 2021; 18: 8711.
3. Almaghrabi A, Alsharif F. Prevalence of Low Back Pain and Associated Risk Factors among Nurses at King Abdulaziz University Hospital. *International Journal of Environmental Research and Public Health*. 2021; 18: 1567.
4. Mutair AA, Mutairi AA, Alabbasi Y, Shamsan A, Al-Mahmoud S, Alhumaid S, et al. Level of anxiety among healthcare providers during COVID-19 pandemic in Saudi Arabia: cross-sectional study. *PeerJ*. 2021; 9: e12119.
5. Alshahrani M, Alfaisal R, Alshahrani K, Alotaibi L, Alghoraibi H, Alghamdi E, et al. Incidence and prevalence of violence toward health care workers in emergency departments: a multicenter cross-sectional survey. *International Journal of Emergency Medicine*. 2021; 14.
6. Al-Shamlan NA, Jayaseeli N, Al-Shawi MM, Al-Joudi AS. Are nurses verbally abused? A cross-sectional study of nurses at a university hospital, Eastern Province, Saudi Arabia. *Journal of Family & Community Medicine*. 2017; 24: 173.
7. Sulais EA, Mosli M, AlAmeel T. The psychological impact of COVID-19 pandemic on physicians in Saudi Arabia: A cross-sectional study. *Saudi Journal of Gastroenterology : Official Journal of the Saudi Gastroenterology Association*. 2020; 26: 249.
8. Majrabi MA, Hasan AA, Alasmee N. Nurses burnout, resilience and its association with safety culture: a cross sectional study. *Mental Health and Social Inclusion*. 2021; 25: 171-182.
9. Sultan S, Bashar A, Nomani I, Tabassum A, Iqbal MS, Fallata EO, et al. Impact of COVID-19 pandemic on psychological health of a sample of the health care workers in the western region of Kingdom of Saudi Arabia. *Middle East Current Psychiatry, Ain Shams University*. 2022; 29.
10. Tariah HA, Nafaic S, Alajmia M, Almutairi F, Alanazi B. Work-related musculoskeletal disorders in nurses working in the Kingdom of Saudi Arabia. *Work*. 2020; 65: 421-428.