

Research Article

Psychological Distress Among Healthcare Providers During the 2023–2025 Israel-Gaza Conflict

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Abstract

Healthcare providers in conflict zones face profound psychological challenges that threaten both their well-being and capacity to deliver care. This study examines the mental health burden among 400 healthcare workers at Gaza's Nasser Medical Complex during the 2023–2025 Israel-Gaza conflict, a period marked by systemic collapse, relentless violence, and resource scarcity. Utilizing a cross-sectional design, the Depression, Anxiety, and Stress Scales (DASS-21) and a socio-demographic survey were administered to assess psychological distress and its correlates. Results revealed alarming rates of moderate-to-severe symptoms: anxiety affected 84.6% of participants, followed by stress (76.8%) and depression (73.3%). Strikingly, 44.3% reported *very severe* anxiety, while 29% exhibited *very severe* depression, underscoring the acute mental health crisis. Statistical analysis identified key risk factors: participants aged 31–39 years, those with 11–15 years of experience, married individuals, and holders of master's degrees reported significantly higher distress levels ($p < 0.05$). Stress demonstrated strong positive correlations with anxiety ($\rho = 0.855$) and depression ($\rho = 0.761$), suggesting interconnected psychological impacts. Notably, gender and income showed no significant association with distress, contrasting with global trends. These findings highlight the compounding effects of prolonged trauma exposure, ethical dilemmas in triaging care, and the collapse of medical infrastructure. The study underscores the urgent need for context-specific interventions, including trauma-informed counseling for mid-career professionals, peer support networks to alleviate isolation among married providers, and systemic reforms to address resource shortages. Integrating mental health screenings into routine care and prioritizing international aid to rebuild Gaza's healthcare system are critical to mitigating this crisis. By addressing these unique stressors, policymakers and humanitarian organizations can safeguard both provider well-being and the sustainability of healthcare delivery in conflict-affected regions.

Keywords

Mental Health, Conflict Psychology, Psychological Distress, Depression, Anxiety, Stress, Healthcare Providers, Gaza Strip

1. Introduction

The psychological well-being of healthcare providers is critical to sustaining high-quality patient care, particularly during prolonged humanitarian crises such as armed conflict.

The Gaza Strip, a region entrenched in cyclical violence and systemic instability, exemplifies a protracted complex humanitarian emergency—a term coined to describe settings where

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civil conflicts disrupt health systems and amplify disease burdens among vulnerable populations [1]. Since October 2023, escalating hostilities have exacerbated preexisting challenges, exposing healthcare workers to direct trauma, severe resource shortages, and the near-collapse of medical infrastructure. These conditions heighten risks of psychological distress, burnout, and compassion fatigue, ultimately undermining both provider well-being and patient outcomes [2, 3]

In Gaza, healthcare providers face unique stressors that compound these systemic issues. Targeted attacks on medical facilities, chronic shortages of essential supplies, and ethical dilemmas stemming from triaging care under siege conditions create an environment of unrelenting psychological strain [4]. Daily exposure to violence, loss of colleagues, and interactions with traumatized patients and families further intensify anxiety, helplessness, and moral injury. Compounding these challenges are deficits in basic necessities—including food, clean water, and safe shelter—which directly impair providers' capacity to function [4]. The absence of sustained media attention and international support exacerbates their isolation, deepening the psychological toll of recurrent conflict and institutional neglect.

Evidence from conflict-affected regions underscores the severity of this crisis. Systematic reviews indicate that prolonged exposure to violence and resource scarcity elevates rates of depression (37.5–73.6%) and anxiety (39.7–84.6%) among healthcare workers [5]. In Arab healthcare settings, factors such as gender, prolonged shifts, and leadership roles correlate strongly with burnout, reflecting systemic inequities in crisis response [6]. Parallels to the COVID-19 pandemic further highlight universal vulnerabilities among healthcare workers, though Gaza's providers face distinct pressures—including displacement risks, constant bombardment, and the ethical burden of allocating scarce lifesaving resources [7, 8].

This study examines symptoms of depression, anxiety, and stress among healthcare providers in Gaza during the 2023–2024 Israel-Gaza conflict. By analyzing the interplay of systemic collapse, occupational hazards, and moral distress, this research aims to inform context-specific interventions to safeguard mental health in Gaza and comparable conflict zones.

2. Methodology

2.1. Study Design

A cross-sectional study was conducted at Nasser Medical Complex, Gaza's largest tertiary hospital, from August to November 2024. This facility was selected due to its central role in trauma care during the conflict and accessibility to researchers. A cross-sectional design was chosen to provide a snapshot of the mental health status of healthcare providers at a specific point in time, allowing for the rapid collection of data during an ongoing crisis.

2.2. Sample

The target population for this study comprised healthcare providers actively working within the Palestinian Ministry of Health in the Gaza Strip during the study period. This included physicians, nurses, and non-medical healthcare personnel directly involved in patient care. A purposive sample of 400 healthcare providers—including physicians (20%), nurses (70%), and non-medical staff (10%)—was recruited. Eligibility required at least six months of service during the conflict.

2.3. Instruments

DASS-21: A 21-item Likert-scale instrument measuring depression, anxiety, and stress severity. Scores were doubled per standard protocol, with severity categorized as normal, mild, moderate, severe, or very severe. This validated tool offers a comprehensive assessment of psychological distress, including depression, anxiety, and stress [9]. Participants were asked to rate the extent to which they experienced each symptom over the past week on a 4-point Likert scale ranging from 0 (Did not apply to me at all) to 3 (Applied to me very much, or most of the time) The Cronbach's alpha value for the Arabic version of the DASS-21 has been reported to be 0.94 in a large-scale study involving 1235 participants, indicating excellent internal consistency [10]. The table No.1 shows the final score when multiplied by 2.

Table 1. Evaluation Domains in Final General Score According to (DASS-21) Scale.

Scale	Normal	Mild	Moderate	Severe	Very severe
Depression	9-0	13-10	20-14	27-21	+28
Anxiety	7-0	9-8	14-10	19-15	+20
Stress	14-0	18-15	25-19	33-26	+34

Sociodemographic Survey: Captured age, gender, marital status, education, income, and experience to explore potential associations with psychological distress

2.4. Procedure

Data collection took place from August 20 to November 20, 2024. Healthcare providers at Nasser Medical Complex were invited to participate in the study through direct contact by the research team. Interested participants were provided with a self-administered questionnaire file containing the DASS-21 and a demographic information form. Participants were assured of the confidentiality of their responses, and informed consent was obtained prior to their participation. Completed questionnaires were collected by the research team and stored

securely. Ethical approval was granted by the Ministry of Health – Gaza on August 28, 2024 (Code: 082024-02).

2.5. Data Analysis

We analyzed data using the Statistical Package for the Social Sciences (SPSS) V.20. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize the demographic characteristics of the sample and the DASS-21 scores. The Kolmogorov-Smirnov test was used to assess the normality of the data. Due to the non-normal distribution of the data, non-parametric tests were employed to examine the relationships between variables. Specifically, Spearman's rank correlation coefficient was used to assess the correlations between depression, anxiety, and stress scores. The Mann-Whitney U test was used to compare psychological distress scores between two groups (e.g., males vs. females). The Kruskal-Wallis test was used to compare psychological distress scores among three or more groups (e.g., different age groups, education levels). A significance level of $p < 0.05$ was used for all statistical tests.

3. Results

3.1. Sociodemographic Data

Sociodemographic data was collected according to the study sample; the sample size was 400 healthcare providers at Nasser Medical Complex in Gaza Strip. Frequencies and percentages were used to determine the number of participants in this study.

Table 2. Distribution of sociodemographic data (n=400).

	Frequency	Percentage
Sex		
Male	248	62.0%
Female	152	38.0%
Age		
20-30	178	44.6%
31-39	155	38.8%
40-49	36	9.1%
50 and above	31	7.4%
Marital Status		
Single	83	20.7%
Married	304	76.0%
Divorced	7	1.7%
Widowed	6	1.5%

	Frequency	Percentage
Educational Level		
Diploma	102	25.6%
Bachelor's Degree	268	67.0%
Master's Degree	30	7.4%
Monthly Income (NIS)		
1000-1500	102	25.6%
1600-2000	212	53.0%
2100-2500	40	10.0%
Above 2600	46	11.4%
Occupation		
Nurses	280	70%
Physicians	80	20%
Nonmedical Healthcare providers	40	10%
Years of Experience		
1-5 years	168	42.0%
6-10 years	70	17.5%
11-15 years	70	17.5%
More than 15 years	92	23.0%

Table 2 presents the sociodemographic characteristics of the 400 healthcare providers who participated in this study. The sample consisted predominantly of males (62%), while females constituted 38%. Most participants were between 20 and 30 years old (44.6%), followed by those aged 31-39 years (38.8%). A smaller proportion of participants were 50 years or older (7.4%). Most participants were married (76%), with single individuals comprising 20.7% of the sample. The predominant level of education was a bachelor's degree (approximately 70%), followed by diplomas (25.6%). Over half of the sample (52.9%) reported a monthly income between 1600-2000 NIS. Incomes of 1000-1500 NIS were reported by 25.6% of participants, while 11.6% earned up to 2600 NIS. This indicates that the sample predominantly has a low to moderate monthly income.

Table 2 presented the distribution of participants' years of experience. A plurality of the sample (42.1%) had between 1 and 5 years of experience, while approximately 23% had over 15 years of experience. The remaining participants had between 6-10 years (17.4%) and 11-15 years (17.4%) of experience.

The Level of psychological distress subscale among healthcare providers in Nasser complex hospital.

The scores for each subscale (depression, anxiety, and stress) are calculated by summing the ratings of the relevant items. These scores provide an indication of the individual's

level of distress in each domain. Generally, higher scores on the DASS-21 indicate higher levels of depression, anxiety, or stress.

Table 3. Prevalence and Severity of Psychological Distress (n = 400).

Distress Scale	Normal	Mild	Moderate	Severe	Very severe
Depression	64 (16.0%)	43 (10.8%)	99 (24.8%)	78 (19.5%)	116 (29.0%)
Anxiety	36 (9.0%)	26 (6.5%)	69 (17.3%)	92 (23.0%)	177 (44.3%)
Stress	47 (11.7%)	46 (11.5%)	86 (21.5%)	82 (20.5%)	139 (34.8%)

Table 3 presents the prevalence and severity of depression, anxiety, and stress among healthcare providers, as measured by the DASS-21. Overall, the results indicate high levels of psychological distress within the sample.

Depression: A substantial proportion of participants (73.3%) experienced moderate to very severe depression. Specifically, 29% suffered from very severe depression, 24.8% from moderate depression, and 19.5% from severe depression.

Anxiety: Anxiety was the most prevalent condition, with 84.6% of participants experiencing moderate to very severe anxiety. Within this group, 44.3% suffered from very severe anxiety, and 23% from severe anxiety.

Stress: A significant proportion of participants (76.8%) experienced moderate to very severe stress. Specifically, 34.8% suffered from very severe stress, 21.5% from moderate stress, and 20.5% from severe stress.

Overall: The results show that a large percentage of the study participants suffer from moderate to very severe levels of depression, anxiety, and stress, which calls for further studies and appropriate interventions to support mental health

3.2. Hypotheses

A One-Sample Kolmogorov-Smirnov (K-S) test was conducted to determine if the data followed a normal distribution. This test is essential when evaluating research questions because most parametric tests require normally distributed data. It is typically used when the sample size exceeds 50.

As shown in Table 4, the test results indicate that the calculated p-value is lower than the significance level of 0.05. This suggests that the data do not follow a normal distribution, necessitating the use of nonparametric tests.

Table 4. One Sample K-S.

Number	Section	items No.	Statistic	P-value
1	Depression	7	0.081	0.05

Number	Section	items No.	Statistic	P-value
2	Anxiety	7	0.090	0.01
3	Stress	7	0.085	0.03

The relationship between Anxiety, Depression and Stress among health care professionals in Gaza

To analyze the relationship between stress and anxiety, as well as stress and depression, a Spearman correlation test was performed. Spearman's rank correlation coefficient was used to assess the relationships between stress, anxiety, and depression. This nonparametric test is appropriate for data that are not normally distributed.

Table 5. Correlation between stress and (anxiety, and depression).

variables	Correlation Coefficient	Number	p-value
Stress with anxiety	0.855**	400	0.000
Stress with depression	0.761**	400	0.000

**p < 0.001

Spearman correlation analysis revealed significant positive correlations between stress and anxiety ($\rho = 0.855, p < 0.001$) and between stress and depression ($\rho = 0.761, p < 0.001$). These results suggest that higher levels of stress are associated with higher levels of both anxiety and depression among healthcare providers. This means that as stress increases, anxiety and depression also increase.

The relationship between psychological distress and gender among health care professionals in Gaza

A Mann-Whitney U test was conducted to compare psychological distress scores between male and female healthcare providers.

Table 6. Mann-Whitney test to assess the relationship between psychological distress and gender among healthcare providers.

Variables	Gender	N	Mean Rank	Sum of Ranks	p-value
Depression	male	male	248	62.13	0.781
	female	female	152	60.31	
Anxiety	male	male	248	59.67	0.744
	female	female	152	61.81	
Stress	male	male	248	61.86	0.833
	female	female	152	60.47	
Total	male	male	248	62.03	0.800
	female	female	152	60.37	
	Total	400			

Table 6 shows that the p -value is greater than 0.05, indicating no statistically significant differences in psychological distress among healthcare providers at Nasser Complex Hospital based on gender.

The relationship between psychological distress and age among health care professionals in Gaza

A Kruskal-Wallis test was used to examine the relationship between psychological distress scores and age groups.

Table 7. Kruskal-Wallis test to assess the relationship between psychological distress scores and age among healthcare providers.

Variables	Age	N	Mean Rank	p-value
Depression	20-30 years	178	50.31	0.027
	31-39 years	155	70.48	
	40-49 years	36	66.95	
	Above 50 years	31	68.39	
Anxiety	20-30 years	178	49.74	0.016
	31-39 years	155	69.78	
	40-49 years	36	67.09	
	Above 50 years	31	75.28	
Stress	20-30 years	178	51.61	0.055
	31-39 years	155	68.95	
	40-49 years	36	62.41	
	Above 50 years	31	74.11	
Total	20-30 years	178	49.92	0.019
	31-39 years	155	70.07	
	40-49 years	36	66.77	
	Above 50 years	31	73.06	
	Total	400		

Table 7 shows that the p -value is less than the significance level of 0.05, indicating a significant relationship between

psychological distress scores and age among healthcare providers. The mean difference between the 20–30 years and 31–39 years age groups is 7.772, suggesting that age influences psychological distress; participants aged 31–39 years experienced higher psychological distress compared to other age groups.

The relationship between psychological distress and marital status among health care professionals in Gaza

Table 8. Kruskal-Wallis test to assess the relationship between psychological distress scores and marital status among healthcare providers.

Variables	Marital status	N	Mean Rank	p-value
Depression	single	83	44.88	0.040
	married	304	64.29	
	widow	7	78.50	
	divorced	6	93.50	
Anxiety	single	83	55.5	0.013
	married	304	42.14	
	widow	7	65.98	
	divorced	6	41.75	
Stress	single	83	86.75	0.008
	married	304	66.8	
	widow	7	42.16	
	divorced	6	65.64	
Total	single	83	44.25	0.012
	married	304	100.00	
	widow	7	72.58	
	divorced	6	42.04	
Total	Total	400		

Table 8 shows that the *p*-value is less than 0.05, indicating a significant relationship between psychological distress scores and marital status among healthcare providers (in favor of married participants, with a mean difference of 11.161 compared to single participants). This indicates that participants' marital status impacts their level of psychological distress;

Table 10. Kruskal-Wallis test to assess the relationship between psychological distress scores and years of experience among healthcare providers.

Variables	years of experiences	N	Mean Rank	p-value
Depression	less than 2 years	168	48.83	0.009

married participants reported more psychological distress than single participants.

The relationship between psychological distress and level of education among health care professionals in Gaza

Table 9. Kruskal-Wallis test to assess the relationship between psychological distress scores and level of education among healthcare providers.

Variables	Job	N	Mean Rank	p-value
Depression	Diploma	102	52.53	0.025
	Bachelor	268	61.19	
	Master	30	88.44	
Anxiety	Diploma	102	87.21	0.014
	Bachelor	268	53.42	
	Master	30	60.47	
Stress	Diploma	102	91.89	0.078
	Bachelor	268	77.22	
	Master	30	53.53	
Total	Diploma	102	61.37	0.020
	Bachelor	268	83.39	
	Master	30	65.23	
Total	Total	400		

Table 9 shows that the *p*-value is less than 0.05, indicating a significant relationship between psychological distress scores and education level among healthcare providers (in favor of those with a master's degree, with a mean difference of 15.8602 compared to those with a diploma). This indicates that participants' education level impacts their psychological distress scores. For stress, the *p*-value was 0.078, which is greater than 0.05, indicating no significant relationship between stress scores and education level among healthcare providers.

Sixth Hypothesis: There is a significant relationship between psychological distress scores and years of experience among healthcare providers.

Kruskal-Wallis test to assess the relationship between psychological distress scores and years of experience among healthcare providers (n = 400).

Variables	years of experiences	N	Mean Rank	p-value
	2-5 years	70	68.62	
	6-10 years	70	75.60	
	more than 10	92	66.50	
	less than 2 years	168	48.75	
Anxiety	2-5 years	70	57.43	0.002
	6-10 years	70	78.90	
	more than 10	92	72.55	
	less than 2 years	168	49.71	
Stress	2-5 years	70	67.00	0.025
	6-10 years	70	71.31	
	more than 10	92	69.34	
	less than 2 years	168	48.40	
Total	2-5 years	70	65.19	0.006
	6-10 years	70	76.05	
	more than 10	92	69.52	
		400		

Table 10 shows that the p -value is less than 0.05, indicating a significant relationship between psychological distress scores and years of experience among healthcare providers (in favor of those with 11–15 years of experience, with a mean difference of 10.82913 compared to those with 1–5 years of experience). This indicates that participants' years of experience impact their level of psychological distress; participants

with 11–15 years of experience reported more psychological distress than those with 1–5 years of experience.

The relationship between psychological distress and monthly income among health care professionals in Gaza

Kruskal-Wallis test to assess the relationship between psychological distress scores and monthly income among healthcare providers ($n = 121$).

Table 11. Kruskal-Wallis test to assess the relationship between psychological distress scores and monthly income among healthcare providers.

Variables	years of experiences	N	Mean Rank	p-value
Depression	1000-1500 NIS	102	53.47	0.518
	1600-2000 NIS	212	62.98	
	2100- 2500 NIS	40	69.00	
	More than 2500	46	61.79	
Anxiety	1000-1500 NIS	102	55.71	0.442
	1600-2000 NIS	212	59.97	
	2100- 2500 NIS	40	73.67	
Stress	More than 2500	46	66.57	0.618
	1000-1500 NIS	102	55.47	
	1600-2000 NIS	212	62.18	
	2100- 2500 NIS	40	70.67	

Variables	years of experiences	N	Mean Rank	p-value
Total	More than 2500	46	59.57	0.478
	1000-1500 NIS	102	53.89	
	1600-2000 NIS	212	62.10	
	2100- 2500 NIS	40	71.71	
	More than 2500	46	62.54	
		400		

Table 11 shows that the p -value is greater than 0.05, indicating no significant relationship between psychological distress scores and monthly income among healthcare providers. This indicates that participants in all monthly income brackets have approximately the same level of psychological distress scores.

4. Discussion

This study reveals alarmingly high levels of psychological distress among healthcare providers in Gaza during the 2023–2025 Israel-Gaza conflict, with 84.6% reporting moderate-to-very severe anxiety, 76.8% stress, and 73.3% depression. These rates surpass those documented in other conflict-affected regions, such as Yemen (48.4% depression among medical students; [11]) and Afghanistan (73.6% depression among healthcare workers; [12]). The pervasive psychological burden in Gaza underscores the compounding effects of prolonged exposure to violence, resource scarcity, and systemic healthcare collapse—factors that differentiate this conflict from shorter-term crises or settings with partial infrastructure stability.

Notably, married participants in Gaza reported higher distress than single individuals ($p = 0.040$), contrasting with global trends where marital status often buffers stress. This paradox may reflect the dual burden of caregiving responsibilities and fears for family safety amid constant bombardment. Similarly, participants with master's degrees exhibited higher distress than those with diplomas ($p = 0.025$), possibly due to greater clinical responsibilities or awareness of systemic inadequacies. These findings echo studies from Afghanistan, where advanced clinical roles correlated with heightened depression (Mohammadi et al., 2023), and emphasize the need for tailored interventions for high-risk subgroups.

The psychological toll observed in Gaza aligns with patterns seen in other conflict zones but intensifies due to unique contextual stressors. For instance, healthcare workers in Afghanistan reported income instability as a primary driver of depression [12], whereas in Gaza, distress was more strongly linked to direct trauma exposure and moral dilemmas arising from triaging patients under bombardment. Similarly, Yemeni

medical students exhibited higher distress in early academic years due to academic pressures [11], while Gaza's mid-career professionals (31–39 years) with 11–15 years of experience faced the highest distress levels, likely due to leadership roles in crisis management.

These contrasts highlight the role of context-specific stressors. In Gaza, the relentless nature of the conflict—marked by frequent airstrikes, displacement risks, and destroyed medical facilities—creates a "trauma saturation" effect. This phenomenon, where chronic stress becomes endemic, exacerbates anxiety and stress beyond rates seen in regions with intermittent violence or stable healthcare systems.

The near-universal prevalence of distress in Gaza signals a mental health crisis with dire implications for healthcare delivery. Chronic psychological strain correlates with burnout, compassion fatigue, and reduced clinical efficacy, as seen in COVID-19 studies where distressed healthcare workers reported impaired decision-making and patient care [13]. In Gaza, where healthcare infrastructure is already crippled, attrition due to mental health issues could collapse the system entirely.

This study has several limitations. The cross-sectional design precludes causal inferences, and the single-site sample (Nasser Medical Complex) may not generalize to non-frontline workers. Self-reporting bias and the absence of pre-conflict baseline data further constrain conclusions. Future research should adopt longitudinal designs to track distress trajectories and mixed-methods approaches to explore contextual factors, such as the impact of repeated displacement or bereavement. Comparative studies across conflict zones—such as Gaza, Yemen, and Ukraine—could identify universal versus context-specific risk factors. Purposive sampling ensured inclusion of personnel directly engaged in emergency care, though it limits generalizability to non-frontline workers.

Recommendations: Integrating on-site psychologists and peer support networks can provide immediate coping strategies for professionals facing high-stress environments, similar to successful programs in Ukraine [14]. Ensuring access to mental health resources through international aid and rebuilding medical infrastructure, as emphasized by WHO (2020), is essential for long-term stability [15]. Additionally, implementing mandatory mental health screenings and trauma

ma-informed training for mid-career professionals can help address leadership-specific stressors and improve workplace resilience. Embedding mental health education into medical training, as seen in Yemen [11], can further equip early-career professionals with the tools to manage burnout and sustain their well-being in demanding roles.

The implications of these findings are critical for healthcare systems in conflict zones. Chronic psychological strain correlates with burnout and reduced clinical efficacy, threatening the sustainability of care delivery. Immediate interventions, such as trauma-informed counseling and international aid for infrastructure rebuilding, are essential. Peer support networks and mental health education integrated into medical training could mitigate long-term impacts.

5. Conclusion

The study reveals significant psychological distress among healthcare providers at Nasser Medical Complex, with high levels of depression, anxiety, and stress. Anxiety was the most prevalent condition, affecting 84.6% of participants at moderate to very severe levels, followed by stress (76.8%) and depression (73.3%).

Key findings show a positive correlation between stress, anxiety, and depression, indicating that as stress increased, anxiety and depression also rose. Gender was not a significant factor in distress levels, but age, marital status, education level, and years of experience were influential. Healthcare providers aged 31–39, married individuals, those with master's degrees, and those with 11–15 years of experience exhibited higher psychological distress.

These findings emphasize the urgent need for mental health support, workplace interventions, and sleep health programs for healthcare providers to improve their overall well-being.

Abbreviations

DASS-21	Depression, Anxiety, and Stress Scales (21-item version)
SPSS	Statistical Package for the Social Sciences
NIS	New Israeli Shekel (Currency)
MOH	Ministry of Health
WHO	World Health Organization
K-S test	Kolmogorov-Smirnov test

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Author Contributions

Ahmed Hisham Alhaj: Conceptualization, Methodology, Resources, Validation, Visualization, Writing – original draft,

Writing – review & editing

Mohammed Jaser Afana: Conceptualization, Funding acquisition, Investigation, Project administration, Supervision, Writing – original draft

Hassan M. Abu Rhama: Data curation, Formal Analysis, Investigation, Software

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Skolnik R. *Global Health 101*. 4th ed. Jones & Bartlett Learning; 2019.
- [2] Lopes Cardozo B, et al. Mental health, social functioning, and attitudes of Kosovar Albanians following the war in Kosovo. *JAMA*. 2004; 292(5): 569-577. <https://doi.org/10.1001/jama.284.5.569>
- [3] Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2(2), 99-113.
- [4] Abed Alah M. (2024). Echoes of conflict: the enduring mental health struggle of Gaza's healthcare workers. *Conflict and health*, 18(1), 21. <https://doi.org/10.1186/s13031-024-00577-6>
- [5] Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*, 62(6), 593–602. <https://doi.org/10.1001/archpsyc.62.6.593>
- [6] Elbarazi, I., Loney, T., Yousef, S., & Elias, A. (2017). Prevalence of and factors associated with burnout among health care professionals in Arab countries: a systematic review. *BMC health services research*, 17(1), 491. <https://doi.org/10.1186/s12913-017-2319-8>
- [7] Lai J, Ma S, Wang Y, et al. Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Netw Open*. 2020; 3(3): e203976. <https://doi.org/10.1001/jamanetworkopen.2020.3976>
- [8] Xiang, Y. T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., & Ng, C. H. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The lancet. Psychiatry*, 7(3), 228–229. [https://doi.org/10.1016/S2215-0366\(20\)30046-8](https://doi.org/10.1016/S2215-0366(20)30046-8)
- [9] Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, 33(3), 335–343. [https://doi.org/10.1016/0005-7967\(94\)00075-u](https://doi.org/10.1016/0005-7967(94)00075-u)
- [10] Alharbi, F. S., & Osman, M. (2024). Psychometric Properties of the Arabic DASS-21 Scale. *Humanities and Educational Sciences Journal*, (36), 852-867. <https://doi.org/10.55074/hesj.vi36.966>

- [11] Beshr, M. S., Beshr, I. A., & Al-Qubati, H. (2024). The prevalence of depression and anxiety among medical students in Yemen: A cross-sectional study. *Journal of affective disorders*, 352, 366–370. <https://doi.org/10.1016/j.jad.2024.02.080>
- [12] Mohammadi, A. Q., Neyazi, A., Rangelova, V., Padhi, B. K., Odey, G. O., Ogbodum, M. U., & Griffiths, M. D. (2023). Depression and quality of life among Afghan healthcare workers: A cross-sectional survey study. *BMC psychology*, 11(1), 29. <https://doi.org/10.1186/s40359-023-01059-9>
- [13] Li, W., Zhang, H., Zhang, C., Luo, J., Wang, H., Wu, H., Zhu, Y., Cui, H., Wang, J., Li, H., Zhu, Z., Xu, Y., & Li, C. (2021). The Prevalence of Psychological Status During the COVID-19 Epidemic in China: A Systemic Review and Meta-Analysis. *Frontiers in psychology*, 12, 614964. <https://doi.org/10.3389/fpsyg.2021.614964>
- [14] Polat, I., Sever, M. S., Demir, E., Yazıcı, H., Koç, S. K., Papila, R., & Özkan, M. (2023). Psychological Response to COVID-19 in Turkish Dialysis Healthcare Providers. *European Psychiatry*, 66(Suppl 1), S794–S795. <https://doi.org/10.1192/j.eurpsy.2023.1679>
- [15] WHO (2022): World Health Organization. (2022). *Situation Report: Occupied Palestinian Territory, Gaza Strip*.