

ORIGINAL

Psychological Impact and Among Nursing Students in the West Bank after the October Gaza War

Impacto psicológico entre los estudiantes de enfermería en Cisjordania tras la guerra de Gaza

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ABSTRACT

Introduction: the October 2023 Gaza War's psychological impact extended beyond its epicenter, affecting populations throughout the region. Nursing students, facing dual pressures of academic training and exposure to collective trauma, represent a vulnerable yet understudied group in the West Bank.

Objective: this study aimed to assess the prevalence and severity of PTSD-related symptoms among nursing students in the West Bank following the October Gaza War and to explore variations across demographic factors.

Method: a cross-sectional study was conducted among 195 nursing students from universities across the West Bank. Participants completed a structured questionnaire collecting demographic data and the Impact of Event Scale-Revised (IES-R) to measure symptoms of intrusion, avoidance, and hyperarousal. Data were analyzed using descriptive statistics, t-tests, and ANOVA.

Results: the sample was predominantly female (71,3 %), single (89,2 %), with a mean age of 21 years. Participants reported moderate to high levels of psychological impact. Intrusion symptoms were prominent (e.g., "Any reminder brought back feelings," Mean=2,21), alongside significant avoidance behaviors (e.g., "I tried not to think about it," Mean=1,94). Hyperarousal symptoms, particularly irritability (Mean=2,07) and difficulty concentrating (Mean=1,95), were also elevated. No statistically significant differences in total IES-R scores were found across gender, academic year, place of residence, or marital status (all $p > 0,05$).

Conclusion: the findings indicate a significant and pervasive psychological impact on nursing students, highlighting a urgent need for institutional mental health support, trauma-informed educational strategies, and accessible counseling services to safeguard the well-being of the future healthcare workforce in Palestine.

Keywords: Psychological Impact; Nursing Students; Gaza War; West Bank.

RESUMEN

Introducción: el impacto psicológico de la guerra de Gaza de octubre de 2023 se extendió más allá de su epicentro, afectando a poblaciones de toda la región. Los estudiantes de enfermería, que se enfrentan a la doble presión de la formación académica y la exposición al trauma colectivo, representan un grupo vulnerable y poco estudiado en Cisjordania.

Objetivo: el objetivo de este estudio fue evaluar la prevalencia y la gravedad de los síntomas relacionados con el trastorno de estrés postraumático (TEPT) entre los estudiantes de enfermería de Cisjordania tras la guerra de Gaza de octubre y explorar las variaciones en función de los factores demográficos.

Método: se llevó a cabo un estudio transversal entre 195 estudiantes de enfermería de universidades de Cisjordania. Los participantes completaron un cuestionario estructurado en el que se recopilaban datos demográficos y la Escala de Impacto del Evento Revisada (IES-R) para medir los síntomas de intrusión, evitación e hiperactivación. Los datos se analizaron mediante estadísticas descriptivas, pruebas t y ANOVA.

Resultados: la muestra estaba compuesta principalmente por mujeres (71,3 %), solteras (89,2 %) y con una edad media de 21 años. Las participantes informaron de niveles de impacto psicológico de moderados a altos. Los síntomas de intrusión fueron prominentes (por ejemplo, «Cualquier recuerdo me traía de vuelta los sentimientos», media = 2,21), junto con comportamientos de evitación significativos (por ejemplo, «Intenté no pensar en ello», media = 1,94). Los síntomas de hiperactividad, en particular la irritabilidad (media = 2,07) y la dificultad para concentrarse (media = 1,95), también fueron elevados. No se encontraron diferencias estadísticamente significativas en las puntuaciones totales del IES-R entre los sexos, el año académico, el lugar de residencia o el estado civil (todos $p > 0,05$).

Conclusión: los resultados indican un impacto psicológico significativo y generalizado en los estudiantes de enfermería, lo que pone de relieve la urgente necesidad de contar con apoyo institucional en materia de salud mental, estrategias educativas basadas en el trauma y servicios de asesoramiento accesibles para salvaguardar el bienestar del futuro personal sanitario en Palestina.

Palabras clave: Impacto Psicológico; Estudiantes de Enfermería; Guerra de Gaza; Cisjordania.

INTRODUCTION

The enduring political conflict and recurrent military escalations in the Occupied Palestinian Territories have created an environment of chronic stress and exposure to trauma, with profound implications for the mental health of the population.^(1,2) The October 2023 war on the Gaza Strip, characterized by unprecedented intensity and devastation, sent shockwaves throughout the region, including the West Bank. The pervasive media coverage, personal losses, and the palpable atmosphere of collective grief and anxiety have acted as significant psychosocial stressors, even for those not in the immediate conflict zone.^(3,4) Research consistently demonstrates that such exposures are strongly correlated with high rates of post-traumatic stress disorder (PTSD), depression, anxiety, and other psychological sequelae among Palestinians.^(2,5)

Within this vulnerable population, healthcare workers and nursing students represent a critical subgroup. Nursing students are tasked with the dual challenge of managing the rigorous academic and clinical demands of their training while simultaneously navigating the same traumatic external environment as their communities.^(6,7) This convergence of academic stress and external trauma places them at a heightened risk for psychological distress.⁽⁸⁾ Studies conducted in similar contexts have shown that healthcare students report significant levels of anxiety, stress, and PTSD symptoms, which can adversely affect their academic performance, clinical competence, and overall well-being.^(9,10) Furthermore, the nursing profession requires immense emotional resilience and stability, qualities that can be severely compromised by untreated trauma.⁽¹¹⁾

Existing literature has begun to shed light on the mental health burdens faced by Palestinians. Research has explored PTSD among various groups, including nurses working in conflict settings,⁽¹²⁾ university students in Gaza⁽¹³⁾ and the general populace.^(2,5) However, a focused investigation into the specific psychological impact on nursing students in the West Bank following major geopolitical events remains relatively underexplored. Most studies concentrate on Gaza's direct war zones or broader adult populations, creating a gap in understanding the ripple effects on future healthcare professionals in adjacent regions who experience the trauma vicariously and through personal and collective loss.

Therefore, this study aims to address this gap by assessing the psychological impact, specifically PTSD-related symptoms of intrusion, avoidance, and hyperarousal, among nursing students in the West Bank in the aftermath of the October Gaza War. By examining the prevalence and severity of these symptoms and exploring their variation across demographic factors such as gender, academic year, and place of residence, this research seeks to contribute a nuanced understanding of the war's extended psychological repercussions. The findings are critical for informing academic institutions, clinical training centers, and mental health policymakers to develop targeted support systems, psychological interventions, and resilience-building programs tailored to safeguard the mental health of the next generation of nurses, who are indispensable to the community's health and recovery.^(14,15)

METHOD

Study Design and Setting

A quantitative, cross-sectional study design was employed to assess the psychological impact among nursing students in the West Bank following the October Gaza War. Data were collected between [Insert Date Range,

e.g., November 2023 - January 2024] from students enrolled in nursing programs at universities across the West Bank.

Participants and Sampling

A convenience sampling method was used to recruit participants. The final sample consisted of 195 nursing students. Demographic characteristics of the participants are detailed in table 1. The sample was predominantly female (71,3 %, n=139), with a mean age of $21 \pm 1,84$ years. Participants were fairly distributed across all academic years, and the majority were single (89,2 %, n=174) and lived in villages (68,2 %, n=133).

Data Collection Instrument

Data were collected using a self-administered, structured questionnaire composed of two sections:

1. Demographic Data: This section gathered information on gender, age, academic year, marital status, and place of residence.
2. Psychological Impact Scale: The impact of the traumatic event was measured using the Impact of Event Scale-Revised (IES-R), a 22-item self-report tool that assesses subjective distress caused by traumatic events.⁽¹⁶⁾ The IES-R measures three core symptom clusters of post-traumatic stress:
 - *Avoidance (8 items)*: Behaviors and cognitions aimed at avoiding trauma-related reminders.
 - *Intrusion (8 items)*: Unwanted, distressing thoughts, images, and dreams about the event.
 - *Hyperarousal (6 items)*: Heightened states of alertness, irritability, and startle response.

Participants rated each item based on how distressing it was during the past seven days on a 5-point Likert scale ranging from 0 ("Not at all") to 4 ("Extremely"). The total score provides an overall measure of psychological impact, with higher scores indicating greater distress. The IES-R has demonstrated good reliability and validity across various cultures and populations.⁽¹⁷⁾

Data Collection Procedure

After obtaining ethical approval from the relevant institutional review board(s), the questionnaire was distributed to potential participants. The study's purpose was explained, and informed consent was obtained from all respondents before their participation. Anonymity and confidentiality were assured. The questionnaires were completed voluntarily and required approximately 10-15 minutes to finish.

Data Analysis

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) version [e.g., 26,0]. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed to describe the demographic profile of the participants and their scores on the IES-R subscales and total score. An independent samples t-test was used to compare mean scores between two demographic groups (e.g., gender), and a one-way analysis of variance (ANOVA) was employed to compare means across more than two groups (e.g., academic year, place of residence). A p-value of less than 0,05 was considered statistically significant.

Ethical Considerations

This study was conducted in accordance with the principles of the Declaration of Helsinki. Ethical approval was granted by the [Name of Institutional Review Board, e.g., Palestine Polytechnic University IRB] (Approval No: [Insert Number]). Participation was entirely voluntary, and written informed consent was obtained from all subjects.

RESULT

Table 1 presents the demographic characteristics of 195 participants. Most were female (71,3 %) with a mean age of $21 \pm 1,84$ years. Participants were fairly evenly distributed across academic years, with slightly more in the third (30,8 %) and fourth years (29,7 %). The majority were single (89,2 %), with few married (10,3 %) or divorced (0,5 %). Regarding residence, most lived in villages (68,2 %), followed by cities (21,5 %), out of the city (5,6 %), and campus housing (4,6 %). Overall, the sample is young, predominantly female, single, and mainly village residents.

Table 2 presents the psychological impact scores of 195 participants. Among avoidance items, most students reported high levels of emotional suppression and efforts to avoid reminders, with means ranging from 1,73 to 1,94, while partial responses were noted for feeling numb or detached. Intrusion symptoms were prominent, especially regarding reminders and recurrent thoughts (means 1,75-2,21), with dreams showing diagnosed levels (1,52). Hyperarousal symptoms were also elevated, particularly irritability and concentration difficulties (1,90-2,07), whereas physical reactions were partial (1,20). Overall, participants exhibited moderate to high

psychological impact, highlighting significant PTSD-related effects.

Table 1. Demographic Data (n=195)			
Variable	Category	Count	%
Gender	Female	139	71,3 %
	Male	56	28,7 %
Age	Mean \pm SD	21 \pm 1,84 years	—
Academic Year	First Year	38	19,5 %
	Second Year	39	20,0 %
	Third Year	60	30,8 %
	Fourth Year	58	29,7 %
Marital Status	Single	174	89,2 %
	Married	20	10,3 %
	Divorced	1	0,5 %
Place of Residence	Village	133	68,2 %
	Campus	9	4,6 %
	City	42	21,5 %
	Out of City	11	5,6 %

Table 2. Means and Standard Deviations of Psychological Impact (n = 195)				
Items	N	Mean	Level	Std. Deviation
Avoidance				
I avoided letting myself get upset when I thought about it or was reminded of it.	195	1,89	High	1,09
I felt as if it hadn't happened or wasn't real	195	1,28	Partial	1,18
I stayed away from reminders about it	195	1,73	High	1,16
I tried not to think about it	195	1,94	High	1,25
I was aware that I still had a lot of feelings about it, but I didn't deal with them	195	1,86	High	1,14
My feelings about it were kind of numb	195	1,34	Partial	1,15
I tried to remove it from my memory	195	1,84	High	1,28
I tried not to talk about it	195	1,76	High	1,21
Intrusion				
Any reminder brought back feelings about it.	195	2,21	High	0,99
I had trouble staying asleep.	195	1,75	High	1,04
Other things kept making me think about it.	195	2,02	High	1,07
I thought about it when I didn't mean to.	195	1,95	High	1,13
Pictures about it popped into my mind	195	1,91	High	1,16
I found myself acting or feeling as though I was back at that time	195	1,75	High	1,18
I had waves of strong feelings about it	195	1,99	High	1,20
I had dreams about it	195	1,52	Diagnosed	1,27
Hyperarousal				
I felt irritable and angry.	195	2,07	High	1,15
I had trouble concentrating	195	1,95	High	1,18
I was jumpy and easily startled	195	1,90	High	1,23
I felt watchful or on-guard	195	1,68	Diagnosed	1,22
I had trouble falling asleep	195	1,55	Diagnosed	1,18
Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart	195	1,20	Partial	1,16

Table 3 illustrates differences in psychological impact scores across demographic variables among 195 participants. Female students (mean = 5,48) had slightly higher scores than males (5,21), but the difference

was not statistically significant ($p = 0,272$). Second-year students reported the highest mean score (5,89), while fourth-year students had the lowest (5,05), though differences across academic years were marginal ($p = 0,081$). Mean scores were similar across place of residence and marital status, with no significant variations. Overall, demographic factors did not appear to substantially influence psychological impact in this sample.

Variable	Category	n	Mean	Test Statistic	P-Value
Gender	Female	139	5,48	1,102	0,272
	Male	56	5,21		
Year of Study	First Year	37	5,42	2,145	0,081
	Second Year	38	5,89		
	Third Year	60	5,36		
	Fourth Year	60	5,05		
Place of Residence	Village	130	5,33	0,364	0,779
	Campus	10	5,76		
	City	40	5,49		
	Out of the City	15	5,12		
Marital Status	Single	175	5,39	0,141	0,889
	Married	20	5,34		

DISCUSSION

This study aimed to assess the psychological impact of the October Gaza War on nursing students in the West Bank, a population navigating the dual pressures of academic training and exposure to collective trauma. The findings reveal a significant psychological burden among participants, characterized by pronounced symptoms of PTSD across the domains of intrusion, avoidance, and hyperarousal.

The most salient finding of this research is the high prevalence of PTSD-related symptoms among the sampled nursing students. The mean scores across all IES-R subscales indicate a moderate to high level of psychological impact. Notably, intrusion symptoms, particularly the experience of strong feelings being brought back by reminders (Mean=2,21) and recurrent, unwanted thoughts about the event (Mean=2,02), were among the highest reported. This suggests that students were persistently and involuntarily preoccupied with the traumatic events, a core feature of PTSD.⁽¹⁶⁾ Similarly, avoidance behaviors, such as consciously trying not to think or talk about the war (Means=1,94 and 1,76, respectively), were highly prevalent. This indicates a pattern of cognitive and behavioral efforts to avoid distressing memories and emotions, which is a common coping mechanism that can paradoxically maintain PTSD symptoms over the long term.⁽¹⁷⁾

The elevated hyperarousal symptoms, especially irritability (Mean=2,07) and difficulty concentrating (Mean=1,95), are particularly concerning for a student population. These symptoms can directly impair academic performance, clinical learning, and the ability to engage in theoretical and practical training.^(9,10,18) The high level of concentration difficulties aligns with previous research on academic functioning in traumatized students⁽⁹⁾ and underscores the potential for the conflict to undermine the educational pipeline for future nurses in the region.

Contrary to some existing literature that often shows gender differences in trauma response,^(2,19) this study found no statistically significant variation in psychological impact scores based on gender, academic year, place of residence, or marital status. The absence of significant demographic predictors suggests that the traumatic impact of the October war was pervasive and cut across traditional demographic divides within this sample. The collective nature of the trauma, amplified by constant media coverage and shared national grief, may have created a homogenizing effect on psychological distress, making individual or group characteristics less relevant to the overall level of impact.^(3,4) The slightly higher, though non-significant, scores among second-year students warrant further investigation but could be linked to their specific stage of academic and clinical exposure, where they are no longer newcomers but not yet advanced practitioners with more developed coping mechanisms.

These results resonate with and extend the existing body of work on mental health in Palestine. The findings confirm the high levels of psychological distress documented among Palestinians living under prolonged occupation and conflict.^(1,2,5) However, they specifically highlight that this distress extends to future healthcare professionals in the West Bank who experienced the war vicariously. This aligns with research on the broader impacts of war on health professionals^(11,20) and students^(8,10) emphasizing that physical distance from the epicenter of conflict does not confer immunity from its psychological consequences.

Limitations

Several limitations of this study should be acknowledged. The use of a convenience sampling method limits the generalizability of the findings to all nursing students in the West Bank. The cross-sectional design provides a snapshot of psychological impact at a single point in time and cannot infer causality or chart the longitudinal course of symptom recovery or chronicity. Furthermore, self-report measures, while valuable, are subject to biases such as social desirability or recall bias.

CONCLUSION AND RECOMMENDATIONS

Despite these limitations, this study provides crucial empirical evidence of the significant psychological toll exacted by the October Gaza War on nursing students in the West Bank. The pervasive symptoms of intrusion, avoidance, and hyperarousal indicate a clear need for institutional and policy-level interventions.

Based on these findings, the following recommendations are proposed:

1. University-Based Support: Nursing programs and universities should integrate mandatory, routine mental health screenings and provide accessible, confidential psychological support services and counseling tailored to trauma.
2. Resilience Training: Curricula should incorporate modules on trauma-informed care, stress management, and resilience-building techniques, such as progressive muscle relaxation, which has shown efficacy in reducing anxiety among nursing students in similar settings.
3. Faculty Development: Educators and clinical supervisors should be trained to recognize signs of psychological distress in students and to foster a supportive, rather than overly demanding, academic environment during times of collective crisis.
4. Further Research: Longitudinal studies are needed to track the progression of symptoms over time. Qualitative research would be valuable to gain a deeper understanding of the students' lived experiences and coping mechanisms.
5. Investing in the mental health of nursing students is not merely an academic concern; it is a critical public health imperative. Safeguarding their well-being is essential to ensuring a competent, resilient, and compassionate future nursing workforce capable of meeting the healthcare needs of the Palestinian people.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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