

CORRESPONDENCE

CORONA EXPERIENCE

The impact of vaccination on stress level of trainee doctors during COVID-19 pandemic

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Vaccination against COVID-19 disease is making a significant difference in the outcome of the disease. This cross-sectional study was conducted at Security Forces Hospital, Riyadh, Saudi Arabia. Trainee doctors from different hospital departments, including surgery, medicine, emergency medicine, anesthesia and critical care units were included. The sample size was calculated to be 58. We used the Perceived Stress Scale (PSS-10) in our study. We distributed the questionnaire comprising PSS-10 questions to trainee doctors from different specialties. Each question in the scale was answered by the trainees on a 5-point scale ranging from *never* = 0, to *very often* = 4. The mean PSS-10 score was 18.93 ± 6.92 . Ten (17.2 %) trainees had low stress, 43 (74.13 %) had moderate stress while 5 (8.6 %) trainees had high stress level.

Massive burden of COVID-19 pandemic is further worsened with recent viral mutations resulting in increased transmission and pressure on healthcare facilities.¹ According to recent data, WHO reported a total 213,752,662 confirmed COVID-19 cases including 4,459,381 deaths. Also, about 4,953,887,422 vaccine doses have also been administered.²

Despite the preventive measures taken at individual levels and widespread national initiatives, COVID-19 pandemic is still remains as a significant threat for the world.¹ The pandemic has resulted in many adverse mental health issues, including anxiety, depression and stress.³ Healthcare personnel (HCP) face higher risk of exposure and increased workload and moral dilemmas during patient care, leading to an increased risk of psychological disturbances among them.⁴ We conducted

a study earlier during this pandemic which reported that mean Perceived Stress Scale (PSS-10) score among trainee doctors was 20 and 83.3 % of all trainee doctors reported moderate level of stress.⁵ This study was conducted to find out the impact of vaccination on stress level among trainee doctors. We calculated the sample size by using the online calculator⁵ to be 58. A convenience sampling technique was used to select study participants. We took ethical approval from the institutional ethical review committee. The scale has been validated in Saudi healthcare workers in one previous study by Alharbi et al.⁴

We requested the trainee doctors to fill the questionnaire either online on SurveyMonkey or in printed form. All data were entered and analysed using Microsoft Excel. A total of 58 trainees were included in our study. Ten trainees filled the questionnaire using the SurveyMonkey link, while 48 trainees filled the printed questionnaire. The mean PSS-10 score was 18.93 ± 6.92 (range 3-38). Ten (17.2 %) trainees had low stress, 43 (74.13 %) had moderate stress while 5 (8.6 %) trainees had high stress as shown in Graph 1.

Xiong et al. reported high incidences of mental health problems i.e., anxiety (59 %), depression (48.3 %) and stress (81.9 %).⁶ Then an online survey reported that the prevalence of clinically significant anxiety, depression and poor sleep quality among general population were 35 %, 20 and 18 % respectively.⁷ In United states of America, data suggests that the likelihood of having either depressive disorder, anxiety disorder or both in April and May 2020 was three times more than in early 2019.⁸

A recent report from UK estimated vaccine efficacy of 89-91 % during 15-28 days after 1st dose of mRNA vaccine. ⁹ Centre for disease control and prevention (CDC) in a report concluded that risk of infection was decreased by 90 % two or more weeks after 2nd dose of mRNA vaccine. ¹⁰

The positive effects of these vaccines have been demonstrated in countries where the vaccination rate is high. This can be reflected in the results of our study as well. The results of our study showed that mean PSS-10 score changed from 20 before vaccination to 18.33 after vaccination. In previous study⁵, only 6.7 % trainee doctors had low stress levels while in current study 17.2 % of trainee doctors reported low level stress. Also 10 % had high stress level in previous study which has reduced to 8.6 % in current study.

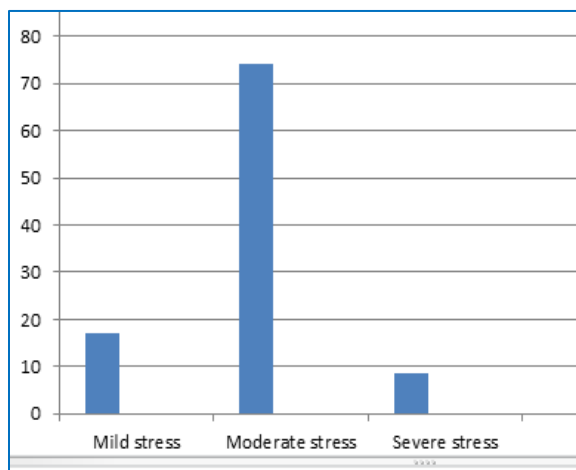


Figure 1: Stress level shown as percentage of participants

Vaccination against COVID-19 has made improvement in stress level among trainee doctors during current pandemic.

Conflict of interest: Authors declared no conflict of interest

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