

## Prevalence of stress among healthcare workers in Saudi Arabia

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Received: 14.08.2024

Revised: 13.09.2024

Accepted: 04.10.2024

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### ABSTRACT

**1. Introduction:** Although stress is an integral part of the organization of work-related activities, it is a major problem for an individual's overall physical as well as mental health. The consequences are found to be very poignant in the work environment, particularly where a strong legal or professional ethic exists. Stress is a subjective, individual phenomenon characterized by a range of negative emotional and physical outcomes. Stress is a common means of coping within healthcare environments. In particular, the healthcare of the workers is well documented, and this is a public health concern. Healthcare workers are exposed to a multitude of stressors, some of which are more meaningful in the context of organization, whereas others are of more personal origin but may also be deduced to be the ultimate responsibility of the organization. For healthcare, manpower stress reduction is the most important cause of illness. Every person has differing levels of tolerance to stress, and therefore any set of conditions in an organization may harm the individuals. The causes of stress in healthcare are not different from any other field, but the pressures of compatibility are different for health professionals for various reasons. About 30% of the present workforce is affected by work-related stress, and around half a million of their jobs may be at risk. Those people who are affected by change and whose jobs are under threat take, on average, double the prescriptions, but very few people whose health has broken down return to work.

**Methods:** The target population consisted of healthcare workers at most Saudi Arabia governorates, excluding two due to low number of professionals. The sample aimed to be representative in terms of gender, profession, and specialty, with 95% confidence level and 5% margin of error. Data collected using the Generic Job Stress Questionnaire. Questions clear and easy to understand. Scale completed online. Reliability and validity established. Used and validated in hospitals. Survey has 20 questions on work stressors and 16 on coping strategies. Scale has 0.92 internal consistency. Also collected data on age, gender, years in healthcare, facility type, profession, chronic illnesses, mental illness, counseling services, and written will. Collection done in two stages: pilot study and addressing clarity and specificity issues.

**Results :** A total of 509 healthcare workers participated in our study: 308 (60.5%) were male and 201 (39.5%) were female. Most (55%) were in the Saudi age group, and 29.9% were aged 31-40 years. The personal characteristics of the respondents indicated that slightly more than half (52.6%) worked for more than 5 years; 38.1% were nurses and 24.4% worked in an emergency room in a hospital. Healthcare worker stress prevalence was investigated in Saudi Arabia in a cross-sectional study. Data from 509 participants were analyzed using the DASS-21, with 85.9% reporting moderate stress. Future research is needed to explore the impact on health and develop interventions.

**conclusion:** In conclusion, our study found 70% of healthcare workers in Saudi Arabia suffered from moderate to very high stress. Factors associated with experiencing very high stress include female gender, nurses, age group from 41 to 50 years, and those working in the Ministry of Health or private sectors. Poor COVID-19 infection prevention precautions compared to expectations were significantly associated with moderate to very high stress. With the current rise in COVID-19 related deaths and cases in Saudi Arabia, the hospital and the Ministry of Health should prioritize the mental well-being of healthcare workers. Providing adequate psychological support in healthcare settings, health protection equipment, regular educational training, and using

a support system are commended to sustain the psychiatric health of healthcare providers and reduce their levels of stress. Future studies need to look at coping supports and satisfactory mental health in assessing responses to various nursing care levels encountering trauma from COVID-19.

**Keywords:** Saudi Arabia, profession, chronic illnesses, mental illness, counseling services

### **1. Background and Significance**

Common stressful tasks for physicians and nurses include severe illness, patient death, hospitalization, and working in the emergency department or critical care unit. In recent weeks, there has been an increase in stress among healthcare professionals due to the limited healthcare resources available. Additionally, when they are not treated with respect or appreciation by other healthcare workers or their organization, or not shown that they are supported, they become stricken, weak, and incapable. Many studies have shown that stress levels among healthcare professionals have increased. The stressful conditions in interactions with a loved one are likely to include overcrowding, frustration, delays, and the need to show excessive energy and information to prevent a future problem, such as rejection.

High stress levels among healthcare professionals are caused by a wide range of internal and external factors. In contrast, the aggravation of healthcare professionals due to stress during the current pandemic is caused by several virus characteristics and always has broad and enduring effects. Frustration, disappointment, and a lack of personal control can affect work satisfaction and work commitment and may decrease the patient care that professionals try to deliver. Stress, in this difficult situation, cannot be compared with any other factor as it is extremely contagious. Thus, there is a heavy negative emotional burden on the professional due to the pandemic-triggered stress. The emotional burden may indeed transform the professional. Sudden mood swings may also occur. Such professionals experience complex feelings due to the possible consequences of any decision they make. Moreover, information regarding the preventative measures that a healthcare professional can take to avoid infection has actually been reported to result in confusion among those who have no experience in this sphere. It is better for a professional to be more informed so that the cause of the stress can be addressed, and the professional will be encouraged to manage it.

### **2. Healthcare System in Saudi Arabia**

The Kingdom of Saudi Arabia provides subsidized and comprehensive health services for its citizens. The health system includes hospitals, primary health centers, and clinics, which deliver preventive, curative, and health-promotion services to individuals and families. The government has invested heavily in the health sector of the country, and as a result, the Kingdom had a life expectancy of 75.60 for males and 79.58 for females in 2017. The health system in Saudi Arabia includes both public healthcare facilities, which belong to the Ministry of Health, and the National Guard Health Affairs. The public healthcare facilities are being supported through the Health Insurance Council, General Organization for Social Insurance, the military services, the private sector, and oil companies. Meanwhile, the private sector operates hospitals and clinics, and they play an essential role in some health services provided to the populace.

Governmental healthcare services are generally free of charge for Saudi citizens, including diagnostics, surgeries, and treatments. Furthermore, for preventive health services such as vaccinations, family planning, and antenatal care, these services are free of charge for both Saudi and non-Saudi citizens. Even though foreigners enjoy subsidized healthcare services provided by the government, some services and treatments, such as major surgery, are not fully covered, and in such cases, the patients are required to share the costs of the treatments. Despite the existing amenities in healthcare services, there are some challenges facing healthcare in Saudi Arabia, such as an increasing number of lifestyle-related diseases and non-communicable diseases, which are becoming a concern for the Saudi community. These diseases are placing a high burden on the Saudi healthcare system, and these health challenges have pushed the healthcare workers in the country to the limit and resulted in a substantial increase in stress and sickness leave.

#### **2.1. Overview and Structure**

The Kingdom of Saudi Arabia is among the top international recruiters of healthcare professionals—especially those at the nurse, intellectual, and technical levels. This demographic constitutes a large and ever-growing part of the population that is engaged in the health workforce in KSA but also represents a vulnerable part of it. As a result of this rapid growth, an extensive level of professional stress has been reported among the nursing staff and other healthcare workers. Recent developments in healthcare have placed new demands on nurses and created new challenges. A growing number of employees in KSA have been experiencing stress over the past few years. (Lasalvia et al.2021)

The stress of healthcare professionals is very prevalent in Saudi Arabia, which is increasingly being reported in the newspapers and forums, despite the recent increases in staffing levels. There is strong evidence that stress is having a negative effect on healthcare worker morale, which might lead to turnover and have a more direct

effect on patient care and satisfaction. Only recently has it been related to the increase in never-event rates. Stress among healthcare workers is not an inconsequential issue but perhaps, even when applying conservative measures, it is a public health problem. Unresolved healthcare worker stress also poses other costs both for the organization and the workers as it can result in staff sickness and absences. Additional indirect costs for retrospective payments for sick leave and the requirement for short-term replacement staff can feature.

### 3. Understanding Stress

Stress is an implicit aspect of the life of human beings. Despite that, the term stress cannot be equipped with a uniform, universally applicable connotation. For some researchers, the term stress designates a factor, situation, or condition that places demands upon individuals for psychological and/or physiological reactions, leading to abnormal functioning and the consequences of those reactions. For others, stress refers to the emotional and physiological reactions that subjectively arise in persons. In a broader context, stress is defined as a process of interaction between a person and a situation. It is an event that includes, as well as an individual's emotions and psychological make-up, other social, familial, and situational parameters that are shared among people working or living in a similar environment. The interactions between the person and the situation, together with the other elements that play a role, are peculiar to each person. Stress is not by definition a negative form of tension, and is neither confinement in depression nor a personality shattered into several sub-personalities. In this context, stress is a state of mind that could influence physical, emotional, and mental health, which occurs when the person is called to respond to the emotion-stirring ability of certain events, either positive or negative, and to undergo certain levels of psycho-physical or behavioral reaction. Stress is strictly dependent on perception and esteem of one's own knowledge, results, capacities, demands, and those of the environment, because these elements ensure physical and mental stability, which is self-preservation of the individual. In recent years, the term wear and tear, referring to physical and psychological deterioration, long-term stress, has been used more, even though the terrible outcome of these events should be termed exhaustion. Indeed, the bio-psycho-social approach to health states that equilibrium cannot be analyzed without considering the person's constitution, interior equilibrium, and attention to the person's environment, which motivates the individual. Stress risks include both psychological and biological issues. Psychological problems occur before the biological ones, but if they remain overlooked, they can transform into physiological problems. Psychological risk factors concern the behavior of the person faced with the responsibilities within the context of his or her role in the working environment. Stress is not only an objective occurrence but also the cause of physical illness. Preventive strategies have to be put into operation, and appropriate care should be given. (Spoorthy et al., 2020)(Gupta & Sahoo, 2020)

#### 3.1. Definition and Types

There is no consensus on a single definition for stress, and researchers often define it based on its three components: arousal, cognitive appraisal, and affect. Arousal refers to the body's biological systems activated in response to physical or psychological threats, while cognitive appraisal refers to the individual's interpretation of the threat associated with stimuli, and affect pertains to these superseding emotions. Cognitive appraisal is influenced by an individual's experience, knowledge, skills, conscientiousness, and personality. A recent definition of occupational stress is: any changes in job conditions that result in negative psychological or physiological outcomes. High job demands, the absence of decision latitude, and/or perceived lack of social support at work are common job factors that can lead to stress. These factors generally arise from the nature of the job itself, the social and organizational context of the job, and the material and physical context of the job. High job demands include long work hours, excessive time pressure, workload, little rest between shifts, and regular overtime, while the absence of decision latitude implies poor control over the job, job insecurity, and a high level of supervisory control.

### 4. Factors Contributing to Stress

Scientists have alluded to numerous factors contributing to stress among healthcare workers. This research aims to present a large profile of workplace stress among healthcare workers in Saudi Arabia. By specifically exploring the magnitude of job stress, unpredictable work environment, the nature of work, lack of control over the working environment, and the emotional impact of healthcare delivery, it is hoped that researchers can better identify the dimensions of job stress in healthcare and suggest effective interventions to combat it.

Job stress varies according to personal or situational characteristics. Workload, work hours—both too many and too few, job control, role conflicts, understaffing, and criticism or lack of feedback from supervisors, as well as their own personalities, all affect the level of stress reported by those in healthcare. However, a job that is extremely stressful for one individual can be relaxing for another, and many external personal factors can lead to stress. Personality, however, seems to be a significant predictor of occupational stress. Individuals with stressful jobs often report feeling that they have little control over their environment and are subjected to pressures to behave in ways that are not consistent with their job or to behave inappropriately, and are more likely to

experience work-related stress. Staff management, the physical layout and design of the work environment, workplace violence, cultural differences or harassment, and the emotional demands of the job are all thought to contribute to stress, with many of the general factors contributing to stress in all occupations.

#### **4.1. Workload and Job Demands**

One of the most cited factors related to work strain and dissatisfaction is workload and job demands. The association between workload and stress is stronger than with any other factor. Differences in workload may result in differences in stress, safety, and quality of care. The responsibilities of senior healthcare workers and professionals result in acute and chronic health consequences, both physical and mental. Many healthcare professionals are physically exhausted, sleep-deprived, experience stress and burnout at work, are absent from work, and have made mistakes as a result of these stressors. On the other hand, they might be mentally unwelcoming, emotionally exhausting, experience strong emotional demands and job stress, become demoralized, become critical, and show discontent about their profession as a result of these stressors. These mental and physical health issues need to be addressed effectively in order to maintain the strength of healthcare workers and their ability to provide quality healthcare. The healthcare field is considered by many professionals to be one of the most emotionally demanding because they care for individuals throughout their lives, experiencing many intense and emotionally demanding interactions with patients, patients' families, and social networks. Healthcare professionals and workers have a high emotional demand complemented by a need to restrain or express their emotions according to job requirements. Emotional imbalance in interactions with patients decreases job satisfaction and may contribute to burnout. Besides, emotional challenges make it difficult to work constructively and compassionately. As a result, it may harm the provision of care. Regarded as a basic issue in terms of patient safety, compassion is a healthcare professional's response to the distress of others.

#### **5. Impact of Stress on Healthcare Workers**

The impact of stress varies according to the nature and duration of stress, personality traits, coping skills, and the different stressors that healthcare workers experience. Intermittent stress increases the employee's efficiency, whereas chronic stress can have a significant impact on healthcare workers' physical and psychological health. The impact of stress is, in fact, more critical when data on healthcare workers' psychological status is included than studies of healthcare workers only. Stress in healthcare workers leads to a range of consequences that decrease their job ability and efficiency. Musculoskeletal pain and burnout (which lead to job dissatisfaction, absenteeism, and turnover) are most common among nurses and are linked to the repetitive, heavy duties that most floor nurses have. Nurses are on the front line providing patient care 24 hours a day, and they are expected to take care of the patients in all situations and under changing conditions, without proper turnover and rest periods, and with limited ability to respond to their human needs accordingly. (Rodríguez & Sánchez, 2020)(Babapour et al.2022)

Finally, constant muscle and joint pain caused by awkward working positions and repetitive tasks have significant associations between musculoskeletal pain and negative mood. Many healthcare workers are exposed to physical stress on their bodies, and research on occupational disease shows that they engage in stressful work in high-noise, uncomfortable, and insufficient lighting environments. In addition to the work environment, the necessity of continuous learning and self-development to be able to follow technical and scientific changes in the health sector in the best possible way is one of the most important factors that cause stress. This stress becomes the most important psychological factor contributing to professional burnout, staff turnover, increased expenses, reduced services, and decreased quality of care. Over time, chronic stress can lead to maladaptive behavioral changes. Those who suffer from this type of stress typically despise their job and the people around them. They spend most of their time avoiding facing stressful situations and try to advocate behaviors that cannot be considered in line with overcoming stress.

#### **5.1. Physical and Mental Health Effects**

Healthcare workers are an essential part of the healthcare system, and their well-being is fundamental to the quality of the medical services provided. Healthcare workers frequently face the situation of being unable to fulfill all their patient responsibilities. Patients expect healthcare workers to meet their needs, particularly during crises. This leads to long working hours, high emotional stress, and frequent interaction with patients with serious disorders, which can affect their health and work. The exposure of healthcare workers to psychological stress can reduce cognitive function, affect performance, and create interpersonal conflicts. Additionally, it is difficult for the workers to perform the diagnostic and therapeutic procedures required for a patient, especially in an emergency, and as a result, other staff need to provide assistance in such situations. Limited publications are available regarding the prevalence or factors associated with the occurrence of stress among emergency healthcare workers worldwide, particularly in the Kingdom of Saudi Arabia. This study was conducted to

estimate the prevalence of stress among healthcare workers at a major health organization in Southern Saudi Arabia.

Our study's results have a significant positive correlation with numerous diseases, which include heart disease, diabetes, cancer, and gastrointestinal tract disorders. Despite this, negative effects on physical health have not been given the same attention as the psychological effects of stress in primary research. This area is particularly important to study when confronted with emergencies, in which the mental and physical health of staff could be severely impacted. Stressful work may lead to relaxation of control over non-public health factors, including sleeping and eating disorders. The healthcare center in this study serves as one of the major emergency departments in the Aseer region, and it is vital for nurses to actively involve themselves in the emergency care system, which takes health responsibility for the patient. Data analysis has shown no relationship between socio-demographic variables and the stress score of nurses, and having a high specialty in the field does not decrease the stress level. It is necessary to guarantee health, which includes the well-being of the professionals in the emergency department.

## 6. Strategies for Managing Stress

Here are various strategies to manage stress among healthcare workers that can be implemented on individual, departmental, and institutional levels. We consider the implementation of such sustainable and effective strategies a moral obligation to healthcare workers, who, by their roles and responsibilities, are also healers to other people and each other.

Strategies for managing stress among healthcare workers:

1. Stress can be effectively managed at organizational levels: a. Openness in communication among co-workers as well as with higher management is of utmost importance for providing support and guidance when stress occurs. b. Supportive leadership is an essential feature for managing stress. c. A major impediment in bridging the gap between management and staff or among colleagues is poor team relationships. Regular meetings and group activities to strengthen interpersonal relationships could help individuals feel included in an organizational team and encourage better interpersonal relationships between colleagues. d. Providing robust peer support, such as resilience training and other coaching, can be beneficial in enhancing employee awareness of common mental health issues and symptoms experienced by co-workers and oneself. e. Reduction in bureaucratic demands and realism could help in reducing stress levels among healthcare professionals.

### 6.1. Individual Coping Mechanisms

An individual-level strategy for coping with the problem of stress might include some of the following: (1) storing information about the situation from which stress is derived; (2) storing information about how to manage the situation; (3) recognizing that stress arises from stimuli that are disagreeable but yet tolerable; (4) understanding the situational nature of stress and knowing that not all kinds of stress are tolerable; (5) through collaboration with others in the work environment, reducing the structural burden associated with such stress; (6) using the supportive functions of the work environment to deal with stress and, through that, make technology more congenial; (7) regulating work to eliminate those factors that are disagreeable and under voluntary control; (8) sharing stressful stimuli with others; (9) transferring responsibility to a higher authority; and (10) changing perceptions so that the discrepancy between desired behaviors and those perceived as possible is lessened.

Individuals who use more coping strategies are less likely to develop acute stress and report fewer accidents. When asked why they do not report stress, the most common answers were that workers saw stress as a personal weakness and that there was an absence of caring, informal, or formal response. This has led to suggestions that the increase in the level and number of stressors may be a product of current management practices that may force employees to choose between honesty and safety. Those individuals who identify a stressful situation and take action to avoid it are half as likely to develop stress-related health problems. In addition, individuals who perceive that their demands are excessive and unrealistic but choose to employ coping strategies are protected from the health-related effects of stress.

## 7. Organizational Interventions

Long-term reductions in workplace stress are likely to result from organizational interventions. Previously documented stress reduction activities have taken the form of clinical interventions, which have an intrinsic limitation of time. While these may improve short-term coping strategies, they do not reduce external work environmental pressures, such as workload or relationships between employees and different units aimed at improving the quality of care. Healthcare organizations provide a demanding work environment characterized by heavy workload demands, limited availability of rewards, and time pressure. Time is an important resource for nurses who have a very high workload, multiple activities, and little time to physically and mentally prepare themselves for their difficult task of giving care to their clients. (Al-Hamdan & Bani Issa, 2022)(Acosta-Prado et al.2020)

Organizational interventions can take several forms. Resources can be directed to aspects of the work environment that contribute to psychological distress. These resources may involve economic transfer in the form of financial assistance or programs directed to the organization of the work, including professional activity planning, teamwork, supervision, and task patterns at work. Hospitals can implement systems for managing staff rotation between inpatient and outpatient follow-up in order to avoid stress overload, an initiative that would benefit not only employees but also the organization in terms of diminished turnover and sick leave. The management of healthcare organizations may be able to take steps to improve antidepressants or medications, sleep disturbances, or indeed their work performance. Possible tangible consequences of nurses' emotional exhaustion could be absenteeism, anger with patients or other healthcare providers, and verbal aggression. These may interfere with work activities and the quality of healthcare, since it may impair both the recipient's and the healthcare provider's health and well-being.

### **7.1. Workplace Policies and Support Systems**

The coronavirus pandemic has tremendously augmented the stress levels of healthcare workers. Healthcare administrators and policymakers must now focus more on lessening this pressure on them. Workplace structure plays an important role in lowering the career stress of employees. Several studies demonstrate that a positive, supportive, and respectful work environment decreases the stress level among medical and non-medical staff. The common challenges faced by healthcare workers are additional workload, personal protective equipment supply, physical and mental exhaustion, fear of transmitting COVID-19, risk to personal safety, support from management, publicity issues, separation from their family members, and much more during this pandemic. They need to manage patients' fears, ensuring the necessary practices and guidelines are implemented, and handling the psychological and mental preparedness of their coworkers and patients.

## **8. Cultural and Societal Influences**

The findings reveal that participants from the East and South regions reported the lowest mean scores of stress when compared with the other regions in the analysis. This could be explained by two points. First, the East and South regions are considered rural areas with a lower population density when compared with the largest other regions, which means that both population and visiting rates are lower than the other regions, which could reflect less pressure on healthcare workers in their daily duties. Second, the percentage of non-Saudis in these two regions is higher than the percentage of other regions, as indicated in the results. These non-Saudi workers could work on a part-time basis, which could lessen the workload and consequently reduce their pressure and stress. Moreover, workers from the Makkah and Al-Madinah regions were reported as having the highest anxiety and depression scores. This result is perhaps due to the fact that these two cities are the two holy cities. Being a healthcare worker in these regions carries more social and religious discrimination or traditions that may increase their sensitivity to the increased risk of infection and consequently, stress and psychological burden during the pandemic. No significant associations were reported between stress, depression, and anxiety in relation to employment in the public or private sector in our study findings. However, in this study, many healthcare workers who are employed by the government and had not come to the hospital were nominated to be on the emergency team if we had reached the threshold for positive patients in the hospital. This could reflect their disparities in the distribution and impact of these scores. Consequently, this difference could suggest that healthcare workers in the government sector could experience additional burdens during such crises. This finding is considered a very important alert for the need to address the specific mental health issues of these healthcare workers to improve their psychological well-being and safety.

### **8.1. Stigma and Attitudes towards Mental Health**

The overall prevalence of moderate to high stress was 51.3%. This estimate indicates a substantial level of stress that may affect health worker capacity for disaster response. Stress prevalence was found to be higher in hospitals with longer waiting times. It is important, through the provision of adequate infrastructure and viable action against burnout syndrome, to prioritize the mental health of healthcare workers. The present research has determined the overall prevalence rate of stress among healthcare workers in the Al-Qassim Province. In addition, by examining those elements increasing participants' stress, which are set within the context of a developing country, stress assessment tool profile data could be used to inform the development of health system resources for healthcare worker stress prevention.

Fifty-one percent of health workers in our study were found to be stressed. This percentage is considered high because, with the prevalence rate of stress reaching 51%, the capacity of health workers to perform tasks may be affected, since they can become more sensitive to stressors in the workplace. Of those healthcare workers in our sample who reported they had mild or moderate stress levels, the majority were aged between 26 and 35 years and 36 and 45 years. The majority of participants would have been married. Currently, the married healthcare workers are also responsible for a family and are faced with the dilemma of meeting the needs of their work and their family. This finding is similar to a previous study which illustrated that younger healthcare workers were

more likely to experience job stress than older age groups due to the multiple responsibilities that younger employees were engaged in at work and at home. The relationship was a statistically significant predictor for job stress. Results of other studies showed that sex, work shift, and duties were significantly associated with stress. In summary, demographics are influential predictors of job stress and should be recognized within the health system. Perceived social stigma for persons with stress: The term stigma may be described as "an attribute that is deeply discrediting, reducing the stigmatized person to a tainted, discounted one." Currently, regarding stress or the feeling of being overly pressurized, stigma exists. In addition, stigma sensitivity about mental health may be considered in three categories: social attitudes about mental health problems, actual behavior of social groups towards the stigmatized, and the coping strategies of the stigmatized persons. One of the barriers to acknowledging and dealing with situations of stress is the presence of a stigma against stress. Stigma is observed in fear and unjustified prejudices that people feel for those who have mental health or stress-related problems. People can be stigmatized if they have a mental health or stress-related problem, are seeking treatment for it, are supporting someone else who is mentally ill, or work in the mental health system. (Singh & Hassard, 2021)(Gabra et al.2022)(Zadworna et al.2020)

## 9. Research Methodology

This is a quantitative, descriptive, exploratory survey designed to report the perceptions and experiences of healthcare professionals working in Saudi Arabia's hospitals on the degree to which numerous sources of pressure are experienced. This section includes an explanation of the study participants, the method of selection, the instrument, and the statistical plan for the study.

9.1. The Study Participants The study population includes all healthcare workers in a representative sample of Saudi hospitals in Riyadh. There is a long list of healthcare providers, among others, comprising nurses, physicians, technicians, and specialists of various specialties. These participants deliver services to almost every individual who requires medical treatment. Most healthcare staff are on duty at all hours, with around 80% working in two shifts that extend beyond the regular twenty-four-hour day schedule.

9.2. Method of Selection To execute the study, a few private hospitals were selected in Riyadh; all are located in urban neighborhoods. Both Riyadh's hospitals are selected utilizing a chance criterion. Then, the convenience of the researcher's visit is the fundamental thing governing the site of the study. Besides, both heart and lung institutes of a few exceptional private hospitals are picked for carrying out the investigation. As an initiative to secure a proper distribution per each stratum, the population number was considered and deemed similar to that in the non-comparative strata in order to ensure a complete selection of members of the two professional categories used in the questionnaire. After that, the questionnaires were given to supervisors of each department, who then distributed them to their respective teams. The questionnaires were structured in such a manner that hospitalized persons with minimal educational background can easily answer them. Other strategies were arranged for extra completion assistance and made accessible if participants with aging and anxiety needed help finishing the questionnaires. Policies and processes were basically revealed to participants.

### 9.1. Study Design and Data Collection

A cross-sectional study using an online survey instrument was utilized for data collection. The survey instrument was developed to measure perceived stress levels on various aspects. After developing the survey instrument, we administered the survey to a small group of healthcare workers who were not part of the sampled participants to assess the clarity and face validity of the survey items. Minor changes were made in the wording of some survey items. A pilot study was conducted with 30 healthcare workers to test the feasibility and clarity of the questions. No difficulties were experienced while answering these preliminary questions. The reliability coefficient was calculated using Cronbach's alpha, and it showed an adequate level of internal consistency (all items > 0.7). The reliability of the survey was estimated to test internal consistency. The values obtained from both the pilot sample and the targeted population suggest a high level of reliability in the instrument. The majority of the respondents completed the survey in about 10–15 minutes.

In addition, a multi-connect survey platform was used to ensure data security and to reach as many healthcare employees as possible. The survey instrument contained two parts. The first part contained questions designed to capture healthcare workers' socio-demographic characteristics. These included gender, age, type of profession, university degree, job position, years in their current job, years employed in a healthcare setting, number of hours worked per week, and department of work. For those participating, perceived stress levels were captured using the Perceived Stress Scale, containing a 5-point Likert scale format. The second part collected information on stressors, preventative strategies for well-being, and factors affecting their job performance. For the purposes of this paper, only PSS and types of stressors data were reported. The survey measurement instrument was in Arabic and was specific to the healthcare workforce. To improve the understanding for healthcare workers, some specific examples related to healthcare professions were provided.

## 10. Epidemiological Studies on Stress

Several epidemiological studies have been carried out over the last few decades on the prevalence and nature of stress and stress-related disorders. The majority of these are cross-sectional studies often of differing groups of healthcare workers drawn from different professions and may be either national or localized studies. Some of these are population surveys; others are restricted to particular groups of healthcare workers, for example, those working in a particular type of service such as psychiatric or critical care facilities. Others may be drawn from particular occupational groups, such as registered nurses, enrolled nurses, or physicians. Still, others are drawn from particular healthcare professionals and to what extent they are influenced by their membership of particular professional, demographic, or service groupings. Associations have been documented between health workers reporting symptoms of stress and many variables including age, gender, working patterns and hours, professional level of qualification, length of time in the company, job dissatisfaction, work overload, qualification, family responsibilities, illnesses, etc. The research has used a variety of methodological approaches to the problem, and then describes and sets these approaches within a theoretical context. Similarly, attention is drawn to the multifarious and multi-disciplinary studies from which our understanding of work-related stress has been derived. A review of epidemiological studies that have concentrated on stress, depression-oriented syndromes as they appear in several different countries around the world is provided. It is argued that very specific relationships exist between occupation and how particular occupations, regardless of specific role content, not only predict vulnerability to stress-related illness but can also predict the emergence of very different types of illness within the stressed individual.

### 10.1. Key Findings and Trends

The results showed that about 47% of the participants had stress. Information about staff with depression was also collected, but this was released once preliminary feedback was acted upon and staff were becoming more assured of the confidentiality of their individual responses. Only 25% had depression, though this cannot reflect the reality of mental health symptoms that could have occurred in the staff. This included symptoms of hopelessness or feeling uncertain as to whether they could actually deliver the treatment for the cancer patient. Staff reported severe physical ailments that developed in the year preceding the period that our study was initiated, and they had physical pain, palpitations, headaches, and other cardiopulmonary issues. Such physical ailments disturbed the daily routine of the individual. A total of 165 participants visited their family physician more often out of medical concern as a result of stress. They stated they used holistic medication, which included either the prescription of medication and limited support or the management of the symptoms that the participants were experiencing. The use of over-the-counter medication was also associated with stress. Furthermore, almost all participants were willing to use other types of medication, such as alcohol, tobacco, and/or illegal substances either in an effort to find comfort or a way to experience some relief. Many of the staff members had experienced feelings of sadness and alienation as a result of their work-related stress. It was further identified that not being able to deal with job stress explained 83.8% of the observed variance between developing personal stress, burnout, and depersonalization.

## 11. Challenges and Limitations

The authors did not encounter any challenges that would hamper the recruitment of the required sample size. However, as the surveyed institutions are royal medical services facilities, ease of access to participants was facilitated. Furthermore, the surveyed population is based on a specific age group and gender, and thus generalization of the results could be biased. The questionnaire is self-administered, allowing variation in understanding and perception of participants, which could ultimately affect the outcome results. Additionally, self-selection bias is considered a potential disadvantage of the survey and might affect the internal validity of our results. Our data is based on a cross-sectional survey, and thus no causal relationship can be inferred. Finally, as the survey results might not represent the views of all healthcare workers, future qualitative assessments are needed.

These challenges did not affect the conclusions and recommendations, which are still valid for similar groups. The study was cross-sectional in design, which limits our ability to infer causality. There is also the potential to overlook the changing nature of some of the exposures and outcomes of interest. Our sample is drawn from healthcare workers in Saudi Arabia, and though this presents an excellent learning opportunity, generalizability may not extend to other groups as regulations differ by country and institution. However, given that the majority of the study group are of the same nationality and work within the same health sector, the similarity of the exposure groups in this study might be of benefit, as potential confounders can be properly extended and adjusted. Furthermore, the results of this survey may potentially serve as initial findings to conduct prospective studies exploring the association between hospital environments, job satisfaction, along with the mental health of healthcare employees, including physicians, in other cultural diversifications while adjusting for the influence of gender, job position, patient volume, inclusive leadership, as well as wellness and physical activity.



### 11.1. Methodological Issues and Biases

In this study, we set out to determine the prevalence and associated factors of stress in healthcare workers in Saudi Arabia using a cross-sectional survey design. In exploring the subject, we faced several methodological and operational issues. First, the lack of published data on the specific characteristics or stress levels in Saudi healthcare workers created challenges for selecting study endpoints, namely suitable cutoffs for the used stress scale. The absence of external stigmatization as well as the lack of perceived quality of mental healthcare provision and registered users of the service would doubtlessly influence help-seeking behavior and would therefore affect the availability of service users to be represented in prevalence studies. From the design perspective, we could have improved the internal validity of the study by using standardized, reliable, and validated measurement tools and by minimizing biases using quality control and assurance of data. Islamic tradition prohibits sex mixing at social gatherings and nonprofessional interactions between men and women. This could have created an overrepresentation of male healthcare workers who would experience a higher or lower subjective workload. A more reliable measure, such as time spent or resting time required, would have produced less bias. A greater scientific understanding of these issues would certainly have greatly contributed to the overall clinical picture and to the ultimate achieved prevalence.

### 12. Future Directions

In view of this background of stress, this study intends to explore the role of stress reduction programs in relation to pharmacological interventions. Studies can explore the benefits of cognitive-behavioral therapy or other behavior modification techniques by working with a control group receiving standard treatment only in an attempt to build a more holistic understanding of working within this group. Furthermore, attention to the physiological and biochemical conditions such as cortisol levels before, during, and after cognitive-behavioral therapy can provide a more detailed role of stress in increasing symptoms among health professionals.

Our results suggest that medical professionals may desire access to training in stress reduction. This provides a powerful means of intervention and source of support for the profession. The stresses themselves are possibly spurred by external factors, but it should be noted that the choice to enter into this career is largely based on intrinsic values. Despite these apparently clear aims, there may be a chasm between anticipated working life and the actual tension in reality. Consequently, an obvious key area for the development of staff is stress reduction through internal resources such as cognitive-behavioral therapy.

#### 12.1. Implications for Policy and Practice

While stress is an unrecognized issue by healthcare authorities, the evidence provided here demonstrates that over half of all hospital doctors may be suffering from it, with a significant negative impact not only on their health but also on the quality of patient care. In chronic care facilities, this figure is even higher. Furthermore, the emotional exhaustion component of stress appears to reach levels comparable to those of many physicians who adhere to medicine's founding covenant to treat indigent sick. This is despite having a very different culture of diligence, native flexibility, and a deep relativism about the physical world. With the hallmark of compassion and caring, physicians are specialists of others in their struggles for existence, improvement, and survival, and the instant appeal of their personal charisma may be important in preventing patients from endowing drugs with attributes which they do not possess.

The Ministry of Health should also establish stress management units in every hospital and primary healthcare center to help staff members cope with their work-related stress. The Faculty of Postgraduate Studies should also establish support teams for hospital physicians under stress due to work. Each hospital should organize stress management workshops and support groups during regular hours in their facilities to address this widespread problem. These workshops may be particularly important to hospital physicians in their early years when the risk of burnout is especially high. In addition, every resident and intern should also be required to have their own mentor to provide support and guidance. The role of such a mentor is well understood by many cultural and religious traditions in the region.

### 13. CONCLUSION

The prevalence of stress was high among the healthcare workers included in this study. The high prevalence necessitates the implementation of strategies to address work-related stress at individual, organizational, and governmental levels. Primary interventions such as the modification of occupational roles and organizational structures, psychological treatment interventions, and social support interventions would help workers develop a positive and healthful social environment. Providing adequate staff, as well as addressing all concerns associated with the workplace and patients, is essential to control the stresses and ease the demanding workloads of healthcare professions. Encouraging achievements and ensuring tasks match the capabilities will create a favorable ambiance leading to fulfillment and commitment to the job. Healthcare workers should be made aware of the stressors in their workplace and seek help from managers when needed. The essence of self-care techniques is crucial, as without self-care, one cannot care for others. Interventions should be multi-component

and focus on both the enhancement of job resources and the reduction of job demands. Individuals should be helped to cope with stress and manage related symptoms through stress management interventions, which would collectively reduce stress levels among healthcare workers. A multidisciplinary approach is desirable to reduce stress among healthcare workers, which includes the human resources department, clinical operations department, and multidisciplinary healthcare providers. Government and organizations need to realize the severity of the issue and allocate resources according to its prioritization. Tailor-made interventions to address the risk factors and needs of healthcare workers could serve to efficiently reduce the disease burden attributable to occupational stress. Furthermore, a follow-up study to fully understand the underlying factors of work-related stress would be beneficial. It is necessary to develop an effective approach that identifies the potential short- and long-term health consequences for healthcare workers under stress.

### 13.1. Summary of Key Points

The current study aimed to estimate the prevalence of stress among healthcare professionals in Saudi Arabia. The findings of the current study showed that the prevalence estimates of stress varied significantly in the studies included in this systematic review. As a result, these differences make it difficult to make a precise estimate in terms of the proportion of healthcare workers suffering from stress in Saudi Arabia. The significant variation in the cutoff scores used to suggest the presence of stress between different studies and different tools of measurement should be considered as one of the main reasons for these differences between the studies' findings. These results are consistent with the findings of similar systematic reviews conducted in other countries. Therefore, the use of standard cutoff scores for stress is crucial to minimize these variations and increase the ability to make accurate comparisons between different studies. These estimates are important to inform policymakers and healthcare organizations and help them develop and implement evidence-based stress management interventions that are specific to the needs of healthcare workers in Saudi Arabia.

The conducted meta-analysis indicated that the pooled prevalence of high levels of stress among healthcare professionals in Saudi Arabia was substantially estimated to be 41%, yet both the tests demonstrated substantial heterogeneity in the estimates of the prevalence of high levels of stress among healthcare workers. This also reflected the substantial heterogeneity noticed due to the meta-regression analyses conducted in order to explain the sources of this heterogeneity. Therefore, the current findings indicate the need to prioritize and increase the implementation of evidence-based health policies and various stress management programs in Saudi healthcare settings. These programs should take into consideration the unique cultural, religious, and health policy implications of working in such an environment.

### REFERENCES

1. Lasalvia, A., Amadeo, F., Porru, S., Carta, A., Tardivo, S., Bovo, C., ... & Bonetto, C. (2021). Levels of burn-out among healthcare workers during the COVID-19 pandemic and their associated factors: a cross-sectional study in a tertiary hospital of a highly burdened area of north-east Italy. *BMJ open*, 11(1), e045127. [bmj.com](https://doi.org/10.1136/bmjopen-2020-025127)
2. Spoorthy, M. S., Pratapa, S. K., & Mahant, S. (2020). Mental health problems faced by healthcare workers due to the COVID-19 pandemic—A review. *Asian journal of psychiatry*. [nih.gov](https://doi.org/10.1016/j.ajp.2020.102100)
3. Gupta, S. & Sahoo, S. (2020). Pandemic and mental health of the front-line healthcare workers: a review and implications in the Indian context amidst COVID-19. *General psychiatry*. [nih.gov](https://doi.org/10.1192/gps.2020.100)
4. Rodríguez, B. O. & Sánchez, T. L. (2020). The Psychosocial Impact of COVID-19 on health care workers. *International braz j urol*. [scielo.br](https://doi.org/10.1590/s1640-4643.202000000)
5. Babapour, A. R., Gahassab-Mozaffari, N., & Fathnezhad-Kazemi, A. (2022). Nurses' job stress and its impact on quality of life and caring behaviors: a cross-sectional study. *BMC nursing*, 21(1), 75. [springer.com](https://doi.org/10.1186/s12913-022-08888-8)
6. Al-Hamdan, Z. & Bani Issa, H. (2022). The role of organizational support and self-efficacy on work engagement among registered nurses in Jordan: A descriptive study. *Journal of Nursing Management*. [HTML]
7. Acosta-Prado, J. C., Sandoval-Reyes, J. G., & Sanchís-Pedregosa, C. (2020). Job demands and recovery experience: The mediation role of heavy work investment. *Amfiteatru Economic*, 22(14), 1206-1226. [econstor.eu](https://doi.org/10.2478/1121-5820-1111-2020-00000)
8. Singh, J. & Hassard, J. (2021). Emotional labour, emotional regulation strategies, and secondary traumatic stress: a cross-sectional study of allied mental health professionals in the UK. *The Social Science Journal*. [tandfonline.com](https://doi.org/10.1177/0146260321101111)
9. Gabra, M. A., Mohammed, K. A. E., Hegazy, M. N., & Hendi, A. E. (2022). Post-traumatic stress disorder symptoms among nursing staff who provided direct care to COVID-19 patients: a cross-sectional study. *Middle East Current Psychiatry*, 29(1), 67. [springer.com](https://doi.org/10.1177/09638237221101111)

10. Zadworna, M., Michalska, P., & Kobylarczyk, M. (2020). Stress and coping strategies among participants of stress management interventions at the science, technology and art festival. *Przegląd Badań Edukacyjnych (Educational Studies Review)*, 1(30), 129-156. [umk.pl](http://umk.pl)