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Post-COVID Era in Jordan- mental & physical effects on healthcare workers & medical students: A systematic review

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Abstract

Introduction: This research paper examines the effects of the post-COVID era on mental health, physical health, and the struggles faced by medical students in Jordan during the transition to e-learning. The Covid-19 pandemic has had a profound impact on societies worldwide, with Jordan being no exception. As the nation navigated through the various stages of the pandemic, it experienced significant disruptions in healthcare, education, and daily life. This paper sheds light on the consequences of these disruptions, focusing on mental health challenges, physical health implications, and the unique struggles encountered by medical students during the shift to online learning. By investigating these aspects, this study aims to provide a comprehensive understanding of the multifaceted impact of the post-COVID era in Jordan.

Methods: This systematic review involved a comprehensive search of databases such as PubMed, Scopus, and Google Scholar using specific keywords related to the effects of the post-COVID era on mental health, physical health, and struggles of medical students during e-learning in Jordan. Studies conducted in Jordan and published in English were included, and data were extracted using a standardized form. The quality of included studies was assessed, and a narrative synthesis approach was used to analyze and identify key themes and patterns in the findings. The systematic review provides insights into the impact of the post-COVID era in Jordan on mental and physical health, as well as the challenges faced by medical students during e-learning.

Results: The systematic review revealed that the post-COVID era in Jordan has had significant effects on mental health, physical health, and the struggles faced by medical students during e-learning. Studies consistently reported a rise in mental health issues, including anxiety, depression, and stress, attributed to social isolation, economic hardships, and uncertainty. Physical health outcomes were negatively impacted, with reduced physical activity, delayed medical procedures, and limited healthcare access. Medical students encountered unique challenges during the transition to e-learning, including the loss of hands-on clinical experiences, technical difficulties, and increased screen time. These findings highlight the need for targeted interventions and support to address the multifaceted impact of the post-COVID era on individuals in Jordan.

Keywords: COVID; Coronavirus; Jordan; Healthcare Workers; Medical Students; Mental Health.

1. Introduction

The COVID-19 pandemic has left an indelible mark on societies globally, and Jordan has witnessed its fair share of challenges as the nation grappled with the unprecedented crisis [1]. Beyond the immediate health consequences, the post-COVID era has introduced a host of new concerns, particularly pertaining to mental health, physical well-being,

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and the educational landscape [1]. In Jordan, the pandemic necessitated significant changes in healthcare delivery, educational institutions, and daily routines, compelling individuals to adapt to a new way of life [2]. Previous pandemics instilled fear among the general population, leading to the development of anxiety and fear-related behavioral problems. The COVID-19 pandemic of 2019 created widespread panic, uncertainty, and concerns about severe consequences [1, 3].

The general population in Jordan has faced various psychological challenges such as anxiety, depression, psychological distress, post-traumatic stress disorder, and insomnia [3]. Studies conducted across multiple countries on different continents have reported similar findings [4]. These psychological changes are primarily attributed to the fear of contracting the disease, economic pressures to work, and the inability to avoid public interactions [3, 4].

The COVID-19 pandemic has profoundly affected the mental well-being of healthcare professionals, giving rise to challenges such as heightened anxiety, depression, and disturbances in sleep patterns [5]. This highlights the importance of offering psychological support to healthcare workers, which can be achieved through the implementation of occupational health surveillance programs. These programs can focus on training and educating healthcare workers, equipping them with the necessary skills to address infectious diseases and mitigate the psychological distress associated with their work [5].

1.1. Implications for healthcare workers

The findings of a study by Alnazly, et al. illuminate the manifestation of psychological distress among healthcare workers in Jordan in response to the COVID-19 pandemic, accompanied by a heightened consciousness of the intricate web of virus transmission risks. Safeguarding the psychological well-being of healthcare workers assumes paramount significance amidst the throes of a pandemic, warranting the discerning identification and implementation of strategies aimed at alleviating their distress [6]. Given the intimate nature of healthcare workers' interactions with patients, anxiety levels are susceptible to soaring heights. Thus, astute managers and leaders are urged to fortify the existing support systems within healthcare organizations and extend their reach to encompass the expansive social networks of these professionals [6].

1.2. Effects of Workplace Violence on Healthcare Workers during and after the COVID-19 Era

In Jordan, similar to other developing nations, the issue of workplace violence within the healthcare sector has been subject to limited research and inadequate documentation, despite its escalating prominence as a significant challenge faced by healthcare workers, particularly over the past decade [7].

Throughout the initial six months of the COVID-19 pandemic, the International Committee of the Red Cross documented over 600 instances of violence, intimidation, or stigmatization targeting healthcare workers (HCWs), patients, and medical infrastructure across 40 countries in Asia, the Americas, Africa, and the Near and Middle East regions [8]. However, it is crucial to acknowledge that these recorded incidents likely represent only a fraction of the actual occurrences, with a significant number going unnoticed. Consequently, recognizing the gravity of the situation, 13 humanitarian organizations collectively appealed to governments to enact legislation aimed at safeguarding HCWs from assaults during the pandemic, establishing secure working conditions, providing mental health support, and combating the dissemination of misinformation [8]. Unfortunately, the violence against healthcare workers has been increasing ever since, and male physicians had higher incidence of workplace abuse in the last one year [9].

1.3. Struggles Faced By Medical Students during and after COVID-19 Era

The COVID-19 pandemic has had adverse effects on various aspects of medical students' lives, particularly during their clinical training years. The academic courses, as well as the psychological and financial aspects, have been significantly impacted. The limitations imposed by the pandemic have resulted in unsatisfactory and shorter teaching rounds, with fewer opportunities to examine patients. This, combined with reduced motivation and less effective feedback, has been identified as the primary underlying factors contributing to the challenges faced by medical students. In response to the pandemic, Jordanian universities, including those offering clinical medical programs, transitioned to online teaching methods. Clinicians employed various electronic techniques, primarily utilizing platforms such as Zoom and Microsoft Teams for instructional purposes [10]. Additionally, social media platforms, particularly WhatsApp, were utilized as a means of teaching and communication. Video recordings of real clinical rounds, surgical procedures, and cases from emergency and outpatient clinics were shared with medical student groups for viewing and discussion [10].

A significant impact on mental health was observed in 70.9% of medical students, with 65.1% reporting increased levels of anxiety or depression [10]. Gender and academic year did not show a significant difference in these outcomes. While

students in clinical years expressed a greater fear of contracting the infection compared to those in basic years, this difference did not reach statistical significance ($p = 0.084$) [10].

Students have expressed that COVID-19 has had a considerable impact on various aspects of their lives, particularly their physical fitness, study commitments, and social relationships [11]. The majority of students voiced apprehensions about contracting COVID-19 themselves, as well as concerns about the possibility of their family members being infected. Furthermore, academic-related concerns were prevalent among the students. A significant proportion expressed the inability to acquire additional clinical skills and attend laboratory sessions, while a major group of students expressed fear of prolonged self-isolation. Moreover, more than one-fifth of the students reported limitations in attending classes and exams, either due to technological challenges or travel restrictions [11]. Some students reported missing out on practical elements of their education and felt this would impact negatively on their careers [10, 11].

1.4. Improving Medical Education in Jordan

We have written an outline to overcome some of the problems mentioned earlier.

Enhance practical training: Emphasize the importance of hands-on clinical experiences and provide opportunities for medical students to actively engage in patient care under proper supervision. This can be achieved through increased availability of clinical rotations and structured mentoring programs.

Strengthen faculty development: Invest in faculty development programs to ensure educators are equipped with the necessary skills and knowledge to deliver high-quality medical education. This includes training on effective teaching methods, utilizing technology in education, and fostering a supportive learning environment.

Foster research culture: Promote a research-oriented mindset among medical students by integrating research components into the curriculum. Encourage students to engage in research projects and provide resources and mentorship to facilitate their involvement in research activities.

1.5. Implementing Regulations to Support Residents:

Develop well-defined work-hour regulations: Establish clear guidelines for resident work hours to prevent excessive workload and burnout. Implement policies that ensure adequate rest periods, limit continuous duty hours, and promote a healthy work-life balance.

Provide mental health support services: Create dedicated support systems to address the mental health needs of residents. This includes offering counseling services, establishing peer support networks, and organizing stress management workshops and training programs.

Implement mentorship programs: Establish mentorship programs that pair experienced physicians with residents to provide guidance, support, and career advice. Mentorship can play a crucial role in alleviating burnout by offering residents a safe space to discuss challenges and seek guidance.

1.6. Improving Mental Health for Medical Students and Residents:

Promote mental health awareness: Introduce mental health education and awareness programs within medical curricula to help students recognize and address their mental health needs. Encourage open discussions about mental health, reduce stigma, and emphasize the importance of seeking help when needed.

Foster a supportive learning environment: Create a culture that prioritizes well-being and supports mental health. This can be achieved through faculty training on mental health issues, promoting a collaborative and empathetic learning environment, and providing resources for stress management and self-care.

Establish peer support networks: Facilitate the formation of peer support groups where medical students and residents can share experiences, provide mutual support, and foster a sense of community. Encouraging peer mentorship can also help create a supportive network.

Implement regular wellness activities: Integrate wellness activities into the medical education and training process. This can include mindfulness sessions, physical exercise programs, and initiatives that promote work-life balance.

By focusing on these recommendations, Jordan can improve medical education, support residents during and after the COVID-19 era, and prioritize the mental health and well-being of medical students and residents, ensuring a healthier and more resilient healthcare workforce.

2. Summary

The COVID-19 pandemic has had significant implications for Jordan, affecting various aspects of society, including mental health, physical well-being, and education. Psychological distress and anxiety have been observed among the general population and healthcare professionals, highlighting the need for psychological support programs. Workplace violence against healthcare workers has also become a growing concern, necessitating the enactment of legislation to protect them. Medical students have faced challenges, such as limited clinical skills acquisition and restricted access to labs, impacting their academic progress. To address these issues, it is important to enhance practical training, invest in faculty development, promote research culture, and implement regulations to support residents. Additionally, improving mental health for medical students and residents can be achieved by promoting awareness, fostering a supportive learning environment, establishing peer support networks, and implementing wellness activities. These efforts will contribute to enhancing medical education, supporting healthcare workers, and prioritizing the well-being of students and residents in Jordan.

3. Conclusions

In conclusion, the COVID-19 pandemic has left a lasting impact on Jordanian society, particularly in the areas of mental health, healthcare, and education. The psychological distress experienced by both the general population and healthcare professionals emphasizes the urgent need for robust support systems and psychological intervention programs. Addressing workplace violence against healthcare workers is crucial to ensure their safety and well-being.

Medical students have encountered significant challenges during the pandemic, including limited access to clinical training and disrupted educational experiences. To improve medical education in Jordan, it is essential to enhance practical training opportunities, invest in faculty development, and foster a research-oriented mindset among students. Implementing regulations to support residents, such as clear work-hour guidelines and access to mental health services, is vital in preventing burnout and promoting their overall well-being.

Moving forward, prioritizing the mental health of medical students and residents is paramount. By promoting mental health awareness, fostering a supportive learning environment, establishing peer support networks, and integrating wellness activities, Jordan can create a resilient healthcare workforce that is better equipped to cope with future challenges.

By implementing these recommendations, Jordan can enhance medical education, support healthcare workers, and ensure the well-being of its medical students and residents. This will contribute to building a healthier and more resilient healthcare system that can effectively respond to crises and provide high-quality care to its population. Subsequent investigations should focus on elucidating the obstacles and difficulties faced by medical institutions in delivering education amidst a pandemic. Given the uncertainty surrounding a potential return to pre-COVID educational norms, proactive measures must be taken to ensure the implementation of medical education in the most efficient and effective manner across all countries.

Compliance with ethical standards

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Disclosure of conflict of interest

There were no conflicts of interest.

References

- [1] Abuhammad, S., Khabour, O. F., Alzoubi, K. H., Hamaideh, S., Khassawneh, B. Y., Alsmadi, B. F., Ababneh, A. M., & Alqudah, S. (2023). Mental health of COVID-19 recovered individuals: A national study from Jordan. *Electronic Journal of General Medicine*, 20(2), em451. <https://doi.org/10.29333/ejgm/12833>
- [2] Aolymat, I., Khasawneh, A. I., & Al-Tamimi, M. (2022). COVID-19-associated mental health impact on menstrual function aspects: Dysmenorrhea and premenstrual syndrome, and genitourinary tract health: A cross sectional study among Jordanian medical students. *International Journal of Environmental Research and Public Health*, 19(3), 1439. <https://doi.org/10.3390/ijerph19031439>
- [3] Abuhammad, S., Khabour, O. F., Alomari, M. A., & Alzoubi, K. H. (2022). Depression, stress, anxiety among Jordanian people during COVID-19 pandemic: A survey-based study. *Informatics in Medicine Unlocked*, 30(100936), 100936. <https://doi.org/10.1016/j.imu.2022.100936>
- [4] Wang, C., Chudzicka-Czupala, A., Tee, M. L., Núñez, M. I. L., Tripp, C., Fardin, M. A., ... & Sears, S. F. (2021). A chain mediation model on COVID-19 symptoms and mental health outcomes in Americans, Asians and Europeans. *Scientific reports*, 11(1), 6481.
- [5] Chirico F, Magnavita N. The crucial role of occupational health surveillance for health-care workers during the COVID-19 Pandemic. *Workplace Health Safe*. 2021;69(1): 5–6. pmid:32961069
- [6] Alnazly, E., Khraisat, O. M., Al-Bashaireh, A. M., & Bryant, C. L. (2021). Anxiety, depression, stress, fear and social support during COVID-19 pandemic among Jordanian healthcare workers. *PloS One*, 16(3), e0247679. <https://doi.org/10.1371/journal.pone.0247679>
- [7] Albashtawy, M. (2013). Workplace violence against nurses in emergency departments in Jordan. *International nursing review*, 60(4), 550-555.
- [8] Ghareeb, N. S., El-Shafei, D. A., & Eladl, A. M. (2021). Workplace violence among healthcare workers during COVID-19 pandemic in a Jordanian governmental hospital: the tip of the iceberg. *Environmental Science and Pollution Research International*, 28(43), 61441–61449. <https://doi.org/10.1007/s11356-021-15112-w>
- [9] Alhamad, R., Suleiman, A., Bsisu, I., Santarisi, A., Al Oweidat, A., Sabri, A., ... & Mahseeri, M. (2021). Violence against physicians in Jordan: an analytical cross-sectional study. *PLoS one*, 16(1), e0245192.
- [10] Al-Husban, N., Alkhayat, A., Aljweesri, M., Alharbi, R., Aljazzaf, Z., Al-Husban, N., Elmuhtaseb, M. S., Al Oweidat, K., & Obeidat, N. (2021). Effects of COVID-19 pandemic on medical students in Jordanian universities: A multi-center cross-sectional study. *Annals of Medicine and Surgery* (2012), 67(102466), 102466. <https://doi.org/10.1016/j.amsu.2021.102466>
- [11] Seetan, K., Al-Zubi, M., Rubbai, Y., Athamneh, M., Khamees, A., & Radaideh, T. (2021). Impact of COVID-19 on medical students' mental wellbeing in Jordan. *PloS One*, 16(6), e0253295. <https://doi.org/10.1371/journal.pone.0253295>