

ORIGINAL RESEARCH

CORONA EXPERIENCE

Assessment of perceived stress among resident trainees of a tertiary care hospital in Saudi Arabia during COVID-19 pandemic – a cross-sectional study

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Abstract

Background & Objective: The massive burden of COVID-19 disease is believed to be associated with significant psychological disturbances on healthcare professionals. Increasing levels of stress may lead to anxiety, depression, burnout syndrome, and in severe cases, post-traumatic stress disorder. The objective of this study was to examine the presence of stress among resident trainee doctors working in a tertiary care hospital in Saudi Arabia in the context of the corona pandemic.

Methodology: This was a cross-sectional study conducted in Security Forces Hospital, Riyadh, Saudi Arabia. We included the resident trainee doctors from different specialties of our hospital including medical, surgical, anesthesia, emergency room (ER), and critical care units. We used convenience sampling to select study respondents. Perceived Stress Scale (PSS) was used for assessing the stress levels among trainees. Trainees were requested to fill the questionnaire either online survey monkey or in paper form. All data were entered and analyzed using SPSS version 26. We calculated mean, standard deviation, frequency count, and percentages for the perceived stress.

Results: A total of 60 trainees were included in this study. Mean PSS-10 score was 20 ± 5.51 , with a range between 6 and 34. Four (6.7 %) trainees had low stress and 50 (83.3 %) trainees had moderate stress while 6 (10 %) trainees had high stress

Conclusion: The majority of resident trainees in our study experienced a moderate level of anxiety during this COVID pandemic.

Key words: Stress, Resident trainees, COVID-19, pandemic

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1. Introduction

In December 2019, few patients developed pneumonia of unknown origin in Wuhan (China) which was later

named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).¹ WHO declared this disease a global pandemic on March 11, 2020. As of 13th June

2020, WHO reported a total of 52,177,708 confirmed COVID-19 cases and 1,286,063 total deaths.²

The massive burden of COVID-19 disease is believed to be associated with significant psychological disturbances to healthcare professionals (HCP). Stress is defined as perceived discomfort which is stimulated by activities perceived as too intense and frequent and exceeds a person’s coping capabilities and available resources to manage it.³ Increasing levels of stress may lead to anxiety, depression, burnout syndrome, and in severe cases, post-traumatic stress disorder (PTSD).⁴ Abdulghani et al.⁵ in their study showed that the overall stress level among resident trainees in Saudi Arabia was high (70.4%), but the severe stress level among the resident trainees is lower than the medical undergraduate students and internship trainees. Some other reports also mentioned careers in medical specialties as stressful.^{6,7} Data about stress among resident trainee doctors during this COVID-19 pandemic is scarce and we could not find any study in Saudi Arabia.

2. Research methodology

This was a cross-sectional study conducted in Security Forces Hospital, Riyadh, Saudi Arabia. We included

the resident trainee doctors from different specialties of our hospital including medical, surgical, anesthesia, ER, and critical care units. The sample size was calculated using the online calculator⁸ and came out to be 57. We used convenience sampling to select study respondents. Ethical approval was taken from the institutional ethical review committee. The trainees were informed about the purpose and significance of this study. We used The Perceived Stress Scale (PSS) for assessing the stress levels among trainees. PSS is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one’s life are appraised as stressful. Items are designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. Each item was answered by the trainees on a five-point scale ranging from never (0) to very often (4).⁹ The scale has been used in Saudi healthcare workers in one previous study by Alharbi et al.³

Trainees were requested to fill the questionnaire either through online SurveyMonkey (<https://www.surveymonkey.com/>) or in a printed paper form. All data were entered and analyzed using SPSS version 26. We calculated mean, standard

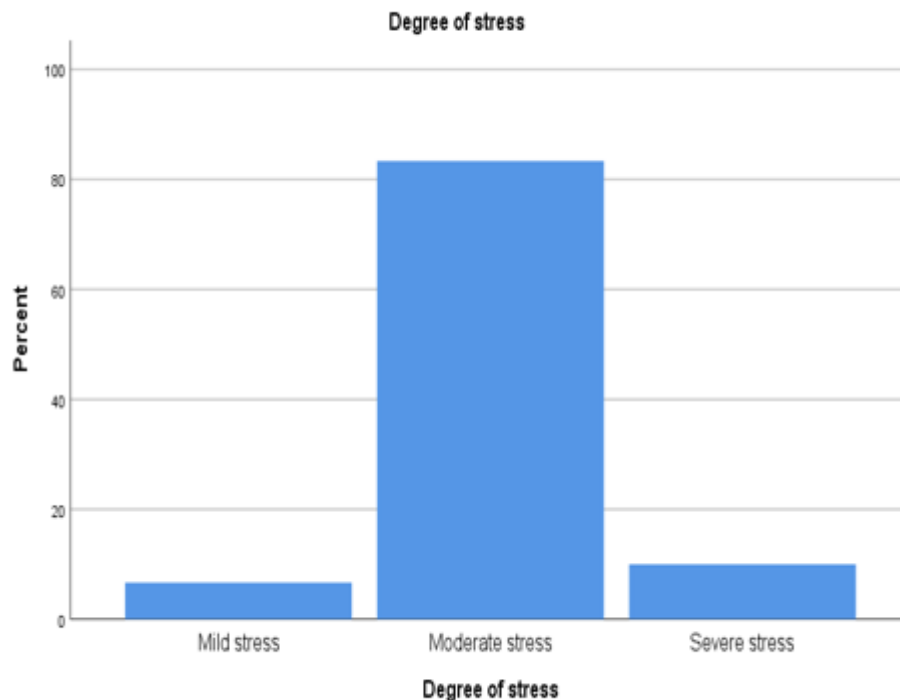


Figure 1: Degree of stress in trainees

deviation, frequency count, and percentages for the perceived stress.

3. Results

A total of 60 trainees were included in this study. Fifteen (25%) trainees filled the questionnaire using the SurveyMonkey link while 45 (75%) filled the paper questionnaire. Mean PSS-10 score was 20 ± 5.51 , with a range between 6 and 34. Four (6.7%) trainees had low stress and 50 (83.3%) trainees had moderate stress while 6 (10%) trainees had high stress as shown in the Figure 1.

4. Discussion

Healthcare professionals are known to be more susceptible to psychological distress compared to other members of society.¹⁰ In one study in Jordan, poor psychosocial work environment, poor social support, and dealing with uncooperative patients were found to be associated with burn out among mental health nurses.¹⁰ Alharbi et al.³ showed that the mean score of PSS10 in ICU nurses of one of the government hospitals in Saudi Arabia was 17.71, which was lower than what we found in our study. Most of the nurses reported a moderate stress level while only a few experienced a low stress level.

With the current situation of COVID-19, this psychological aspect has got further worsened. Scientific literature from previous epidemics has shown significant individual and social psychosocial impact following epidemics and outbreaks in the past.^{11,12} During this COVID-19 pandemic, the world is going through a shutdown or slowdown in daily activities but on the other hand, HCPs need to continue their working schedules.¹³ Additionally, because of increasing healthcare demand, they have to work longer shifts, often with limited resources and with the need to wear personal protective equipment (PPE) resulting in physical discomfort as well. Also, they are at risk of getting infected and the risk of spreading the virus to their family and friends. This fear makes them to isolate themselves from family and friends, resulting in various levels of psychological pressures and dysphoric states like stress, irritability, fatigue, and despair.¹⁴

In 2003, during the outbreak of SARS (severe acute respiratory syndrome), 18-57 % of HCPs experienced

serious emotional and psychiatric disturbances. During the outbreak of MERS (Middle East respiratory syndrome) in 2015, dysphoria and stress were reported among HCPs.¹⁵ During this COVID pandemic, a large survey of HCPs in China¹⁶ reported the prevalence rate of traumatic stress at 73.4 %, depression at 50.7 %, and generalized anxiety at 44.7%, while our study demonstrated a very alarming percentage of moderate to severe stress (93%) among resident trainees. These results were also much higher than reported by Abdulghani⁵ who reported overall stress level as 70.4 although the prevalence of severe stress level was much lower in our study at 10% compared to 22.6% reported by them.

5. Conclusion

The majority of trainee residents in our study experienced a moderate level of anxiety during this COVID pandemic. We, therefore, recommend that psychosocial support should be made available for trainee residents during the pandemic.

6. Acknowledgements

None

7. Authors contribution

AUH: Concept, literature search, Conduct of study, Data collection and entry, Data analysis, Manuscript writing and editing, Final approval

MY: Literature search, Conduct of study, Data collection, Manuscript editing, Final approval

SRS, MWA: Conduct of study, Data collection, Manuscript editing, Final approval

8. Conflict of interests

None declared by the authors. No funding was obtained to conduct this study from any source.

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