Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.53555/jptcp.v30i16.2639

PSYCHOSOCIAL IMPACT OF COVID-19 AMONG MEDICAL/ DENTAL STUDENTS AND JUNIOR DOCTORS/DENTISTS IN A PUBLIC SECTOR MEDICAL SCHOOL/HOSPITAL

Dr Rakhshinda Jabeen[1]*, Dr Aiman Shahab[2], Dr Armash Shahab[3], Ali Arif[4], Muhammad Sufiyan Faisal[5], Dr Muhammad Ubaid[6]

[1]*F.C.P.S., Associate Professor of Medicine, Dow Medical College, Dow University of Health Sciences, Karachi
[2]B.D.S., Dow International Dental College, Dow University of Health Sciences, Karachi
[3]B.D.S., Dow International Dental College, Dow University of Health Sciences, Karachi
[4]M.B.B.S., Dow International Medical College, Dow University of Health Sciences, Karachi
[5] 3rd Year Medical Student, Dow International Medical College, Dow University of Health Sciences, Karachi
[6]F.C.P.S, Assistant Professor of Medicine, Dow Dental College, Dow University of Health Sciences, Karachi

***Corresponding Author:** Dr Rakhshinda Jabeen,
*F.C.P.S., Associate Professor of Medicine, Dow Medical College, Dow University of Health Sciences, Karachi Pakistan, Email: rakh372@yahoo.com

Author contributions
RJ, conceived and designed the study design.
AS, did data collection and drafted manuscript.
AS, did data collection and drafted manuscript.
AA, did data collection and statistical analysis.
MSF, did data collection and statistical analysis
MU, did the Critical Revision and Tabulation

Abstract

Objectives

The highly contagious nature of COVID-19 has impacted both medical and dental education worldwide. The disease presents as a substantial challenge for medical education because of limited exposure of students to patient care because of the shift to online classes and shortened clinical teaching. In addition, the social isolation and distancing measures have significantly impacted the mental well-being of medical and dental students. The study aims to understand the psychosocial experiences of junior doctors working during the Covid-19 pandemic and medical and dental students.

Methods

An online survey was assessed from May 2022 to July 2022. The following data were collected at inclusion: age, gender, qualification, and overall impact of COVID-19. The survey was distributed online on Google forms via WhatsApp and Facebook between medical/dental students and postgraduate trainees.

Result
The results showed that a significant number of junior doctors, medical and dental students were impacted by the psychological effects of the pandemic.

Conclusion
In conclusion, the COVID-19 pandemic has brought significant psychological and educational challenges for future doctors and dentists. Most of the respondents were vulnerable to anxiety. Similarly, a large proportion of students thought that there was a decreased understanding of lectures because of online classes.

Keywords: COVID-19, psychosocial impact, junior doctors, medical and dental students, anxiety, fear.

Introduction

The Covid-19 pandemic resulted in adverse psychosocial outcomes because of the constantly changing conditions and an uncertainty of the future. The readily available information obtained through social networking services, mass hysteria and panic regarding the pandemic triggered psychosocial problems in the public from all domains and especially the healthcare community [1]. Previous studies have further elucidated that global pandemics may a detrimental impact on the mental wellbeing. Disease itself with nationwide lockdowns can trigger posttraumatic stress disorders, depression, paranoia, and panic attacks. Moreover, frontline workers are at a higher risk of contracting the disease and experiencing adverse psychological problems, such as fear of transmitting the infection, burnout, anxiety, depression, and posttraumatic stress disorder [1].

The first case of Covid-19 was reported in December 2019, and The World Health Organization declared the novel coronavirus (Covid-19) outbreak a global pandemic on March 11, 2020 [2]. As of July 15, 2022, there have been 557 million confirmed cases of the disease, globally and over 6,000,000 associated deaths [3]. Covid-19 is a highly transmissible disease and resulted in an unprecedented public health response from the government of Pakistan, which enforced social distancing on a population level, self-isolation for symptomatic individuals, school closures and banning of public events. The government further introduced a lockdown to curb the disease outbreak. Other than the global, social and economic challenges, the Covid-19 pandemic has caused an unprecedented disruption in the medical and dental education systems worldwide [4].

The highly contagious nature of the disease has influenced the medical education system worldwide. The disease presents as a substantial challenge for medical education because of limited exposure of students to patient care because of the shift to online classes and shortened clinical teaching. Similarly, the major focus on Covid-19 patients further led to restricted opportunities for students because of a lack of exposure to other diseases and conditions. Clinical rotations had also been suspended halfway through the pandemic for the safety of students. Junior doctors and students were also constantly under the fear of contracting the virus during training [5]. While all elective procedure including dental procedures were put at a halt during the pandemic's peak, Covid-19 has also had a significant impact on dental education around the world. Dental students and dentists, including teaching staff are in direct contact with salivary fluids in a closed environment [6]. The pandemic led to a global crisis and disruption in the education system with no alternative available immediately. In addition, the social isolation and distancing measures have significantly impacted the mental well-being of medical and dental students.

Healthcare workers are subjected to stressful workplace demands that contribute to a higher rate of mental illnesses, including anxiety, depression, and emotional exhaustion. Long work hours, poor work-life balance and heavy workload are all contributing factors to mental illness in healthcare

workers. Similarly, compared to other professional groups, junior doctors experience higher levels of emotional exhaustion and psychological distress [7]. Other factors that contribute to mental health issues in junior doctors include the fear of making clinical errors, the strict training environment and poor working conditions that may lead to burnout [8]. Covid-19 has further caused significant changes in the healthcare system and healthcare workers have had to endure several additional challenges including increased workloads, fatigue, burnout, distress and depression, in addition to the fear of exposing their family and friends to the virus [9]. Concerns about the availability of personal protective equipment (PPE) and other resources were also linked with anxiety [10]. However, there are limited studies about the impact of Covid-19 on junior doctors, medical and dental students in in medical school and hospitals in Karachi. Given the critical role junior doctors play in the healthcare system, it is important to understand their concerns to safeguard the workforce in the long term. This study examines the impact of Covid-19 among junior doctors, medical and dental students in a public sector medical school of Karachi. The study further aims to understand the psychosocial experiences of junior doctors working during the Covid-19 pandemic. There is a dearth of literature available in regard to public healthcare institutions and the working conditions there that contributed to the issue.

Methods

Participation in the survey was completely voluntary. The respondents were informed about the objectives of the study and the confidentiality of data. The questionnaire was divided into three sections including personal information (name, age, and gender), qualification and impact of COVID-19. As the respondents consented to filling out the survey themselves, no ethical approval was required.

Study design

Cross-sectional online survey. An online survey was assessed from May 2022 to July 2022. The following data were collected at inclusion: age, gender, qualification, and overall impact of COVID-19. The survey was distributed online on Google forms via WhatsApp and Facebook between medical/dental students and postgraduate trainees.

Study setting

Public sector medical university.

Study population

The study included junior doctors and medical and dental students.

Eligibility criteria for participation

The respondents included junior doctors, medical and dental students.

Sampling technique

Convenient sampling.

Sample size

The intended number of participants was 500 and 521 respondents participated in the study.

Ethical approval

Ethical approval was not acquired because this was an anonymous online survey.

Responders

Five hundred and fifty-one junior doctors, medical and dental students responded to the survey. Respondents included MBBS students, followed by medicine, surgery and dentistry house officers and postgraduate trainees. Respondents were predominantly female (73.5%).

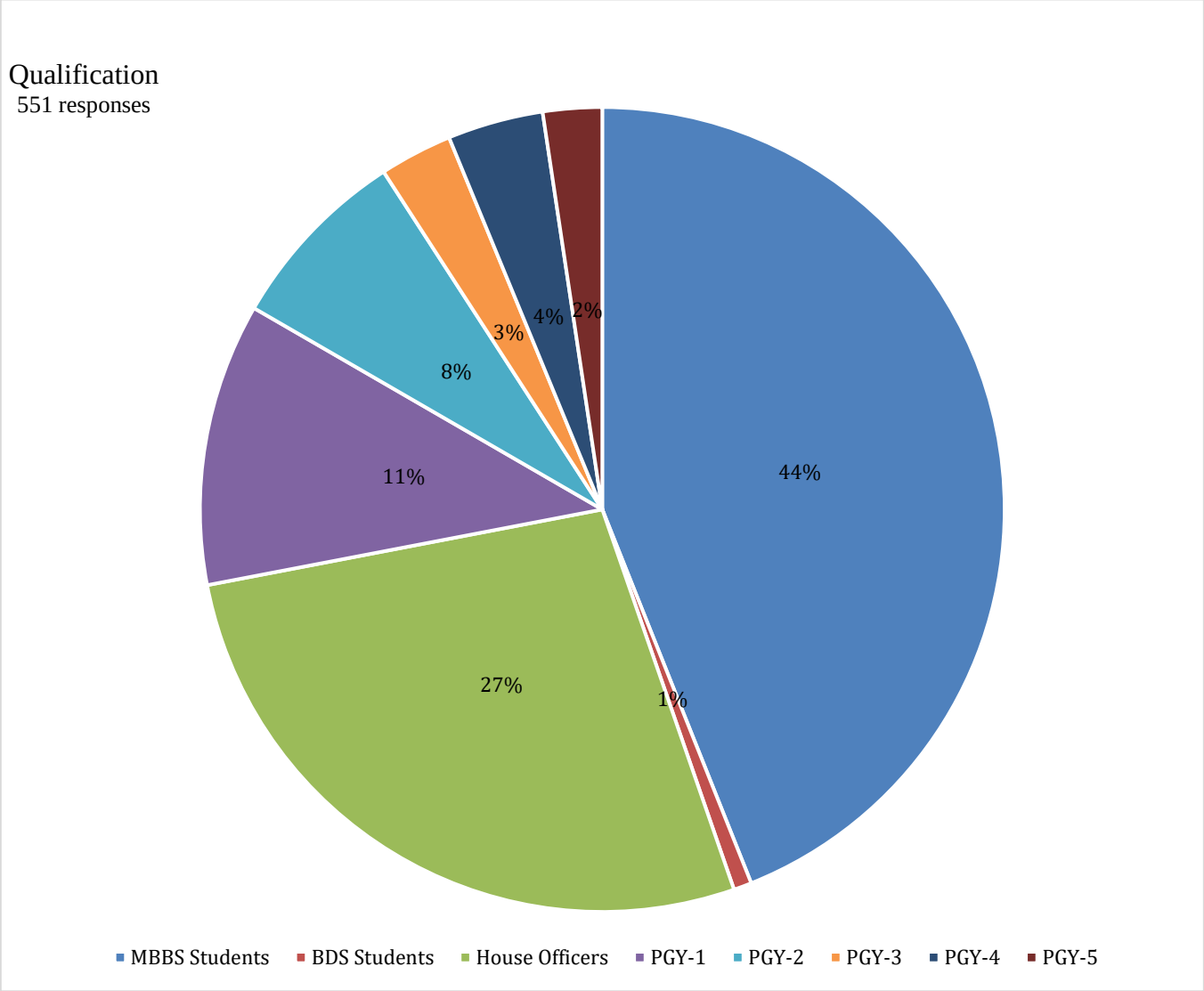

Figure 1: Qualification of respondents

Results

A total of 551 responses were received. A large proportion of the junior doctors, medical and dental students (58.4%) were infected with mild (56.9%), moderate (36.2%) and severe (6.9%) COVID-19 disease. A significant proportion (61.9%) of the respondents reported that their immediate family members were infected with COVID-19.

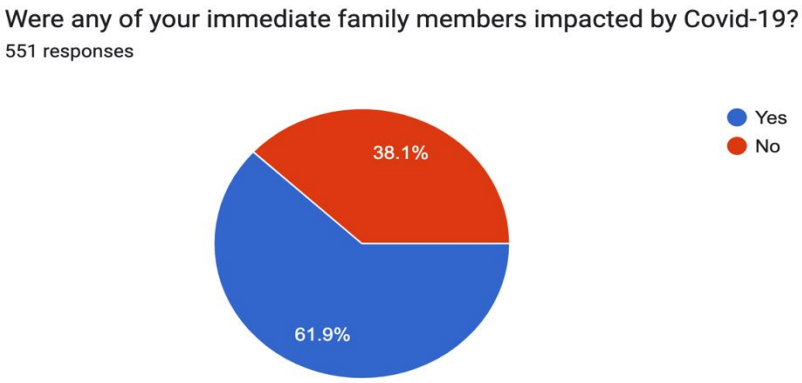

Figure 2: Positivity rate of COVID-19 in respondents' immediate family members

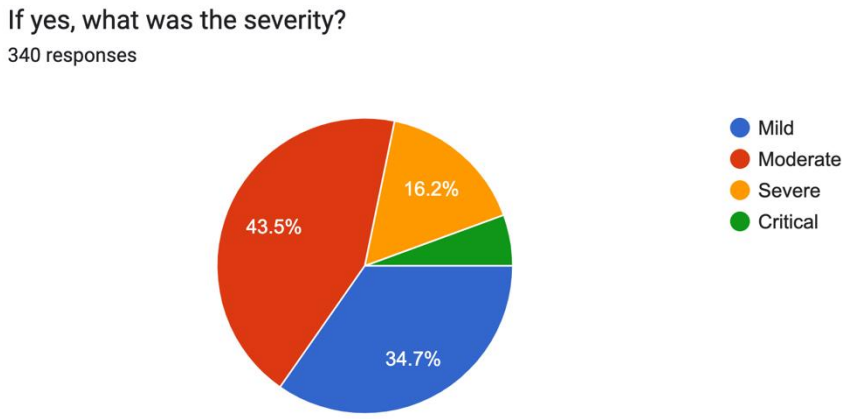

Figure 3: Grading of severity of illness in COVID-19 positive family members

When asked about the impression of COVID-19, 29.6% of the respondents recognized it as life threatening disease, 26% responded that the disease will stay forever, 20% responded that the disease will go away with time, 15.6% said that "it's just a pandemic" and 8.9% of the respondents recognized it as a mild disease. The survey further identified stress-related symptoms in the respondents. 51.5% of the respondents reported that the pandemic triggered anxiety for them, 11.5% reported disturbed sleep, 24.5% reported fear and 10.7% struggled with anhedonia. However, 15.2% experienced no stress-related symptoms.

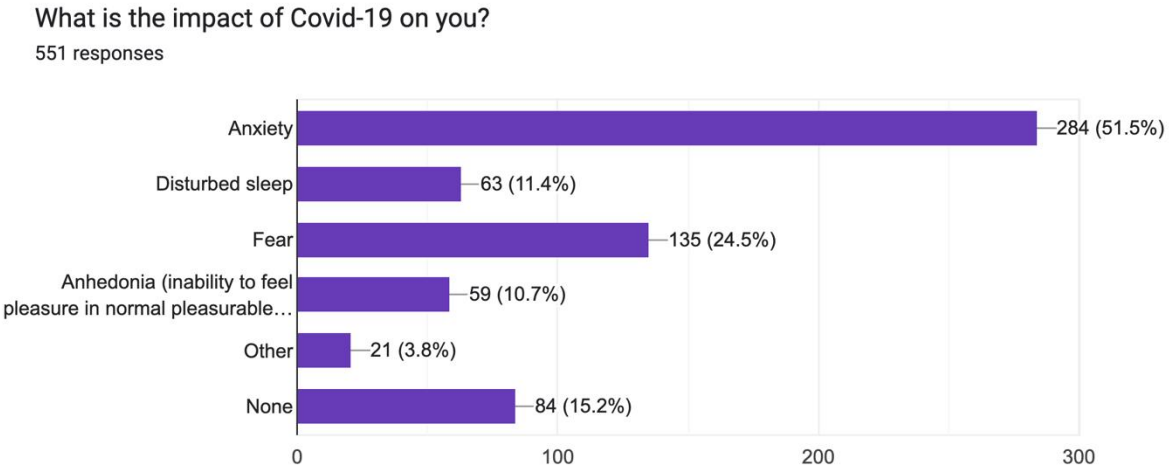

Figure 4: Psychosocial impact of COVID-19 on respondents

Additionally, when asked about how COVID-19 impacted the respondents' daily chores, 481 (87.3%) of the respondents reported that they started wearing a mask, 311 (56.4%) frequently sanitized their hands, 237 (3%) frequently washed their hands, 179 (32.5%) followed social distancing and 159 (28.9%) avoided social gatherings.

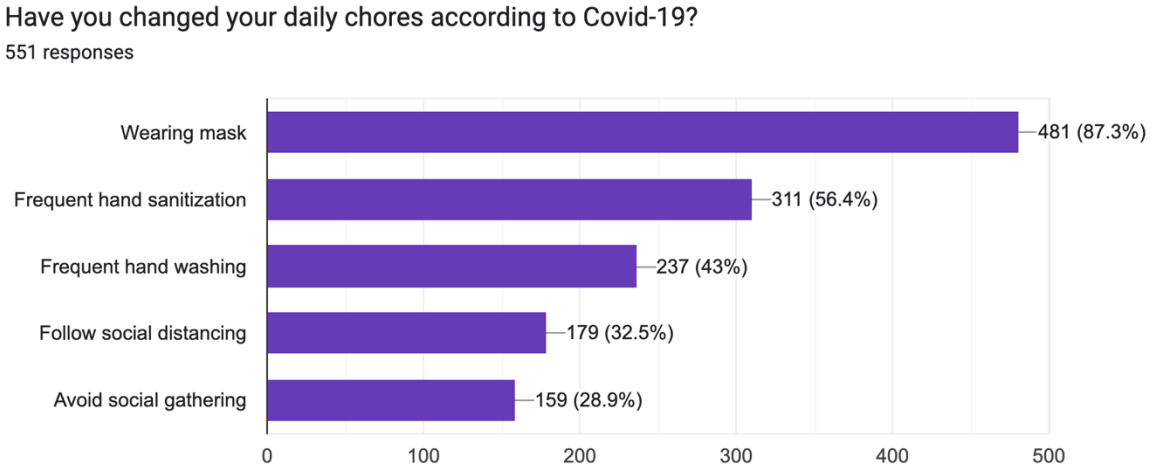

Figure 5: Impact of COVID-19 on daily chores of respondents

Majority of the educational institutions started online classes and a large proportion of the students (49.6%) thought that there was a decreased understanding of lectures because of online classes. 57.3% of the students felt that their clinical skills were also impacted because of less interactive sessions and 32.3% said that their daily ward activities were abandoned.

When asked whether the respondents had worked in a COVID-19 unit, 63.2% responded that they had worked in a COVID-19 unit. A fair number of the respondents took it as a part of their duty (47.4%), whereas others worked with good will (33.3%). 12.7% of the respondents answered that they were scared while dealing with patients, 5.2% enjoyed working in the COVID-19 unit, whereas 1.4% did not enjoy. The respondents were further asked if they would like to work again in a COVID-19 unit. 55.6% of the respondents answered that they would. Out of these respondents, 87.7% said that they would work with full precautions and 12.3% said that they would not. While working in the COVID-19 unit, a large proportion of the respondents (89.6%) were mindful of following SOP's and removing their PPE before leaving the unit and a small proportion (10.4%) were not.

The study further measured the respondents' vaccination status and their intentions to get vaccinated. Of the 551 medical, dental students and postgraduate trainees, 522 (94.7) responded that they have been vaccinated. Out of the vaccinated respondents, 83.4% got it at their own will, 12.9% got it as a job requirement and 3.7% got it under the pressure of seniors. Whereas out of the 29 (5.2%) unvaccinated respondents, 34.6% were still waiting for their turn to get vaccinated, 23.1% did not get it because of family pressure, 19.2% were lazy, 15.4% were not pushed by seniors and 7.7% were doubtful about the available vaccine.

Discussion

The study focused on junior doctors, medical and dental students in a public sector medical school of Karachi during the COVID-19 pandemic. There were 73.5% females and 26.5% males in the present study which reflects the gender distribution of students enrolled in medical and dental school. As the COVID-19 pandemic hit, junior doctors, medical and dental students faced significant challenges when institutions were closed to curb the spread of disease. The pandemic was particularly challenging because of its novelty, contagion, and psychological effects [11]. Thus, to curb the spread of infection, different countries implemented various measures including, travel restrictions, closing of workplaces, stadiums, theatres, restaurants, shopping centers and educational institutes. In this regard, medical and dental institutions were also affected leading to a negative impact on education

and psychological health [12]. Similar findings have been reported by Ren et al., regarding the psychological impact of COVID-19 on college students [13].

Both medicine and dentistry are highly demanding, challenging, and stressful careers. However, despite it, the students are not physically or mentally resilient to stressful conditions. Medical and dental students suffer from high levels of stress and may experience adverse psychological symptoms [14]. Our study identified stress-related mental health consequences of COVID-19 including anxiety, disturbed sleep, fear, and anhedonia. The study identified that the COVID-19 pandemic triggered anxiety in a majority of the junior doctors, medical and dental students. A previous study conducted on dentists concluded that a majority of Pakistani dentists including females, GDPs, young and elderly dentists suffered with anxiety and feared getting infected by the virus during the pandemic [17]. It was also identified that most of the junior doctors, medical and dental students were infected with mild, moderate, and severe forms of COVID-19. Interestingly, a fairly large proportion of the respondents also answered that their immediate family members were infected with mild, moderate, severe, and critical forms of disease. While majority of the respondents' immediate family showed complete recovery, others suffered from post-COVID consequences and a few, unfortunately, passed away.

The results of the survey further highlight that the respondents adopted effective ways to help combat the spread of infection, including wearing a mask, practicing good hand hygiene and physical distancing measures in line with the best recognized practices. In terms of the educational impact, in purview of the collected responses, most of the students responded that the shift from physical to online lectures elicited a decreased understanding of lectures and a lack of proper clinical knowledge. Similarly, a recent study also highlighted concerns of Indian undergraduate medical students regarding insufficient practical and clinical exposure [15].

The respondents of the survey further included junior doctors working in a COVID-19 unit. The survey found that most of the junior doctors worked in the COVID-19 unit as a part of their duty. Similarly, despite the life-threatening consequences of the COVID-19 infection, many of the junior doctors worked willingly during the peak of the pandemic. Interestingly, some of the respondents also reported that they would unhesitatingly take on this opportunity again. Junior doctors played a critical role in diagnosis, containment, and treatment of disease, despite the several health risks and societal pressure and extraordinary level of psychological stress on healthcare workers [16]. However, as a natural response at a time of life-threatening global pandemic, a few of the respondents feared getting infected while working in the COVID-19 unit and were therefore, not open to the idea of working in a COVID-19 unit in the future. Another study highlighted that doctors working frontline struggled with major challenges including adverse effects on their psychological health because of an increased professional demand during the pandemic [18].

In the current study, most of the junior doctors, medical and dental students were vaccinated either at their own will, as a job requirement or upon the pressure of seniors. Only a small number of respondents were unvaccinated either because they were still waiting for their turn to get vaccinated, lazy to get vaccinated, family pressure or they had doubts about the vaccine. To the best of our knowledge, this is the first study that examines both the psychological and educational impact of COVID-19 among junior doctors, medical and dental students in a public sector medical school of Karachi.

Conclusion

In conclusion, the COVID-19 pandemic has brought significant psychological and educational challenges for future doctors and dentists. Most of the respondents were vulnerable to anxiety. However, despite the challenges, the future doctors and dentists are still willing to serve the

community. They are highly aware of the precautions that are needed to be taken to prevent the spread of infection.

Source of funding
This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of interest
The authors have no conflicts of interest to declare. All co-authors have seen and agree with the contents of the manuscript and there is no financial interest to report. We certify that the submission is original work and is not under review at any other publication.

Ethical approval
Ethical approval was not acquired because this was an online survey and the results are published anonymously.

References
1. Dubey S, Biswas P, Ghosh R, Chatterjee S, Dubey MJ, Chatterjee S, Lahiri D, Lavie CJ. Psychosocial impact of COVID-19. Diabetes & Metabolic Syndrome: clinical research & reviews. 2020 Sep 1;14(5):779-88.
2. Cucinotta D, Vanelli M. WHO declares COVID-19 a pandemic. Acta Bio Medica: Atenei Parmensis. 2020;91(1):157.
3. WHO Coronavirus (COVID-19) Dashboard
4. Woolliscroft JO. Innovation in response to the COVID-19 pandemic crisis. Academic medicine. 2020 Apr 4.
5. Khasawneh AI, Humeidan AA, Alsulaiman JW, Bloukh S, Ramadan M, Al-Shatanawi TN, Awad HH, Hijazi WY, Al-Kammash KR, Obeidat N, Saleh T. Medical students and COVID-19: knowledge, attitudes, and precautionary measures. A descriptive study from Jordan. Frontiers in public health. 2020 May 29;8:253.
6. Laureano IC, Cavalcanti AF, Cavalcanti AL. Impact of COVID-19 on Dental Education. E-Learning and Digital Education in the Twenty-First Century. 2022 Jan 12:227.
7. Fitzpatrick M, Garsia K, Eyre K, Blackhall CA, Pit S. Emotional exhaustion among regional doctors in training and the application of international guidelines on sustainable employability management for organisations. Australian Health Review. 2020 Mar 18;44(4):609-17.
8. Hollis AC, Streeter J, Van Hamel C, Milburn L, Alberti H. The new cultural norm: reasons why UK foundation doctors are choosing not to go straight into speciality training. BMC Medical Education. 2020 Dec;20(1):1-9.
9. Smallwood N, Willis K. Mental health among healthcare workers during the COVID-19 pandemic. Respirology (Carlton, Vic.). 2021 Nov;26(11):1016.
10. Park DH, Lee E, Jung J, Kang CK, Song KH, Choe PG, Park WB, Bang JH, Kim ES, Kim HB, Park SW. Changes in Anxiety Level and Personal Protective Equipment Use Among Healthcare Workers Exposed to COVID-19. Journal of Korean medical science. 2022 Apr 25;37(16).
11. AlHumaid J, Ali S, Farooq I. The psychological effects of the COVID-19 pandemic and coping with them in Saudi Arabia. Psychological Trauma: Theory, Research, Practice, and Policy. 2020 Jul;12(5):505.
12. Hakami Z, Khanagar SB, Vishwanathaiah S, Hakami A, Bokhari AM, Jabali AH, Alasmari D, Aldrees AM. Psychological impact of the coronavirus disease 2019 (COVID-19) pandemic on dental students: a nationwide study. Journal of dental education. 2021 Apr;85(4):494-503.
13. Ren Z, Xin Y, Ge J, Zhao Z, Liu D, Ho RC, Ho CS. Psychological impact of COVID-19 on college students after school reopening: a cross-sectional study based on machine learning. Frontiers in Psychology. 2021 Apr 29;12:641806.

14. Harris RC, Millichamp CJ, Thomson WM. Stress and coping in fourth-year medical and dental students. New Zealand Dental Journal. 2015 Sep 1;111(3):102-8.
15. Menon UK, Gopalakrishnan S, Ramachandran R, Baby P, Sasidharan A, Radhakrishnan N. Perceptions of undergraduate medical students regarding institutional online teaching-learning programme. medical journal armed forces india. 2021 Feb 1;77:S227-33.
16. Di Trani M, Mariani R, Ferri R, De Berardinis D, Frigo MG. From resilience to burnout in healthcare workers during the COVID-19 emergency: the role of the ability to tolerate uncertainty. Frontiers in Psychology. 2021 Apr 16;12:646435.
17. Majeed MM, Sarwar H, Ramzan Z. The psychology of coronavirus fear: Are dentists of Pakistan suffering from corona-phobia. JPDA. 2021 Jan;30(01).
18. Rashid A, Faisal K. Pandemic anxiety and its correlates among young doctors working frontline in Pakistan. Global Mental Health. 2020;7.