



Prevalence and Predictors of Depression, Anxiety, and Stress (DASS-21) Among Palestinian Bedouins in Hebron During the 2023 Gaza War

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Abstract:

Background: the war has psychological impacts on marginalized communities such as Bedouins who are stripped of their traditional livelihoods, subjected to chronic trauma and insecurity, and displaced. **Objective:** This study seeks to measure the prevalence and predictors of depression, anxiety, and stress experienced by Palestinian Bedouins living in Hebron due to the Gaza war using the DASS-21 questionnaire. **Methods:** The study used a cross-sectional survey that was distributed to (N=385) Bedouins in Hebron governorate. **Results:** The results indicated that most Palestinian Bedouins in Hebron are experiencing a lot of psychological distress, with their depression and anxiety having mean scores of 20.4 and 17.7, respectively, and stress having a mean score of 17.7; all of these results are severe according to the DASS-21 criteria. **Demographic analysis** did not indicate any gender differences, while younger participants, ranging from 18 to 20 years, reported lower distress levels than the older age groups, and participants with postgraduate education reported having more depression, anxiety, and stress. **Conclusion:** The study concluded that Palestinian Bedouins living in Hebron went through severe depression, anxiety, and stress because of the 2023 Gaza War and that these effects were influenced by age and educational level, with strong connections among the three psychological variables. **Recommendations:** The study recommends using special, culturally appropriate mental health programs tailored to those who are elderly and not well-educated and urges expanding psychological support services for individuals living in marginalized Bedouin areas.

Keywords: marginalized communities, Bedouins, trauma, displacement.

المستخلص:

الخلفية: للحرب آثار نفسية على المجتمعات المهمشة مثل البدو الذين حُرِّموا من سبل عيشهم التقليدية، وتعرضوا لصدمات مزمنة وانعدام للأمن، وتم تهجيرهم. الهدف: تهدف هذه الدراسة إلى قياس مدى انتشار الاكتئاب والقلق والتوتر والتنبؤ بها لدى البدو الفلسطينيين المقيمين في الخليل نتيجة حرب غزة، باستخدام استبيان DASS-21 المنهجية: استخدمت الدراسة مسحاً مقطوعياً وُزِعَ على (N=385) من البدو في محافظة الخليل. النتائج: أشارت النتائج إلى أن معظم البدو الفلسطينيين في الخليل يعانون من ضائقة نفسية شديدة، حيث بلغ متوسط درجات الاكتئاب والقلق ٢٠.٤ و ١٧.٧ على التوالي، وبلغ متوسط التوتر ١٧.٧؛ وتُصنَّف جميع هذه النتائج على أنها شديدة وفقاً لمعايير استبيان DASS-21. لم تُظهر التحليلات الديموغرافية فروقاً بين الجنسين، بينما أبلغ المشاركون الأصغر سناً، الذين تتراوح أعمارهم بين ١٨ و ٢٠ عاماً، عن مستويات ضائقة أقل من الفئات العمرية الأكبر سناً، كما أبلغ المشاركون من ذوي التعليم العالي عن مستويات أعلى من الاكتئاب والقلق والتوتر. الاستنتاج: خلصت الدراسة إلى أن البدو الفلسطينيين المقيمين في الخليل مرُّوا بحالات شديدة من الاكتئاب والقلق والتوتر بسبب حرب غزة ٢٠٢٣، وأن هذه التأثيرات تأثرت بالعمر والمستوى التعليمي، مع وجود ارتباطات قوية بين المتغيرات النفسية الثلاثة. التوصيات: توصي الدراسة باستخدام برامج صحة نفسية خاصة ومناسبة ثقافياً تستهدف كبار السن وغير المتعلمين، وتدعو إلى توسيع خدمات الدعم النفسي للأفراد المقيمين في المناطق البدوية المهمشة.

الكلمات المفتاحية: المجتمعات المهمشة، البدو، الصدمات النفسية، التهجير.

Introduction:

Since 1519 until the First World War, Palestine was occupied by the Ottoman Empire (Schneer, 2010). Then, in 1900, the Jews immigrated to Palestine with the aim of establishing a Jewish state in Palestine (Gammoh et al., 2024). Jewish immigration to Palestine caused unease and tension among the Palestinian people, leading to conflict and war between the two sides (Makdisi, 2018).

War is one of the biggest issues facing individuals, that have several repercussions that are exemplified not only in

devastating their social lives but also their inner feelings, leading to psychological issues. In their study, Moreno-Chaparro et al. (2022) indicate that war affects the physical and health integrity of individuals as well as their mental health, resulting in long-term psychological problems. Similar assertion was made by World Health Organization (WHO), which pointed out that one in five individuals in war experience a variety of mental health symptoms (Abudayya et al., 2023).

Nowadays, Gaza war is considered one of the toughest, deadliest, and most destructive wars in the history. The Gaza war began on the seventh of October, 2023, and has led to widespread displacement, extensive damage to productive, physical, and social infrastructure, and devastating loss of life (Hassoun et al., 2024). The Gaza strip encountered violent conflict from October 2023 to January 2025 resulting in major suffering and displacement (Aldabbour et al., 2025).

The war has resulted in negative psychological impacts on West Bank communities (Dweik et al., 2024). These impacts are exemplified in the feelings of depression, stress, and anxiety among Palestinians in general and Palestinian Bedouins in Hebron in particular (Aldabbour et al., 2024). To clarify, the Palestinians' feelings of depression, anxiety, and stress have resulted from recurrent as well as severe trauma and forced immigration, which have increased their psychiatric morbidity (Atallah et al., 2017). Moreover, the long-standing conflict between Israeli and Palestinian has resulted in humanitarian crisis (Abudayya et al., 2023). Such humanitarian crisis has intensified the Palestinians' feelings of trauma, depression, anxiety, and stress (Aldabbour et al., 2025). The Gaza war affected (22%) of Palestinians who experienced mental symptoms, including stress, depression, post-traumatic stress

disorder, schizophrenia, or anxiety (World Health Organization, 2022).

In addition, the conflict in Gaza has caused severe spillover impacts on West Bank communities (Valbjørn et al., 2024). The unemployment rate has accelerated to (35%) because of job losses associated with the conflict (World Bank et al., 2025). The West Bank communities have witnessed severe disruption in the education services affecting the majority of students (Dweik et al., 2024). From a psychological aspect, prolonged exposure to displacement anxieties and violence has led to widespread trauma among Palestinians (Marie et al., 2020). More than 228,000 pregnant and breastfeeding women and 439,000 children in the West Bank urgently needs psychosocial and nutritional support (World Bank et al., 2025). Palestinians' feelings of depression, anxiety, and stress are often experienced by Bedouin communities due to their limited access to mental health services and displacement risks (Massad et al., 2017). These psychological feelings are heightened among displaced individuals in general and women in particular (Gammoh et al., 2024). Besides, the Bedouins in Palestine face profound psychological suffering due to their exposure to constant threats of home demolitions, forced displacement, the erosion of their traditional way of life, and restricted access to basic services (UNDP/PAPP, 2017). Therefore, the majority of Palestinian Bedouins experience a state of disconnection from their land and identity and chronic insecurity (Abdo, 2002). The constant exposure to such hardships intensifies their profound sense of emotional distress, social fragmentation, and loss, influencing their resilience and mental health (Aldabbour et al., 2024).

This study seeks to investigate the predictors of depression, anxiety, and stress among Palestinian Bedouins in

Hebron during the 2023 Gaza war using Arabic DASS-21 (7-point Likert per subscale) that was distributed to adult Bedouins in Hebron governorate. The sample consists of Masafer Yatta, Masafer Bani Na'im, and Biriya al-Shuyukh. The rationale that prompts the researcher to conduct this study in particular is attributed to the dearth of research addressing Bedouins' mental health during current war. Therefore, this study hypothesizes that there are higher DASS-21 scores among displaced Bedouin individuals and women.

Literature Review:

Depression, Anxiety, and Stress:

The exposure to traumatic events, particularly from war, leads to psychological problems that are exemplified in the feelings of depression, anxiety, and stress (El Baba and Colucci, 2018). Depression is defined as the constant feelings of hopelessness, lack of pleasure and interests in activities, and sadness (Watson et al., 2020). Depression is often associated with changes in cognitive functioning, appetite, and sleep (Lim et al., 2022). As for anxiety, it is characterized by excessive or persistent feelings of anxiety and fear that disrupt daily activities (Porcelli, 2020). Anxiety often results in avoidance behaviors and might be associated with physical symptoms like panic attacks and tension (Zhang & Li, 2024). With regard to stress, it is considered a mental health condition that can develop after witnessing or experiencing a traumatic event (Bryant, 2019).

Altogether, these psychological feelings are mainly encountered among individuals who are affected by armed conflicts (Moreno-Chaparro et al., 2022). When it comes to the studies investigating the impact of depression, anxiety, and stress on Palestinian people, Aldabbour et al. (2024) addressed this issue on a group of young adults from Gaza and revealed that young Palestinians are highly vulnerable to psychiatric problems

due to living in shelters, losing family members and friends, and losing their homes and income. In Gaza, little is known about the prevalence and predictors of depression, anxiety, and stress among Palestinians in general and Bedouin Palestinian in particular. Therefore, this study is conducted to bridge this gap in literature.

Before proceeding to examine the Bedouins in Palestine, it is necessary to highlight the war in Gaza and its psychological impacts on the Palestinian people.

War in Gaza:

It is widely acknowledged that Gaza has experienced violence and war for several years (WHO, 2022). Besides, Gaza has constantly encountered a complicated humanitarian emergency (Farhat et al., 2023). The humanitarian emergencies experienced by people in Gaza expose them to significant social and psychological suffering (Danese et al., 2020). As a result, Gaza's indigenous people encounter severe psychological problems that affect their psychosocial well-being (Aldabbour et al., 2024). The war has caused profound psychological trauma to Palestinians that are manifested in facing severe depression, post-traumatic stress, anxiety, and grief (Milton-Edwards, 2024). These psychological impacts are resulted from several factors; including destruction of homes, continuous exposure to violence, and massive loss of life (Thabet, 2019). Moreover, Palestinians' feelings of collective trauma and despair are resulted from the near-total devastation of Gaza's infrastructure and environment compounded by hopelessness about the future and displacement (Hamamra et al., 2025).

Bedouin in Palestine

Palestinian Bedouins since the emergence of the State of Israel in 1948 were subjected to a series of prejudiced policies based on their way of life and ethnic identity (Tatour, 2019).

Palestinian Bedouins are denied the rights granted to indigenous people under international law because the Israeli authorities did not recognize them as an indigenous group (Elsana, 2015).

The Bedouin population is considered the most vulnerable population in Palestine who lack necessities such as electricity and water and subject to forced relocation (Massad et al., 2017). The majority of Bedouins in Palestine trace back to the Negev Desert, whose number accounts for (40.000) (Yahel et al., 2017). The majority of Palestinians Bedouin are displaced and refugee tribes, who live in Jericho and Bethlehem in the West Bank, Hebron, and Jerusalem (Heneiti, 2016). They prefer living in areas that enable them to practice their traditional lifestyle; including agriculture, animal husbandry, semi-nomadism, and tribalism (Kressel et al., 1999). The Bedouins in 1967 since Israel's occupation of the West Bank, they have been forced to resettle to give room for Israeli settlement growth (Waldman, 2020).

Studies on The Prevalence and Predictors of Depression, Anxiety, and Stress Among Palestinian during the Gaza War

Several attempts were conducted to investigate the psychological impact of Gaza war on Palestinian. Aldabbour et al. (2024) addressed this issue using DASS21 questionnaire that was distributed to 339 Palestinian medical young adults in Gaza. The study found that the participants have experienced high levels of depression, anxiety, and stress due to several reasons. These include recurrent displacement, losing colleague, friend, or relative, losing home and income, and living in a shelter. All of which have exacerbated their feelings of dissatisfaction and their psychiatric morbidities. Interestingly, the study found that these feelings were higher among females compared to males. To mitigate the psychological impact of war in Gaza, the study recommended culturally sensitive mental health interventions

tailored to vulnerable groups, including displaced individuals, children, and women, followed by an immediate cessation of violence.

In their study, Massad et al. (2017) examined the mental health and political violence experienced by children in the West Bank. To this end, a questionnaire was distributed to 455 refugee children in Palestine aged between 5-16 years old. The participants were recruited randomly from 18 Bedouin communities on the West Bank. The Strengths and Difficulties Questionnaire was used to measure the participants' mental health. The results showed that 44% of the respondents encountered psychiatric disorders as a result of their exposure to traumatic events. The study underscored the role of maternal mental health as a contributing factor influencing the vulnerability of children. Besides, the study recommended using immediate psychosocial intervention for Bedouin mothers and their children that is tailored to protect their basic human rights. Similarly, Abudayya et al. (2023) reviewed the literature on the impacts of Gaza's war on young Palestinians. The study further addressed the resilience mechanisms used by Palestinians to cope with their traumatic events. The study found that the majority of Palestinian children encountered war-related traumatic experiences. These traumatic experiences have increased the mental health problems experienced by Palestinians, resulting from their exposure to destruction, violence, loss of friends and family members. The study further found that Palestinians used several coping and resilience mechanisms to mitigate their feelings of depression, anxiety, and stress.

Likewise, Thabet and Abu Sultan (2016) examined the impact of the Palestinian-Israeli war on university students' levels of anxiety, stress, and resilience using a questionnaire that

was distributed to 399 students who were recruited from Al-Quds Open and Islamic University Al-Azha, and Al-Aqsa universities in Gaza. The results revealed that watching mutilated bodies on television, followed by witnessing destruction and shelling of another's home, witnessing firing by heavy artillery and tanks at a neighbor's home, subsequent by forced immigration from one's home to a safer place, were some of the most traumatic events experienced by the respondents. Interestingly, the study found that the majority of Palestinian people encountered anxiety, stress, and trauma. To cope with these traumatic events, they resort to various resilience notions that are anchored on their beliefs that Allah will help them and that everything happens for a reason. These beliefs enable them to endure the traumatic feeling resulting from war. More importantly, the study found that males have considerably more personal trust, resilience, and competence in their instincts compared to females.

Aldabbour et al. (2025) investigated the psychological impact of Gaza war and forced displacement on Palestinians' feelings of anxiety, stress, and depression. To this end, a survey was distributed to 952 displaced adults. The study found that the majority of the participants lived either in camps or shelters. The majority of them experienced either moderate or high levels of anxiety. The main reasons behind their feelings of depressions are related to several reasons; including torture, military detention, and the death of a first-degree relative.

Marie et al. (2020) carried out a study on the feelings of anxiety and post-traumatic stress disorder facing Palestinians. The study revealed that Palestinians tend to experience stress and anxiety for several reasons, including limitations in mental health services, financial, educational, and professional opportunities, prolonged displacement, and political violence.

Gammoh et al. (2024) investigated the prevalence of anxiety, stress, and insomnia among Palestinian women who reside in the camp during the Gaza war. The sample consisted of (177) female Palestinian refugees residing in Jerash, Jordan, using a questionnaire. The results showed that the majority of Palestinian women experienced depression (73%), followed by insomnia (65%), and subsequently by anxiety (60%). Interestingly, the study found that the main triggers behind depression were having a first-degree relative in Gaza and prior diagnosis with chronic diseases. Moreover, the main reasons behind insomnia were losing friends or relatives in the war and losing connections with friends in the war.

So far, the previous studies Aldabbour et al. (2024), investigated the anxiety, stress, and depression experienced by young adults in Gaza using DASS-21. Likewise, Abudayya et al. (2023) tackled the impact of the Gaza war on young Palestinians by reviewing the literature on the topic under investigation. Similarly, Aldabbour et al. (2025) investigated the psychological impact of the Gaza war and forced displacement on Palestinians' feelings of anxiety, stress, and depression. In the same vein, Massad et al. (2017) addressed the psychological problems experienced by children in the West Bank due to the Gaza war. In addition, Abu Sultan (2016) tackled the impact of the Palestinian-Israeli war on university students' levels of anxiety, stress, and resilience. None of the previous studies investigated the psychological feelings of depression, anxiety, and stress among Palestinian Bedouins living in Hebron during the Gaza war using DASS-21. This gap in the literature has prompted the researcher to carry out this study to bridge this gap.

Methods and Procedures

Study Design

This research used a quantitative cross-sectional approach to evaluate depression, anxiety and stress levels among Palestinian Bedouins living in Hebron during the 2023 Gaza war. The Depression Anxiety Stress Scales (DASS-21) operated as the main instrument for gathering research data. The DASS-21¹ handles 21 items that distribute equally across its three constructs while providing a 4-point Likert-scale response system that reaches from 0 ("Did not apply to me at all") to 3 ("Applied to me very much or most of the time") (Lovibond & Lovibond, 1995). The Arabic version of DASS-21 served as the research instrument because it demonstrated cultural validation to guarantee response accuracy and reliability.

Participants

The study population included all adult Bedouin residents older than 18 who lived in the communities of Jinba, Susiya, Umm Qussa, Al-Majaz, Al-Rakeez, Zuweidin, Bireh Al-Shuyoukh, and Masafer Bani Naim within the Hebron governorate. The research participants were recruited from Jinba, Susiya, Umm Qussa and Al-Majaz, Al-Rakeez, Zuweidin, Bireh Al-Shuyoukh, Masafer Bani Naim. Accordingly, the total number of respondents accounts for (385). The participants were recruited using convenience sampling, which is used to collect data from participants who are accessible to the researcher (Golzar et al., 2022).

Data Collection

The questionnaire was self-administered to collect data while using the Arabic version of DASS-21. A clear process for

¹ <https://melanoma.org.au/wp-content/uploads/2022/05/DASS21-Form.pdf>

self-related questionnaire completion was provided to participants independently. The researchers underlined both anonymity and voluntariness because of the sensitivity of the topic during wartime. Research participants learned that their answers for the survey would preserve their privacy, and they could decide entirely for themselves whether to participate. The study protected ethical integrity through consent procedures while providing participants access to mental health resources in case of needing additional support.

Data Analysis

The researcher analyzed the coded questionnaire data through the use of IBM SPSS Statistics version 28. The research team computed descriptive statistics through frequencies and percentages and means and standard deviations to explain depression and anxiety and stress levels. The researchers analyzed data through Analysis of Variance (ANOVA) between different demographic and community groups. A Pearson's correlation coefficient analysis (r) demonstrated how the DASS-21 subscale scores related to each other to investigate potential connections between the depression, anxiety, and stress measurements.

Study Results

This section presents the statistical analysis results of the study data collected using the DASS-21 questionnaire.

Descriptive Statistics of Participants' Demographic Characteristics

The following table illustrates descriptive statistics of participants' demographic characteristics.

Table 1. Participants' Demographic Characteristics

Demographic Characteristics	Categories	Freq.	Percentage%
Gender	Male	163	42.3
	Female	222	57.7

Total		385	100%
Age	18 -Less Than 20 Years	64	16.6
	20-Less Than 35 Years	117	30.4
	35-Less Than 50 Years	106	27.5
	50 Years and More	98	25.5
Total		385	100%
Educational Level	High school or less	97	25.2
	Diploma	107	27.8
	Bachelor's	141	36.6
	Postgraduate studies	40	10.4
Total		385	100%

Table 1 indicated that the majority of participants were females, accounting for (57.7%), while males accounted for (42.3%). Participants aged between (20 - less than 35) years represented (27.5%), while the age group (18 - less than 20) years represented (16.6%) of the participants, which is the lowest percentage. Also, 36.6% of the participants held a bachelor's degree, while (10.4%) of them held postgraduate degrees.

Descriptive Statistics of Depression, Anxiety, and Stress Among Participants

The DASS-21 (Depression Anxiety Stress Scales-21) is a shortened version of the original DASS-42 scale, developed by Lovibond & Lovibond (1995) to measure three negative psychological states: depression, anxiety, and stress. According to DASS-42, depression can be classified into four levels, as shown in the following table:

Table 2. Classification of the Level of Depression

Depression Score	Anxiety Score	Stress Score	Level
0 – 9	0 – 7	0 – 14	Normal
10 – 13	8 – 9	15 – 18	Mild
14 – 20	10 – 14	19 – 25	Moderate
21 – 27	15 – 19	26 – 33	Severe
28 and above	20 and above	34 and above	Extremely

			Severe
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The following table illustrates the descriptive statistics of depression among participants.

Table 3. Descriptive Statistics of Depression, Anxiety, and Stress Among Participants (N=385)

No#	Domain	Mean	SD	Level
1	Depression	20.4	8.72	Sever
2	Anxiety	17.7	9.37	Severe
3	Stress	26.8	8.56	Severe

Table 3 showed that levels of depression, anxiety, and stress among Palestinian Bedouins in Hebron during the 2023 Gaza War were severe. The mean depression score was (20.4) with a standard deviation of (8.72), and according to the reference Table 2, the depression level is classified as severe based on DASS-21 criteria. Additionally, the mean anxiety score was (17.7) with a standard deviation of (9.37), and the mean stress score was (26.8) with a standard deviation of (8.56), both classified as severe according to the reference Table 2. This result reflects the psychological condition experienced by the participants, especially in light of the escalating events and psychological pressures related to the Gaza war, the aggression on the occupied Palestinian territories, and the violations and assaults on the West Bank lands. This highlights the urgent need for psychological and community interventions to improve the participants' mental health.

Independent Sample T-test

To examine the presence of statistically significant differences at the level ($\alpha < 0.05$) in the levels of depression, anxiety, and stress among participants attributed to gender, an independent samples t-test was used. The following table presents the results of this test.

Table 4. Differences in the Levels of Depression, Anxiety, and Stress among Participants Attributed to Gender

No#	Domain		Mean	SD	t-value	p-value
1	Depression	Male	19.9	9.03	0.914	0.361
		Female	20.7	8.49		
2	Anxiety	Male	17.2	9.54	0.897	0.370
		Female	18.0	9.25		
3	Stress	Male	26.0	8.72	1.610	0.108
		Female	27.4	8.41		

Table 4 showed no statistically significant differences between males and females in levels of depression ($t=0.914$, $p\text{-value}=0.361$), anxiety ($t=0.897$, $p\text{-value}=0.370$), and stress ($t=1.610$, $p\text{-value}=0.108$) at the significance level of $\alpha < 0.05$. It is worth noting that females showed higher means in all three variables, with the mean depression score for females being (9.03) compared to (8.49) for males. Meanwhile, the mean anxiety score for females was (18) compared to (17.2) for males. Conversely, the mean stress score for females was (27.4), and (26) for males. This result reflects similar levels of depression, anxiety, and stress among the participants, as they are experiencing difficult psychological conditions imposed by the Gaza war and the assaults on the West Bank, which have caused them to feel fear about the future.

ANOVA Test

According to Age

To examine the presence of statistically significant differences at the level ($\alpha < 0.05$) in the levels of depression, anxiety, and stress among participants attributed to age group, an ANOVA test was used. The following table presents the results of this test.

Table 5. Differences in the Levels of Depression, Anxiety, and Stress among Participants Attributed to Age

Domain		Sum of Squares	DF	Mean Square	F	Sig.
Depression	Between Groups	3394.9	3	1131.6	16.70	.000*
	Within Groups	25802.2	381	67.7		
	Total	29197.1	384			
Anxiety	Between Groups	4898.3	3	1632.8	21.58	.000*
	Within Groups	28829.8	381	75.7		
	Total	33728.1	384			
Stress	Between Groups	4589.9	3	1530.0	24.78	.000*
	Within Groups	23526.5	381	61.7		
	Total	28116.4	384			

*** Statistically significant at the 0.05 level**

Table 5 showed there are statistically significant differences between participants in levels of depression ($t=0.16.70$, $p\text{-value}=0.000$), anxiety ($t=21.58$, $p\text{-value}=0.000$), and stress ($t=24.78$, $p\text{-value}=0.000$) which are statistically significant at level of ($\alpha < 0.05$). To identify the source of variance, the Scheffé post hoc test was used, and the following table presents the results.

Table 6. Scheffé Post Hoc Test- Age Group

Variable	Age group (I)	Age group (J)	Mean Difference (I-J)	Std. Error	Sig.
Depression	18 –Less Than20 Years	20-Less Than 35 Years	-8.40678*	1.27945	.000
		35-Less Than 50 Years	-7.29422*	1.30271	.000
		50 Years and More	-7.93304*	1.32258	.000
Anxiety	18 –Less Than20 Years	20-Less Than 35 Years	-9.54087*	1.35243	.000
		35-Less Than 50 Years	-8.40153*	1.37702	.000
		50 Years and More	-10.29911*	1.39802	.000
Stress	18 –Less Than20 Years	20-Less Than 35 Years	-9.05716*	1.22172	.000
		35-Less Than 50 Years	-9.01297*	1.24394	.000
		50 Years and More	-9.71301*	1.26291	.000

*** The mean difference is significant at the 0.05 level.**

Table 6 showed statistically significant differences in participants' scores on the depression scale among the four age groups. However, the difference in mean scores between the (18-less than 20 years) group and the (20-less than 35 years) group was the highest ($I-J=-8.40678$, $p = 0.000$), the negative sign indicates that the difference was in favor of the (20-less than 35 years) group. Regarding to Anxiety, there are statistically significant differences in participants' scores on the among the four age groups. However, the difference in mean scores between the (18-less than 20 years) group and the (50 Years and More) group was the highest ($I-J=-10.29911$, $p = 0.000$), and the negative sign indicates that the difference was in favor of the (50 Years and More) group. Regarding to Stress, there are statistically significant differences in participants' scores on the among the four age groups. However, the difference in mean scores between the (18-less than 20 years) group and the (50 Years and More) group was the highest ($I-J=-9.71301$, $p = 0.000$), and the negative sign indicates that the difference was in favor of the (50 Years and More) group.

According to Educational Level

To examine the presence of statistically significant differences at the level ($\alpha < 0.05$) in the levels of depression, anxiety, and stress among participants attributed to educational level, an ANOVA test was used. The following table presents the results of this test.

Table 7. Differences in the Levels of Depression, Anxiety, and Stress among Participants Attributed to Educational Level

Domain		Sum of Squares	DF	Mean Square	F	Sig.
Depression	Between Groups	1069.97	3	356.655	4.831	.003 *
	Within	28127.13	38	73.824		

	Groups		1			
	Total	29197.09	384			
Anxiety	Between Groups	1261.55	3	420.518	4.935	.002*
	Within Groups	32466.51	381	85.214		
	Total	33728.06	384			
Stress	Between Groups	624.40	3	208.132	2.884	.036*
	Within Groups	27492.03	381	72.158		
	Total	28116.43	384			

*** Statistically significant at the 0.05 level**

Table 7. showed there are statistically significant differences between participants according to educational level in levels of depression ($t=4.831$, $p\text{-value}=0.0\text{٠٣}$), anxiety ($t=4.935$, $p\text{-value}=0.00٢$), and stress ($t=2.884$, $p\text{-value}=0.0٣٦$) which are statistically significant at level of ($\alpha < 0.05$).

Table 8. Scheffé Post Hoc Test- Educational Level

Variable	Age group (I)	Age group (J)	Mean Difference (I-J)	Std. Error	Sig.
Depression	High school or less	Diploma	-3.41478*	1.205	0.047
		Bachelor's	-2.12254	1.133	0.321
		Postgraduate studies	-5.53814*	1.615	0.009
Anxiety	High school or less	Diploma	-2.47943	1.294	0.301
		Bachelor's	-1.73415	1.218	0.567
		Postgraduate studies	-6.57990*	1.735	0.003
Stress	High school or less	Diploma	-2.32392	1.191	0.285
		Bachelor's	-1.44754	1.121	0.644
		Postgraduate studies	-4.41598*	1.596	٠.030

* The mean difference is significant at the 0.05 level.

Table^ showed statistically significant differences in the participants' scores on the depression, anxiety, and stress scale

attributed to educational level, according to Scheffe's post hoc test. It was found that the highest differences in the means were between the (high school or less) category and the (postgraduate) category, where the differences were statistically significant in favor of the postgraduate category in the variables of depression (I-J = -5.53814, $p = 0.009$) and anxiety (I-J = -6.57990, $p = 0.003$), as well as in the stress variable (I-J = -4.41598, $p = 0.030$). The negative sign indicates that the postgraduate category's mean scores were higher than those of the high school or lower category.

Pearson's Correlation Coefficient Analysis

A Pearson's correlation coefficient analysis demonstrated how the DASS-21 subscale scores related to each other to investigate potential connections between the depression, anxiety, and stress measurements.

Table 9. Pearson's Correlation Coefficient Analysis

		Depression	Anxiety	Stress
Depression	Pearson Correlation	1		
	P-value			
Anxiety	Pearson Correlation	.804**	1	
	P-value	0.00		
Stress	Pearson Correlation	.857**	.825**	1
	P-value	0.00	0.00	

**** Correlation is significant at the 0.01 level (2-tailed)**

Table 9 indicated that there are strong positive and statistically significant correlations at the (0.01) level between the three study variables (depression, anxiety, and stress). The correlation coefficient between depression and anxiety was (0.804), which confirms a strong positive relationship between them. This indicates that higher levels of depression are associated with higher levels of anxiety among the participants. In addition to, the correlation coefficient between depression and

stress was (0.857), which confirms a strong positive relationship between them. This indicates that higher levels of depression are associated with higher levels of stress among the participants. Besides, the correlation coefficient between anxiety and stress was (0.825), which confirms a strong positive relationship between them. This indicates that higher levels of anxiety are associated with higher levels of stress among the participants.

Discussion

Descriptive Statistics

The results of the descriptive analysis indicate that most participants were females (57.7%), between 20 and 35 years old (30.4%), and had attained a bachelor's degree (36.6%). These demographic characteristics help us understand groups often affected by mental health issues caused by ongoing conflicts, as previous research has shown. The higher female participation corresponds with Aldabbour et al. (2024), who stated that a higher number of females in Gaza were found to experience higher depression, anxiety, and stress because of displacement, loss, and an unstable situation. It could be that women are both more vulnerable now and also more open about sharing their psychological stress. There are more participants in the 20–35 age group, which aligns with Aldabbour et al.'s (2025) findings, who noted that young adults living in shelters or camps experienced higher levels of anxiety and depression. Likewise, individuals with higher education may recognize more what psychological symptoms mean and are more likely to participate in mental health surveys (Marie et al., 2020).

Unlike earlier studies, this study concentrates on Palestinian Bedouins in Hebron in order to bridge the literature gap in the field. Bedouins deal with upheavals, denial of native rights, displacement, and poor living circumstances (Tatour, 2019; Massad et al., 2017); these challenges could aggravate

their mental health during war. The current study, therefore, addresses insights that have not been highlighted in previous studies.

Severe Psychological Impact of the Gaza War on Palestinian Bedouins in Hebron

According to the study findings, the participants suffered from severe depression ($M = 20.4$), anxiety ($M = 17.7$), and stress ($M = 26.8$) throughout the Gaza War in 2023. DASS-21 reveals that these scores indicate a “severe” level of distress in all three areas. For Bedouins residing in Hebron, such psychological stress results from continuous trauma, forced displacement, systematic deprivation, a history of marginalization, and lack of resources (Tatour, 2019; Elsana, 2015).

The findings correspond with earlier studies carried out in Gaza and the West Bank. These findings correspond with earlier studies carried out in Gaza and the West Bank. Aldabbour et al. (2024, 2025), for example, highlighted that displaced Palestinians living in shelters have a high level of psychological distress, often stem from losing their homes, livelihoods, and family members. Correspondingly, Massad et al. (2017) showed that 44% of Bedouin children in the West Bank suffered from psychiatric disorders due to trauma exposure. In addition, Thabet and Abu Sultan (2016) stressed that witnessing violence and destruction leads university students to experience extra stress and anxiety.

Unlike earlier research, the present study specifically covers the mental health of Bedouins in Hebron, a community disregarded in Gaza war literature. This underlines how urgently these vulnerable demographic needs focused mental health treatments.

Gender Differences in Depression, Anxiety, and Stress During the Gaza War

The data in Table 4 indicate that there are no significant gender differences in depression, anxiety, or stress between participants ($p > 0.05$). Although not major, females tended to score a slightly higher mean score than males in all three psychological domains. This could be that throughout the Gaza war and the assaults on the West Bank, all Palestinians went through the same intense fear and unstable circumstances.

These findings correspond with Aldabbour et al. (2024), who highlighted that home, income and family losses linked to war affect many young Palestinians, especially females, and increase their chance of experiencing mental health issues. Likewise, Gammoh et al. (2024) documented that depression and anxiety are common among Palestinian women living in refugee camps. On the other hand, in the present study, there were no significant differences since the shared and severe trauma likely reduced any psychological gender differences (Hamamra et al., 2025).

Unlike earlier studies concentrating on Gaza residents or Palestinians living in camps, this study focuses on Bedouins in Hebron during the Gaza conflict, therefore filling a gap that has not been explored much before. It highlights how similar psychological stresses male and female individuals face under severe conflict.

Age-Related Differences in Depression, Anxiety, and Stress

It was found using the ANOVA and Scheffé post hoc tests that there is a significant difference in depression, anxiety, and stress based on different age groups ($p = 0.000$). Participants in the 18–less than 20 years group experienced less psychological distress than the older groups, and the differences were greatest between this group and the 50 years or older group. These

disparities could be reflections of developmental and experiential differences whereby older individuals may be more psychologically burdened by past unresolved war experiences, responsibility for families, or accumulated trauma.

Aldabbour et al. (2024) confirmed this pattern by revealing that older young adults in Gaza were more likely to suffer from depression, anxiety, and stress following displacement and loss. Similarly, Massad et al. (2017) emphasized how mental health is affected by age and ongoing exposure to political violence, especially in Bedouin populations. Marie et al. (2020) have noted that limited access to mental health care and economic constraints aggravate distress among older adults. Overall, these findings show that age significantly affects emotional reactions to war and that older Palestinian populations, especially in vulnerable groups like Bedouins, need focused mental health help to alleviate their increased psychological stress during conflict.

Differences in Depression, Anxiety, and Stress by Educational Level

The ANOVA (Table 7) found that depression ($F = 4.831$, $p = 0.003$), anxiety ($F = 4.935$, $p = 0.002$), and stress ($F = 2.884$, $p = 0.036$) differed statistically depending on the educational background of the participants. When Scheffé's test was applied in a post hoc analysis (Table 8), it was found that participants with high school education or less had much higher depression, anxiety, and stress scores than those with postgraduate education. This pattern implies that limited access to coping strategies, awareness, or mental health services could be related to lower educational attainment, so increasing vulnerability to psychological distress during conflict.

These findings correspond with previous studies demonstrating that war severely impacts Palestinians, namely

those with minimal social support, psychologically (Aldabbour et al., 2024; Marie et al., 2020). Better education, according to further studies, results in higher resilience and information or support systems (Abudayya et al., 2023).

As Massad et al. (2017) emphasize, populations such as Bedouins and immigrants experience a much greater level of vulnerability if they are not well educated. This shows that it is very important to support and assist less educated populations during and after violence and displacement.

Correlation Between Depression, Anxiety, and Stress

According to Table 9, there were strong, significant, and positive relationships found between depression, anxiety, and stress among the participants. There was a strong connection between depression and both anxiety ($r = 0.804$, $p < 0.01$) and stress ($r = 0.857$, $p < 0.01$). Similarly, anxiety and stress were highly related ($r = 0.825$, $p < 0.01$). This research finding shows that having one psychological condition usually means having another, proving how they are related.

The findings are in line with existing studies, which indicate that war trauma commonly leads to having depression, anxiety and stress (El Baba & Colucci, 2018; Moreno-Chaparro et al., 2022). Aldabbour et al. (2024), for example, observed among young Palestinians in Gaza substantial co-occurrence rates of these conditions connected to displacement, loss, and insecurity. In a similar vein, Massad et al. (2017) revealed that traumatized children also displayed overlapping indicators of psychological disorder. Strong connections in this study support the theory that war's psychological load is complex and cumulative. Treating one symptom alone might not be sufficient; instead, especially for vulnerable groups like Palestinian Bedouins who deal with combined stresses, holistic mental health treatments are vital.

Conclusion

The aim of the study was to find out the prevalence and predictors of depression, anxiety, and stress among Palestinian Bedouins in Hebron during the 2023 Gaza War using the DASS-21 in Arabic. Using a cross-sectional quantitative approach, data were gathered from 385 adults in the Bedouin community using a self-administered questionnaire. The study findings showed that participants experienced high psychological distress, as the average scores for the three areas were “severe,” with 20.4 for depression, 17.7 for anxiety and 26.8 for stress. Although there was no statistically significant difference between males and females, females reported slightly higher mean scores, suggesting a similar but slightly different kind of burden. Younger participants experienced less distress and those who had higher education were found to have better psychological outcomes. War-related psychological distress like depression, anxiety and stress are closely related.

These findings highlight the critical necessity of focused, culturally relevant mental health treatments for Bedouin individuals, particularly those with minimal educational background and those who are older more susceptible to cumulative stress. The research is distinct since it concentrates on Palestinian Bedouins, a little-studied group facing tough challenges, with much of their psychological problems during wars left unexplored.

It highlights the need for responses to public health that acknowledge how displacement, identity, and mental health services are linked. The results are helpful for policymakers, non-government groups and mental health specialists developing comprehensive support strategies that tackle the many ways ongoing conflict alters mental health in delicate communities.

References

- Abdo, N. (2002). Dislocating self, relocating 'Other': A Palestinian experience. *Women and the Politics of Military Confrontation: Palestinian and Israeli Gendered Narratives of Dislocation*. Nahla Abdo and Ronit Lentin, eds, 119-156.
- Abudayya, A., Bruaset, G. T. F., Nyhus, H. B., Aburukba, R., & Tofthagen, R. (2023). Consequences of war-related traumatic stress among Palestinian young people in the Gaza Strip: A scoping review. *Mental Health & Prevention*, 32, 200305.
- Aldabbour, B., Abuabada, A., Lahlouh, A., Halimy, M., Elamassie, S., Sammour, A. A. K., ... & Nadarajah, S. (2024). Psychological impacts of the Gaza war on Palestinian young adults: a cross-sectional study of depression, anxiety, stress, and PTSD symptoms. *BMC psychology*, 12(1), 1-12.
- Aldabbour, B., El-Jamal, M., Abuabada, A., Al-Dardasawi, A., Abusedo, E., Abu Daff, H., ... & Dardas, L. A. (2025). The Psychological Toll of War and Forced Displacement in Gaza: A Study on Anxiety, PTSD, and Depression. *Chronic Stress*, 9, 24705470251334943.
- Atallah, D. G. (2017). A community-based qualitative study of intergenerational resilience with Palestinian refugee families facing structural violence and historical trauma. *Transcultural psychiatry*, 54(3), 357-383.

- Bryant, R. A. (2019). Post-traumatic stress disorder: a state-of-the-art review of evidence and challenges. *World psychiatry*, 18(3), 259-269.
- Danese, A., Smith, P., Chitsabesan, P., & Dubicka, B. (2020). Child and adolescent mental health amidst emergencies and disasters. *The British Journal of Psychiatry*, 216(3), 159–162. <https://doi.org/10.1192/bjp.2019.244>.
- Dweik, H., Hadwan, A. A., Maraqa, B., Taher, A., & Zink, T. (2024). Perspectives of Palestinian physicians on the impact of the Gaza War in the West Bank. *SSM- Qualitative Research in Health*, 6, 100504.
- Dweik, H., Hadwan, A. A., Maraqa, B., Taher, A., & Zink, T. (2024). Perspectives of Palestinian physicians on the impact of the Gaza War in the West Bank. *SSM- Qualitative Research in Health*, 6, 100504.
- El Baba, R., & Colucci, E. (2018). Post-traumatic stress disorders, depression, and anxiety in unaccompanied refugee minors exposed to war-related trauma: a systematic review. *International journal of culture and mental health*, 11(2), 194-207.
- Elsana, M. (2015). The Recognition of Indigenous People's Land: Application of the Customary Land Rights Model on the Arab-Bedouin Case in Israel. *Geo. JL & Mod. Critical Race Persp.*, 87(4), 1-33.
- Farhat, T., Ibrahim, S., Abdul-Sater, Z., & Abu-Sittah, G. (2023). Responding to the Humanitarian Crisis in Gaza: Damned if You do... Damned if You don't!. *Annals of Global Health*, 89(1), 1-6.

- Gammoh, O., Sayaheen, B., Alsous, M., Al-Smadi, A., Al-Jaidi, B., & Aljabali, A. A. (2024). The Prevalence and Correlates of Depression, Anxiety, and Insomnia among Camp Residing Palestinian Women Migrants during the Outbreak of the War on Gaza: A Cross-Sectional Study from Jordan. *Medicina*, 60(8), 1-11 .
- Golzar, J., Noor, S., & Tajik, O. (2022). Convenience sampling. *International Journal of Education & Language Studies*, 1(2), 72-77.
- Hamamra, B., Mahamid, F., Bdier, D., & Atiya, M. (2025). War-related trauma in narratives of Gazans: challenges, difficulties and survival coping. *Cambridge Prisms: Global Mental Health*, 12, 1-9.
- Hassoun, A., Al-Muhannadi, K., Hassan, H. F., Hamad, A., Khwaldia, K., Buheji, M., & Al Jawaldeh, A. (2024). From acute food insecurity to famine: how the 2023/2024 war on Gaza has dramatically set back sustainable development goal 2 to end hunger. *Frontiers in Sustainable Food Systems*, 8, 1402150.
- Heneiti, A. (2016). Bedouin Communities in Greater Jerusalem: Planning or Forced Displacement?. *Jerusalem Quarterly*, (65), 52-86.
- Kressel, G. M., Ben-David, J., Rabi'a, K. A., & Bedouin, N. (1991). Changes in the land usage by the negev bedouin since the mid-19th century. The intra-tribal perspective. *Nomadic Peoples*, 28-55.

- Makdisi, K. (2018). Palestine and the Arab–Israeli Conflict: 100 years of regional relevance and international failure. Barcelona: Menara, 5.
- Marie, M., SaadAdeen, S., & Battat, M. (2020). Anxiety disorders and PTSD in Palestine: a literature review. *BMC psychiatry*, 20, 1-18.
- Massad, S., Khammash, U., & Shute, R. (2017). Political violence and mental health of Bedouin children in the West Bank, Palestine: a cross-sectional study. *Medicine, conflict and survival*, 33(3), 188-206.
- Milton-Edwards, B. (2024, November 11). *The future of the war on Gaza* (Strategic Analyses No. 13). Strategic Studies Unit. Series: October 7 One Year On: Strategic Analyses.
- Moreno-Chaparro, J., Piñeros-Ortiz, S., Rodríguez-Ramírez, L., Urrego-Mendoza, Z., Garzón-Orjuela, N., & Eslava-Schmalbach, J. (2022). Mental health consequences of armed conflicts in adults: An overview. *Actas Españolas de Psiquiatría*, 50(2), 68–91.
- Porcelli, P. (2020). Fear, anxiety and health-related consequences after the COVID-19 epidemic. *Clinical Neuropsychiatry*, 17(2), 103-111.
- Schneer, J. (2010). The Balfour Declaration: The origins of the Arab-Israeli conflict. Random House.
- Tatour, L. (2019). The culturalisation of indigeneity: the Palestinian-Bedouin of the Naqab and indigenous rights. *The International Journal of Human Rights*, 23(10), 1569-1593.

- Thabet, A. A. M. (2019). Psychological well-being of Palestinian children and adolescents in Gaza Strip and West bank: Review paper. *EC Psychology and Psychiatry*, 8(3), 197-205.
- Thabet, A. A. M., & Sultan, S. M. A. (2016). War trauma, anxiety, and resilience among university students in the Gaza Strip. *Clinical Psychiatry*, 2(4), 1-70.
- United Nations Development Programme - Programme of Assistance to the Palestinian People (UNDP/PAPP). (2017). *Resilience series: Palestinians in the occupied Palestinian territories*. UNDP/PAPP.
- Valbjørn, M., Bank, A., & Darwich, M. (2024). Forward to the Past? Regional Repercussions of the Gaza War. *Middle East Policy*, 31(3), 3-17.
- Waldman, Z. P. (2020). *Israeli settlement expansion in the West Bank* (Doctoral dissertation, San Francisco State University).
- Watson, R., Harvey, K., McCabe, C., & Reynolds, S. (2020). Understanding anhedonia: A qualitative study exploring loss of interest and pleasure in adolescent depression. *European Child & Adolescent Psychiatry*, 29(4), 489-499.
- WHO. (2022). Mental health in emergencies. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/mental-health-in-emergencies>.
- World Bank, European Union, & United Nations. (2025). *Gaza and West Bank Interim Rapid Damage and Needs Assessment (IRDNA)*, February 2025. World Bank

Group.

<https://thedocs.worldbank.org/en/doc/ce9fed0d3bb295f0363d690224d1cd39-0280012024/original/Palestinian-Econ-Upd-May2024-FINAL-ENGLISH-Only.pdf>

Yahel, H., Kark, R., & Frantzman, S. (2017). Negev Bedouin and indigenous people: A comparative review. *Societies, Social Inequalities and Marginalization: Marginal Regions in the 21st Century*, 121-144.

Zhang, S. X., & Li, L. Z. (2024). War Anxiety: A Review. *Current Psychiatry Reports*, 1-7.