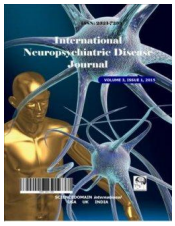

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Acute Stress Disorder in Palestinian Children in the Gaza Strip

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Authors' contributions

This work was carried out in collaboration between both authors. Authors AMT designed the study and wrote the protocol. Author SST preformed the data collection and statistical analysis, managed the literature search. Author AMT wrote the first draft of the manuscript with assistance from author SST. Both authors read and approved the final manuscript.

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ABSTRACT

Aim: This study aimed to describe the range of acute traumatic stress disorder symptoms in a sample of displaced and non-displaced children and adolescents in the Gaza Strip.
Methods: This was descriptive analytic study. The study sample consisted of 381 children and adolescents ranging in age from 7 to 18 years. Regarding displacement status, 190 of them were non-displaced (50.1%) and 191 were displaced (49.91%). Ninety-four of displaced children were boys (49.22%), while, 73 of non-displaced children were boys (38.41%). One hundred seventeen of displaced children were girls (61.6%), 97 of non-displaced children were girls (50.8%). Children were assessed by a socio demographic questionnaire, the Gaza Traumatic Events Checklist, and Acute Stress Disorder Scale.
Results: The highest frequencies of reported traumatic events for both groups (displaced and non-displaced) were hearing shelling of the area, hearing the loud voice of Drones, and watching mutilated bodies in TV. However, displaced children reported more traumatic event such as forced to leave home with family members due to shelling, receiving pamphlets from Airplane to leave home at the border area to the city center, threatened by telephone to leave their homes for

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bombardment of homes, destruction of their personal belongings during incursion. Displaced children reported more traumatic events than non-displaced ones (Mean= 13.6 vs. 9.08). Boys reported more traumatic events. Using the DSM-V criteria, 10.0% of non-displaced children and 18.4% of displaced children had acute traumatic stress disorder. Displaced children reported more acute stress disorder, dissociative, re-experiencing, avoidance, and hyperarousal symptoms. Traumatic events were associated acute traumatic stress, re-experiencing, and hyperarousal symptoms.

Conclusion and recommendations: This study showed that Palestinian children and adolescents are victims of continuous war and trauma, and will develop new symptoms of acute stress disorder after exposure to war in the Gaza Strip. Such findings highlight the needs for better mental health services for children especially displaced populations who are not able to return to their homes due to the siege, in order to increase their coping abilities and resilience in face of adversities.

Keywords: Acute stress disorder; children; Gaza; trauma; war.

1. INTRODUCTION

The Middle East including Palestinian Territories region is known for having the largest number of refugees and internally displaced people in the world. During the twentieth century, several states in the region generated massive waves of refugees as a result of interstate conflicts, large-scale development projects, forced settlement of nomads, and ethnically motivated forced migration and internal civil wars [1].

During the summer of 2014, another wave of violence on Gaza started in July, and continued for 51 days (7th July–to 26th August 2014). Such violence and war lead to massive damage of Palestinian personal properties including homes, factories, and infrastructure. According to the United Nations for Relief and Work of Palestinians in the Middle East (UNRWA), 10,854 people, including 3,307 children, 2042 women and 401 elderly were injured and 1045 were killed. As of 22 August, a quarter of the total Gaza population were internally displaced as a result of the hostilities. Approximately 300,000 were sheltered in 85 UNRWA schools, 45,000 were hosted in non-UNRWA premises, and at least 137,400 more were in other hosting arrangements [2].

Displacement poses greater physical and psychosocial challenges and risks for children as they are more prone to abuse, neglect and exploitation. The United Nations provides the following definition for internally displaced persons: “Internally displaced persons are persons or groups of persons who have been forced or obligated to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border” [3].

Acute stress disorder (ASD) was first utilized as a diagnosis in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994) to describe post traumatic reactions after exposure to traumatic events. Diagnostic criteria specify that ASD may develop after an individual has been exposed to a threatening event that elicits a response of fear, helplessness, or horror (Criterion A). The presence of dissociative symptoms (Criterion B), re-experiencing symptoms (Criterion C), marked avoidance of the traumatic stimuli (Criterion D), and marked symptoms of hyperarousal (Criterion E) are also required. Additionally, the disturbance must persist between 2 days to 4 weeks after the onset of the traumatic event and cause clinically significant distress (Criterion F and G). The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders diagnosis include a listing of dissociative symptoms (derealization, depersonalization, dissociative amnesia), but no longer stipulate that a specific number of dissociative symptoms must be present to meet the criteria for the disorder [4].

Criticisms about ASD have been voiced that question the additive benefit and clinical utility for creating another disorder that so closely resembles Post Traumatic Stress Disorder (PTSD) [5,6]. Some clinicians and researchers also disagree with the diagnostic emphasis placed on dissociative symptoms in the criteria for ASD [7,8]. Children’s post-disaster war adjustment includes a wide range of biological, cognitive, emotional, and behavioral components. PTSD had been identified as the

most commonly assessed mental health outcomes for child and adult disaster survivors [9]. We reviewed study of 93 patients 10–16 years old who were seen in an emergency department for having been assaulted or having been involved in a motor vehicle accident, and were interviewed within 4 weeks after the assault or accident to assess acute stress disorder. At initial interview, 18 (19.4%) of the 93 patients had acute stress disorder and 23 (24.7%) met all acute stress disorder criteria except dissociation [10]. Research in similar context showed that wars and internal violence carry negative consequences on children, including heightened aggression and violence, revenge seeking, insecurity, anxiety, depression, withdrawal, post-traumatic stress and somatic complaints, sleep disorders, fear and panic, poor school performance and engagement in political violence [11].

The aim of the current study was to describe the range symptoms of ASD in the aftermath of trauma due to 51 days war in a sample of displaced and non-displaced children and adolescents in the Gaza Strip.

2. METHODS

2.1 Participants

The target population consisted of 381 children ages 7 to 18 years, who were exposed to the war on the Gaza Strip between 7 July and 26 August 2014, and who lived in three localities of the Gaza Strip (North, Gaza, Middle area). As shown in Fig. 1, 190 of children were non-displaced (50.1%) and 191 were displaced (49.91%). Ninety-four of displaced children were boys (49.22%), while, 73 of non-displaced children were boys (38.41%). One hundred seventeen of displaced children were girls (61.6%), 97 of non-displaced children were girls (50.8%). The displaced children sample (191) was selected randomly from 6 schools in Gaza city which were used as shelters for families who left their homes due to bombardment of the border areas. We selected a control group of non-displaced children (190), matched for age (7–18 years) from families living in regions of the Gaza Strip that had been non-displaced.

2.2 Study Procedure

Data were collected by 6 trained professionals (2 psychologists, 2 social workers, and 2 nurses). They were trained for six hours in data collection and interviewing techniques. The data were collected during Sept 2014, less than one year after finishing the war. Children completed self-administered questionnaires at shelters (displaced children), community centers, and homes with assistance from the data collectors. The completion of the self-administrative measures took at least 10 minutes for each child. Socio demographic information, measures of exposure to acute traumatic events and stress disorder were gathered from children by face-to-face interviews. Parents provided informed consent for their children's participation in the study and they were assured of privacy protection.

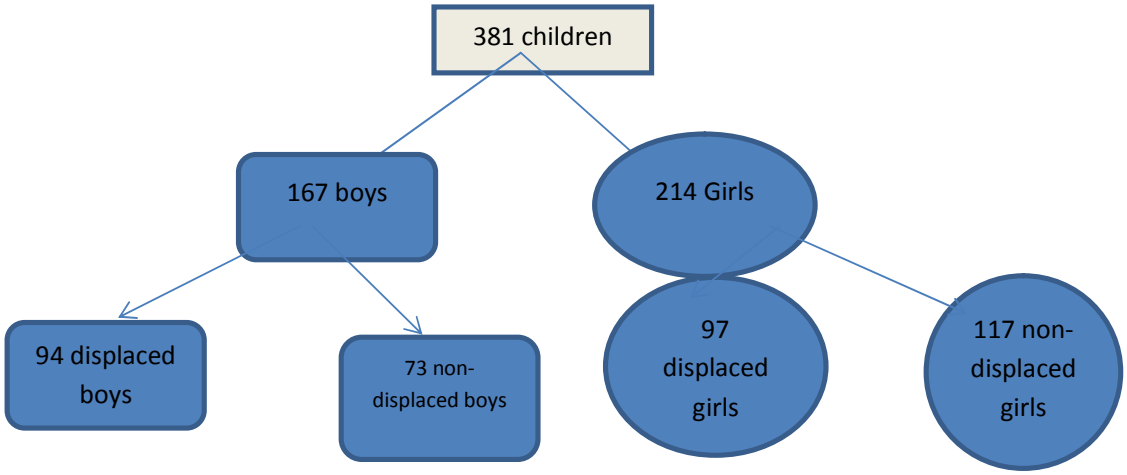

Fig. 1. Study sample N= 381

2.3 Measures

2.3.1 Socio-demographic questionnaire

The researcher prepared a questionnaire which included; name, gender, date of birth, place of residence, number of siblings, and other demographic information.

2.3.2 Gaza traumatic events checklist

The checklist was developed to reflect the particular circumstances of the regional conflict which could not be captured by other war trauma measures and had been reported previously [12,13,14]. This checklist consists of 28 items covering three domains of events typical of the war on Gaza: (1) hearing traumatic events (items number 1-4 include hearing about killing of relatives or friends) (2) witnessing trauma (items number 5-14, experiencing witnessing of home demolition, killing of others); and (3) personal experiences (items number 15-28, being personally the target of violence, being shot, injured, or beaten up by soldiers). The respondents rated whether they had been exposed to each of these events as (0) 'no' or (1) 'yes'. A total score was estimated. Responses to these items were highly internally consistent (Cronbach's alpha=.82).

2.3.3 Acute stress disorder scale

The ASD symptoms were assessed with the acute stress disorder scale [4]. The ASDS is a 14-item scale based on the DSM-V criteria, and each of the items is scored on a 5-point scale that indicates the severity of ASD symptoms from 0 (not at all) to 4 (very much).

The items that compose the scale include 2 assessing dissociation symptoms, 4 assessing intrusion symptoms, one negative mood, 2 assessing avoidance symptoms, and 5 assessing arousal symptoms. The ASDS is now a widely used self-report measure in trauma-related research and clinical settings, and has been demonstrated to have sound psychometric properties [15,16]. Children were classified as having ASD symptoms present when the responses were either "much" or "most of the time" to all of the ASD symptom questions (3 and 4), which is consistent with the Diagnostic and Statistical Manual of Mental Disorders. Acute stress reaction disorder were diagnosed according to DSM-V, presence of nine (or more) of the 14 symptoms from any of the five categories of intrusion, negative mood, dissociation, avoidance, and arousal, beginning or worsening after the traumatic event(s) occurred. Responses to these items were moderately internally consistent (Cronbach's alpha=.74).

2.4 Statistical Analysis

The analysis was conducted using the Statistical Package for Social Sciences (SPSS 20 for windows, SPSS Inc. Chicago, Illinois, USA). Prevalence rates were given as percentages and other descriptive data were given as percentages and means and standard deviations. Categorical variables were analysed using independent t and chi-square tests to find out differences in trauma and acute stress disorder among both groups. One-way ANOVA post hoc Tukey was used to investigate differences between more than two groups. Associations between continuous variables were measured using the Pearson's correlation coefficient test. In order to find the predictors of acute stress symptoms, multivariate regression analysis was conducted, in which each traumatic events were entered as the independent variables, and total acute traumatic stress symptoms entered as the dependent variable.

3. RESULTS

3.1 Demographic Characteristics of the Study Sample

As shown in table one, the sample consisted of 381 adolescents. The ages ranged from 7 to 18 years, with a mean of 11.83 years (SD=2.55). Displaced children's mean age was 12.07 (SD=2.57) and the mean age of non-displaced children was 11.60 (SD=2.51). No significant differences between the two groups (t =-1.81, p=ns). As shown in table one, the sample consisted of 381 adolescents. The ages ranged from 7 to 18 years, with a mean of 11.83 years (SD=2.55). Displaced children's mean age was 12.07 (SD=2.57) and the mean age of non-displaced children was 11.60 (SD=2.51). No significant differences between the two groups (t = -1.81, p = ns). Regarding area of residence, 36.3% of non-displaced children lived in north Gaza area compared to 65.4% of displaced, 56.8% of non-displaced live in Gaza city and 34.6% of displaced children live in Gaza, and 6.8% of non-displaced children live in middle area and none of displaced children was from

middle area. Regarding family monthly income, 80.5% of non-displaced children's families had income less than 300 US$ compared to 90.6% displaced children. Displaced children were coming from families with significantly less monthly income (χ2= 13.07 df = 1, p =0.003).

3.2 Exposure to Traumatic Events

As shown in table two, the highest frequencies of reported traumatic events by both groups (displaced and non-displaced) were hearing shelling of the area (49.1% vs. 48.8%), hearing the loud voice of Drones (48.3% vs. 47.5%), and watching mutilated bodies in TV (47.2% vs. 45.9%). While, displaced children experienced significantly traumatic event such as forced to leave their home with family members due to shelling of the area (44.6% vs. 23.1%) (χ2= 79.10 df = 1, p =0.001), receiving pamphlets from airplane to leave their home at the border area to the city center (44.1% vs. 14.2) (χ2= 138.10, df = 1, p =0.001), threatened by telephone to leave their home for bombardment of their home (44.1% vs. 14.2%) (χ2= 13.8, df =1, p = 001), destroying of their personal belongings during incursion (28.6% vs. 10.2%) (χ2= 53.53, df = 1, p = 0.001).

Overall, children reported 0 to 28 traumatic events, with a mean = 11.23 (SD=4.92). Independent t test was conducted. Displaced children reported more traumatic events than non-displaced ones (Mean = 13.6 vs. 9.08) (F = 10.48, p = 0.001). Non-displaced females reported more traumatic events toward boys (t=3.17, p=0.001). No sex differences were observed in reporting traumatic events in displaced children (t=1.32, p=0.18).

Age was grouped into 7-11, 12-15 and 16-18 years age groups. Post Hoc test using One Way ANOVA showed that non-displaced children aged 16-18 years reported more traumatic events than less than 11 and 12-15 years (F= 7.75, p = 0.001). No age differences were found in displaced children (F = 0.90, p = 0.43). No differences in family monthly income according to exposure to trauma in both groups (F = 1.90, p = 0.11).

3.3 Children's Acute Traumatic Stress Symptoms

The most common acute post traumatic symptoms were intense distress at reminders (54.73%), exaggerated startle response (52.74%), irritable or aggressive behavior (47.26%), Inability to remember important aspect of event (46.88%), and altered sense of reality (46.27%) (Table 3).

3.3.1 Differences in mean and of acute stress disorder between displace and non-displaced children

Mean acute stress disorder symptoms in displaced children was 6.54 (SD=3.30) and mean was 4.64 (SD = 3.2) in non-displaced children (Table 4). There were statistically significant differences in acute stress disorder (t =-5.71, p=0.001), dissociative symptoms. (t=6.17, p=0.001), re-experiencing symptoms (t=-3.62, p=0.001), avoidance of the traumatic stimuli symptoms (t = -2.30, p = 0.001), and hyperarousal symptoms (t = -4.02, p = 0.001) toward displaced children.

Using cut-off point of 8 and more symptoms for diagnosis of acute traumatic stress disorder, 108 of children (28.4%) reported acute traumatic stress symptoms (much/all the time) and 273 of children reported no symptoms (70.9%). Comparing both groups, 38 of non-displaced children had acute traumatic stress symptoms (10.0%) and 70 displaced children had acute traumatic stress symptoms (18.4%). Displaced children significantly reported acute traumatic stress symptoms than non-displaced children (χ2 = 12.8, df = 1, p< 0.001). No sex differences in acute stress disorder and other subscales in non-displaced children. However, displaced boys were significantly reported more dissociative symptoms than girls (t =2 .23, p = 0.02).

Post Hoc Tukey test showed that non-displaced children aged 12-15 years reported more acute post stress disorder than children age less than 11 years and 16-18 years-old (F= 7.98, p = 0.001). Non-displaced children aged 12-15 years were significantly reported more dissociative symptoms than the other two age groups (F = 5.12, p = 0.007). Meanwhile, there were no significant differences in acute stress disorder symptoms and age group in non-displaced children (F= 0.21, p = 0.88).

3.3.2 Relationship between total traumatic events reported by children and total acute traumatic stress symptoms

Pearson correlation coefficient test was conducted to find the relationships between

traumatic events and post-traumatic stress disorder for displaced and non-displaced children. For displaced children, there were significant association between total traumatic events reported by children and total acute traumatic stress symptoms (r=0.17, p = 0.01), dissociative symptoms (r=0.18, p = 0.001), and hyperarousal symptoms (r=0.27, p = 0.001). For non-displaced children, there were significant association between total traumatic events reported by children and total acute traumatic stress symptoms (r=0.30, p = 0.001), dissociative symptoms (r=0.26 p = 0.001), re-experiences symptoms (r=0.14, p = 0.001), and hyperarousal symptoms (r=0.45, p = 0.001) Table 5.

3.3.3 Predictors of a diagnosis of acute stress disorder (ASD) in the aftermath of trauma

In a multivariate regression model, each traumatic event was entered as an independent variable, with total acute stress reactions scores as the dependent variable for displace and non-displaced children. For non-displaced children, four traumatic events were significantly associated with total acute stress disorder: threaten of killing of closed relative in front of him (B=0.17, p=0.02), being arrested during the land incursion (B=0.20, p=0.003), hearing killing of a friend (B=0.16, p=0.001), personal threat of killing by the army (B=0.16, p=0.01).

For displaced children, four traumatic events were significantly associated with total acute stress disorder: threaten by shooting (B=0.14, p=0.04), deprivation from water or electricity during detention at home (B=0.21, p=0.002), being arrested during the land incursion (B=0.23, p=0.001), hearing killing of a friend (B=0.16, p=0.001), witnessing firing by tanks and heavy artillery at own home (B=0.16, p=0.02).

4. DISCUSSION

This is the first study to examine predictors of a diagnosis of acute stress disorder (ASD) in the aftermath of trauma in a sample of children and adolescents after 51 days of war in Gaza on 2014 summer time. The study showed that the most commonly reported traumatic events experienced by both groups (displaced and displaced) during the last war were hearing shelling of the area by, hearing the loud voice of Drones, and watching mutilated bodies in TV.

Displaced children reported significantly traumatic event such as forced to leave you home with family members due to shelling, receiving pamphlets from airplane to leave their home at the border and to move to the city center, threatened by telephone to leave the home for bombardment of home, destruction of their personal belongings during incursion. Such traumatic events were reported previously in Gaza Strip in the last 10 year [14,17,18].

Table 1. Demographic characteristics of sample (N = 381)

Variable name	Non-displaced		Displaced	
Child sex	**No.**	**%**	**No.**	**%**
Boys	73	38.4	94	49.2
Girls	117	61.6	97	50.8
Age range from 7-18 years with mean 11.86 y (SD = 2.53)				
Less than 11 years	90	47.4	69	36.1
12-14 years	80	42.1	103	53.9
15-18 years	20	10.5	19	9.9
Area of residence				
North Gaza	69	36.3	125	65.4
Gaza	108	56.8	66	34.6
Middle area	13	6.8	0	0.0
Number of siblings				
Less than 4	45	23.7	27	14.1
5-7	93	48.9	77	40.3
8 and more	52	27.4	87	45.5
Monthly family income				
Less than 300 US $	153	80.5	173	90.6
301-750 US $	22	11.6	15	7.9
751-1000 US $	12	6.3	1	.5
More than 1000 US $	3	1.6	2	1.0

Table 2. Percentage of traumatic experiences by both groups of total sample (No. = 381)

Traumatic events	Non-displaced		Displaced	
	No.	%	No.	%
Hearing shelling of the area by artillery	186	48.80	187	49.10
Hearing the loud voice of Drones	181	47.50	184	48.30
Watching mutilated bodies in TV	175	45.90	180	47.20
Inhalation of bad smells due to bombardment	146	38.30	167	43.80
Deprivation from water or electricity during detention at home	105	27.60	137	36.10
Hearing killing of a friend	93	24.40	147	38.60
Witnessing firing by tanks and heavy artillery at neighbours homes	93	24.40	147	38.60
Forced to leave you home with family members due to shelling	91	23.90	127	33.30
Threaten by telephone to leave the home for bombarment of home	88	23.10	170	44.60
Witnessing assassination of people by rockets	74	19.40	110	28.90
Receiving pamphlets from airplane to leave your home at the border and to move to the city centers	62	16.30	112	29.40
Threaten by shooting	54	14.20	168	44.10
Hearing killing of a close relative	48	12.60	128	33.60
Destroying of your personal belongings during incursion	46	12.10	79	20.70
Witnessing shooting of a close relative	39	10.20	109	28.60
Witnessing shooting of a friend	32	8.40	58	15.20
Threaten of killing of your closed relative in front of you	31	8.10	63	16.50
Witnessing firing by tanks and heavy artillery at own home	21	5.50	56	14.70
Witnessing killing of a friend	20	5.20	90	23.60
Personal threat if killing by the army	19	5.00	56	14.70
Physical injury due to bombardment of your home	19	5.00	30	7.90
Threatened with death by being used as human shield by the army to move from one home to home	16	4.20	40	10.50
Witnessing arrest of a friend	16	4.20	38	10.00
Shot by bullets, rocket, or bombs	14	3.70	25	6.60
Witnessing killing of a close relative	14	3.70	26	6.80
Being arrested during the land incursion	12	3.10	47	12.30
Witnessing arrest of a close relative by the army	10	2.60	27	7.10
Being arrested during the land incursion	8	2.10	18	4.70

Table 3. Percentage of acute traumatic stress symptoms

	No/ Little	Sometimes	Much/ most of the time
1. Intrusive distressing memories of event	65.42	12.19	22.39
2. Recurrent distressing dreams	47.51	19.65	32.84
3. Flashbacks/reliving	65.92	14.93	19.15
4. Intense distress at reminders	23.38	21.89	54.73
5. Numbing, detachment, reduced responsiveness	40.55	14.93	44.28
6. Altered sense of reality	33.08	20.65	46.27
7. Inability to remember important aspect(s) of event	33.92	19.2	46.88
8. Avoidance of thoughts, conversations, feelings	41.79	22.89	35.32
9. Avoidance of activities, places, physical reminders	45.02	18.66	36.07
10. Sleep disturbance	40.3	20.4	39.3
11. Hypervigilance	42.29	20.15	37.31
12. Irritable or aggressive behavior	36.07	16.67	47.26
13. Exaggerated startle response	30.85	16.42	52.74
14. Agitation or restlessness	38.31	15.42	46.27

Table 4. Mean and standard deviation of acute stress disorder in both groups (No. = 381)

		N	Mean	Std. deviation	Mean deviation	t	p
Total acute traumatic stress symptoms	Non displaced	190	4.64	3.20	-1.90	-5.71	.001
	Displaced	191	6.54	3.30			
Dissociative symptoms (Criterion B)	Non displaced	190	.48	.73	-.53	-6.17	.001
	Displaced	191	1.01	.92			
Re-experiencing symptoms (Criterion C)	Non displaced	190	1.65	1.36	-.49	-3.62	.001
	Displaced	191	2.14	1.28			
Avoidance of the traumatic stimuli symptoms (Criterion D)	Non displaced	190	.63	.78	-.19	-2.30	.02
	Displaced	191	.82	.83			
Hyperarousal symptoms (Criterion E)	Non displaced	190	1.87	1.65	-.68	-4.02	.001
	Displaced	191	2.55	1.63			

Table 5. Pearson correlation coefficients between in the traumatic events and acute traumatic stress disorder among displaced and non-displaced children

	Displaced	Non-displaced
	Total traumatic events	
Total traumatic events	-	-
Total acute stress	.17*	.40**
Dissociative symptoms	.18*	.26**
Re-experiencing symptoms	.06	.14*
Avoidance of the traumatic stimuli symptoms	.40	.06
Hyperarousal symptoms	.27**	.45**

**p=0.05, ** p = 0.01, *** p = 0.001*

Palestinian children reported mean of 11.23 traumatic events; displaced children reported more traumatic events than non-displaced ones. There were significant differences between males and females in reporting traumatic events, children aged 12-15 years reported more traumatic events than less than 11 years and 15-18 years. Others found that exposure to war may include various traumatic events, such as exposure to bombings or air raids, physical injury, witnessing violence, loss of loved ones, displacement, and disruption of routine life, lack of educational structure, living in poor living conditions, and living with distressed adults [19].

This study showed that the most common acute stress traumatic symptoms reported by children were had spontaneous or cued recurrent, involuntary and intrusive distressing memories of the event, had exaggerated startle response, and were irritable, angry or aggressive behavior, had intense or prolonged psychological distress or physiological reactivity at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event. Others found a high number of somatic complaints and memory problems among children (aged 10–14) exposed to war in Sri Lanka [20]. In Kuwait, another study reported an association between exposure to war-related trauma and poor subjective ratings of health and sleep quality among children aged 9 to 12 years living in Kuwait [21].

Our study showed that 28.4% of children reported acute traumatic stress symptoms. Displaced children significantly reported acute traumatic stress symptoms than non-displaced children. No statistically significant difference in acute stress according to sex. In our study, children aged 12-15 years reported more acute stress reactions than children who were less than 11 years and 15-18 years.

Others reported prevalence rates for ASD which varied widely from 7% to 33% based on the type of precipitating trauma and differences in assessment methods [5,22]. This study's prevalence rate of ASD was less than the rate found in paediatric surgical children and adolescents injured in the Wenchuan earthquake of China (the prevalence of ASD was 54.3%). There were no significant differences among the age groups about the severity of ASD symptom. The proportions of ASD-positive were 44% in males and 63.6% in females that showed significant difference [23]. Forced migration,

involving displacement of individuals, families, and entire communities from their homes and lands, is one of the most psychologically devastating consequences of persecution, armed conflict, generalized violence, and other types of Human rights violations. Others postulated that migrants are repeatedly exposed to potentially traumatic events (PTEs) and experience crippling losses that begin even before they are dispossessed of their homes, possessions, livelihoods, communities, and systems of social support [24,25,26,27].

This study showed that there was significant association between total traumatic events reported by children and total acute traumatic stress symptoms, re-experiencing symptoms, and hyperarousal symptoms, but not with avoidance symptoms. Such findings were consistent with most of the studies which showed causal relationship between trauma and post traumatic symptoms. Non existence relationship between avoidance symptoms and acute post traumatic disorder could be the results of using avoidance as coping by children immediately after exposure to war traumatic events. Such an association was found in a study on the experiences of Palestinian children (aged 1–15) residing in the West Bank, witnessing traumatic events such as murder, physical abuse, destruction of property, and threats was associated with PTSD symptoms [28].

Five traumatic events were significantly associated with total acute stress disorder: deprivation of going to the toilet and leaving the room at home because of firing and shelling in the area; loss of a friend or relative; destruction of personal belongings and witnessing firing by tanks and heavy artillery at own home; being threatened of death by being used as a human shield by the army; and shot by bullets, rockets, or bombs. Studies showed that indirect exposure through the media and through the climate of threat of war also put children at risk of mental health problems. For example, a study was conducted to examine the responses of children (aged 14–17 years) following a terrorist attack in a school in Beslan, Russia during which a school with 1,300 adults and children was taken hostage and resulted in the death of 329 people and the injury of hundreds [29]. The findings of that study indicated that there were no significant differences in psychological, emotional, and behavioral responses between those directly and indirectly exposed to the attack, indicating that both direct and indirect exposure to combat put children at risk.

5. RECOMMENDATIONS

This current study showed that Palestinian children and adolescents were at risk of developing acute stress disorder symptoms after exposure to war. Displaced children were more traumatized and had more symptoms than non-displaced children. Such findings highlight the need for mental health services for displaced populations, and not only for those directly traumatized by war, but also for the displaced populations to enable them to cope with the stress of isolation and social dislocation, and severe emotional or mood disturbances. We had to empower working NGOs, governmental, and UNRWA to establish multi-disciplinary mental health teams with psychosocial counselors, physical and occupational therapists and medical practitioners. They should work with primary care providers to train them in basic mental health assessment and interventions. They should develop outreach teams of psychosocial workers that incorporate trusted members of the displaced community. In addition, resources had to be identified for acute and chronic mental health care in different service provider's locations in the Gaza Strip. The teams had to have models of multi-disciplinary mental health care in acute crisis situations and had to go on to train other groups in the region.

6. STUDY LIMITATIONS

This study had some limitations. One of the limitations was that the sample of displaced and non-displaced children were exposed to similar traumatic events which make analysis between the two groups in absence of another control group in the area very difficult and may lead to bias.

Also, such study which follow immediately the war and traumatic events make it very difficult to study other risk and protective factors in Palestinian society such as coping, social support, family support, commodity with other psychiatric problems, and previous experiences.

7. CONCLUSION

Our study results showed that Palestinian children and adolescents were at risk of developing acute stress disorder symptoms after

exposure to war on Gaza. Displaced children were more traumatized and had more symptoms than non-displaced children. Such findings highlight the need for increasing mental health services for displaced populations in shelters, besides the governmental and other Non-governmental support of the families at risk.

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ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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آثـــار مشاهـــدة برامـــج العنـــف في التلفـــاز علـي الصحـــة النفسيـــة للطفـل
عند الأطفـال في قطاع غزه

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ملخص الدراسة

هدفت هذه الدراسة إلي التعرف علي آثار مشاهدة برامج العنف في التلفاز علي الصحة النفسية لدي الأطفال وخصوصاً طلبه المرحلة الاعدادية بمدارس وكاله الغوث ، في ضوء متغيرات هي: الجنس، مكان السكن، عدد ساعات المشاهدة.

الطريقة

العينة: بلغ حجم العينة (392) طالب وطالبة من طلبة مدارس وكالة غوث وتشغيل اللاجئين الفلسطينيين في قطاع غزة من الجنسين، وقد بلغ عدد الذكور (210) طالب بنسبة 53.6%، وعدد الإناث (182) طالبة بنسبة 46.4%، وقد تراوحت أعمارهم بين 12-16 سنة، بمتوسط عمر (13.94 سنة)

الادوات : تم اختيار وتحديد المقاييس التي طبقها في هذه الدراسة, وهي: قائمة العوامل الديموغرافية, و قائمة بيانات خاصة بمشاهدة التلفاز, و استبيان نوعية البرامج التلفزيونية المفضلة, ومقياس العنف المدرسي, مقياس الصعوبات والتحديات بصوره الثلاث: الطالب، والمعلم، والوالدين.

النتائج: يتبين أن نوعية البرامج المفضلة تقع عند مستوى متوسط بمتوسط حسابي (30.49) بين أفراد العينة من الطلبة.ويتبين أن أعلى الفقرات التي تمثل البرامج التلفزيونية المفضلة لدى الطلبة كانت كما يلي:

أتابع الرسوم المتحركة مثل (توم وجيري - بوباي)" في المرتبة الأولى بمتوسط حسابي (2.59). و يليها أفضل برامج المسابقات مثل (من سيربح المليون - وزنك ذهب)" بمتوسط حسابي (2.27). و أفضل البرامج السياسية (تحت الحصار - الاتجاه المعاكس)" بمتوسط حسابي (2.24). تبين أن متوسط العنف المدرسي بين أفراد العينة ككل (64.75) , و العنف في الدفاع عن الذات في أعلى مرتبة بمتوسط حسابي (26.00)، ويليه الاتجاه نحو العنف بمتوسط حسابي (14.08)، و العنف المادي نحو الآخرين بمتوسط حسابي (12.78)، و العنف اللفظي نحو الآخرين بمتوسط حسابي (11.89). و توجد فروق دالة إحصائياً بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف المادي نحو الآخرين، والاتجاه نحو العنف، العنف المدرسي ككل، وكانت الفروق لصالح الطلاب الذكور.

تبين أن الصعوبات والتحديات متوسطة المستوى بين أفراد العينة من الطلبة بحيث يقع المتوسط الحسابي للصعوبات والتحديات ككل بواسطة الطالب عند متوسط (11.27)، والمعلم عند متوسط (11.73)، والوالدين بمتوسط حسابي (11.77) على التوالي. و تبين وجود فروق دالة إحصائياً بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات النشاط الزائد/ طالب، والمشاكل العاطفية/ طالب، والصعوبات

والتحديات ككل/ طالب، والمشاكل العاطفية/ الوالدين، والصعوبات والتحديات ككل/ الوالدين، وكانت الفروق لصالح الإناث. و توجد فروق دالة إحصائياً بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات العلاقة مع الأقران/ طالب ومعلم، السلوك السئ/ معلم، والصعوبات والتحديات ككل/ معلم، وكانت الفروق لصالح الذكور.

و تبين وجود علاقة ذات دلالة إحصائية بين نوعية البرامج المفضلة من ناحية، وبين النشاط الزائد/ الوالدين، والمشاكل العاطفية/ الوالدين، ومشاكل السلوك السيئ/ المعلم والوالدين، الصعوبات والتحديات ككل/ الوالدين من ناحية أخرى. و عدم وجود علاقة ذات دلالة إحصائية بين نوعية البرامج المفضلة، وبين معظم الصعوبات والتحديات. ووجود علاقة ذات دلالة إحصائية بين العنف المدرسي بأبعاده ودرجته الكلية، ومعظم الصعوبات والتحديات بواسطة الطالب والمعلم والوالدين.

التوصيات: في ضوء نتائج الدراسة وضع الباحثان عدة توصيات ومقترحات للآباء والمعلمين، والمرشدين النفسيين، والمربين والمسئولين عن التربية والتعليم في قطاع غزة، والباحثين في مجال علم النفس، والإرشاد النفسي، وواضعي المناهج في ضرورة الاهتمام بالحاجات والمتطلبات الأساسية لطالب المرحلة الاعدادية وكذلك وضع البرامج الإرشادية الهادفة إلي الحد من تلك الاثار الناجمه عن العنف، وحث المختصين علي مراعاة جميع الجوانب النفسية والاجتماعية والجسمية والمعرفية العقلية للطفل الفلسطيني في ظل المعاناة التي يتعرض لها.

مقدمة:

تعتبر وسائل الإعلام من أهم القنوات التي يستقي منها الطفل أنماط سلوكه العدواني والتي تشكل أهمية كبيرة في حياة الإنسان في هذا العصر, فلم يعد الإنسان المعاصر يستغني عن زاد يتزود به يومياً من المادة الإعلامية, سواء كانت مسموعة أم مقروءة أم مرئية, ولو استعرضنا وسائل الإعلام لأدركنا كم هي عميقة ومتنوعة, وكم هي تتباين بين الايجابية والسلبية, فوسائل الإعلام من التليفزيون والراديو والصحف والكتب والمجلات وغيرها, قد تلعب دوراً كبيراً في عمليات التثقيف والتعليم والتوعية, وقد تؤثر سلبياً إذا ما هيأت الأذهان لذلك, ويعتبر التليفزيون أكثر وسائل الإعلام تأثيراً, ويعتبر نافذة الطفل الأولى على العالم.

وعلى الرغم من أن التليفزيون الذي يعتبر أحد معجزات العصر الحالي, لم يمض وقت طويل على اكتشافه، فقد أصبح وسيلة فعالة من وسائل الإعلام التي تنقل الصوت والصورة والحركة واللون إلى المشاهدين, كما أنه يعتبر وسيلة اقتصادية للاتصال بالجماهير, مما أدى إلى استخدامه أداة فعالة في إحداث تعييرات اجتماعية واقتصادية وسياسية ملموسة وحيث أن التليفزيون جهاز لا يكاد يخلو منه بيت في فلسطين, كما أنه من أكثر وسائل الإعلام تأثيراً على الأطفال, لذا فقد أصبح له وجود ثقافي واجتماعي ونفسي شديد التأثير في حياتنا, حيث أن الأطفال يبدؤون بمشاهدة التليفزيون في سن العامين أو الثلاثة أعوام الأولي من حياتهم, ويقضي هؤلاء الأطفال وقتاً أمام التليفزيون أكثر مما يقضونه في متابعة دروسهم, وأمورهم الأسرية, وذلك يتضح من خلال ملاحظاتنا اليومية لطبيعة المشاهدة الأسرية (حسن:2002 :74).

ويؤكد المختصون أن أخطر آثار وسائل الإعلام والتلفاز هو ما سيظهر بشكل ملموس لاحقاً في جيل كامل من الأطفال الذين سيكبر من نجا منهم وهو يعاني من مشاكل نفسية، قد تقل خطورتها أو تزيد حسب استيعاب ووعي الأهل لكيفية مساعدة الطفل على تجاوز المشاهد المروعة التي عاشها أو شاهدها، ومن المؤكد أنه يمكن التقليل من الآثار النفسية السلبية في هذه الحالات، إذا تذكر الأهل الجانب النفسي للطفل في الأوقات العصيبة، واجتهدوا لمعالجتها في حينه. ونجد في هذا السياق العديد من الدراسات التي تناولت الآثار النفسية والاجتماعية غير المرغوبة الناجمة عن مشاهدة البرامج التليفزيونية،

وفيما يتعلق بالتليفزيون وعلاقته بالأطفال فنجد العديد من الدراسات العربية التي أجريت في هذا المجال, والتي ركزت على علاقة التليفزيون بتثقيف الطفل والتحصيل الدراسي وأثر مدة المشاهدة على سلوك الأطفال, وايجابيات وسلبيات البرامج التليفزيونية في حين أننا نجد وفرة في الدراسات الأجنبية ففي دراسة ستيفن ومالسو (Stevens, and Mulsow,2006) والتي هدفت إلي دراسة الآثار العكسية لمشاهدة

التلفاز في فترة الطفولة المبكرة وعلاقتها باضطراب لحركة الزائدة ونقص الانتباه, علي عينة من طلاب رياض الأطفال. وكانت نتائج الدراسة بأن هناك علاقة بين مشاهدة التلفاز و ADHD تشتت الانتباه و فرط الحركة لدى طلاب الصف الأول خلال مرحلة الروضة . اضافة الى دراسة دوارك وسكريل (Dworak & Schierl,2007) : و هدفت الدراسة معرفة تأثير التعرض المفرط لألعاب الكمبيوتر والتلفاز على نمط النوم وأداء الذاكرة للأطفال بسن المدرسة , وقدبينت نتائج الدراسة أن ألعاب الكمبيوتر فقط تقلل من ساعات النوم وتمثيل الذاكرة والنطق ، لا تأثير على حركة العين التلقائية أثناء النوم ، وأن برامج التلفاز قللت من تأثير النوم ولكن لم تؤثر على نمط النوم.

كما أن دراسة كريستاكس وزيمرمان (Christakis and Zimmerman,2007) والتي هدفت إلى معرفة العلاقة بين مشاهدة برامج العنف في مرحلة ما قبل الدراسة (2–5 سنوات) والسلوك ألالجتماعي في عمر (7–10 سنوات) ، النتائج أظهرت أن العمر ، وتعليم الأسرة ، واكتئاب الأم ، والدعم المعرفي والعاطفي ، وبرامج العنف التليفزيونية ، كلها كانت ذات علاقة متزايدة من الخطر بسلوك متسلسل وعنيف لدى الأطفال الذكور ولكن ليس لدى البنات. كما جاء في دراسة لاندوس و بولتون (Landhuis, and Poulton, 2007) والتي هدفت توضيح الجدل حول إذا ما كان مشاهدة التلفزيون في مرحلة الطفولة تسبب مشاكل في الانتباه في " دنيدن في نيوزلندا" بين نيسان 1972 ومارس 1973 ، وكانت نتائج الدراسة أن ربط متوسط عدد ساعات مشاهدة التلفاز أثناء الطفولة مع أعراض مشاكل الانتباه عند الكبر. كما هدفت دراسة (هامر Hamer,2009) إلي معرفة مستويات مشاهدة التلفاز والتسلية العالية ومستويات النشاط الجسدي المنخفضة, تتداخل لتزيد من مستوى عدم التوافق النفسي عند الأطفال الصغار , وقد أظهرت نتائج الدراسة بعد تحليل البيانات أن الصعوبات الشاملة لدى الطفال سجل ارتفاعاً غير عادي من 20–40 عند 4,2 % من العينة تقريباً و 25% من الأطفال كانوا يشاهدون التلفاز والتسلية على الأقل 3 ساعات يومياً وبشكل عام النماذج الخطية ومشاهدة التلفزيون و التسلية في الأسبوع ومستويات النشاط الجسدي كانت مرتبطة بشكل مستقل وبنقاط القوة والصعوبات في الاستبيان. الصعوبات الشاملة سجلت بعد التعديل للعمر والجنس ومستويات الحرمان. وفي دراسة سوينج وجينتايل (Swing & Gentile, 2010) لمعرفة نتائج التعرض للتلفاز وألعاب الفيديو وتفاقم مشكلات الانتباه. وقد كانت نتائج الدراسة أن كل من تعرض للتلفاز وألعاب الفيديو مرتبط بمشكلات متتابعة ومتزايدة في الانتباه في مرحلة الطفولة، فقد يبدو أن هناك ارتباط مماثل بين التلفزيون وألعاب الفيديو ومشاكل الانتباه في مرحلة الطفولة المتأخرة والرشد.

وعليه وضع الهدف العام لهذه الدراسة لمعرفة تأثير مشاهدة برامج العنف في التلفاز على الصحة النفسية عند الأطفال في قطاع غزة.

الطريقـــــــة

العينـــــــة

وتم اختيار (392) طالب وطالبة من طلبة مدارس وكالة غوث وتشغيل اللاجئين الفلسطينيين في قطاع غزة بطريقة المعاينة العشوائية العنقودية من الجنسين من طلبة الصفوف السابع والثامن والتاسع من المرحلة الإعدادية في الفصل الثاني من العام الدراسي 2010/ 2011م. وقد بلغ عدد الذكور (210) طالب بنسبة 53.6%، وعدد الإناث (182) طالبة بنسبة 46.4%، وقد تراوحت أعمارهم بين 12–16 سنة، بمتوسط عمر (13.94 سنة وانحراف معياري(1.03 سنة).

طريقـــــة جمـــــع البيانـــــات

قبل تطبيق الأدوات على عينة الدراسة من الطلبة قام الباحثان بالأخذ بالاعتبارات الأخلاقية التالية:

الحصول على موافقة لجنة هلسنكي (وزارة الصحة), و تم توجيه رسالة خطية لإدارة التعليم في وكالة غوث وتشغيل اللاجئين الفلسطينيين في قطاع غزة بهدف تطبيق البحث، , وموافقة الطلاب و أهلهم، فقد تم التعهد للطلبة من عينة البحث بأن البيانات التي سيتم جمعها ستستخدم لأغراض الباحث العلمي فقط وأنها تخضع للسرية التامة. وقامت الباحثة الاولى بنفسها بزيارة المدارس التي دخلت عينة الدراسة ومن خلال التواصل مع مدير المدرسة وبمساعدة المرشد التربوي تم تطبيق أدوات الدراسة قائمة البيانات الديموغرافية و ومقياس نوعية البرامج التلفزيونية، ومقياس العنف المدرسي، ومقياس الصعوبات والتحديات في صوره الثلاثة الطالب والمدرس والوالدين، على عينة الدراسة من طلبة الصفوف السابع والثامن والتاسع من مدارس تابعة لوكالة الغوث بقطاع غزة.

استخدمت الأدوات البحثية التالية

قائمة العوامل الديموغرافية

تحتوي هذه القائمة على بعض البيانات الأولية لعينة البحث مثل: الجنس، والعمر، والصف، ونوع السكن، وعدد الأبناء في الأسرة، والترتيب الميلادي للطفل بين إخوانه، ومستوى تعليم ومهنة الوالدين، والدخل الشهري للأسرة.

مقياس نوعية البرامج التلفزيونية المفضلة (احمد دحلان2003)

أعد مقياس نوعية البرامج التلفزيونية المفضلة (احمد دحلان) و قد قام الباحثان بتقنين المقياس على البيئة الفلسطينية وتكون المقياس في صورته النهائية من (15) عبارة موزعة على أربعة مقاييس فرعية، كل منها يمثل أسلوباً من أنماط التفاعل داخل الأسرة وهو عبارة، تشير إلى خاصية لدى الطلبة من أفراد العينة في نوعية البرامج التلفزيونية التي

يفضلون مشاهدتها.وتتم الاستجابة على فقرات المقياس وفقاً لتدرج رباعي البدائل على طريقة وهو غالباً (3 درجات)، أحياناً (2 درجات)، نادراً (1 درجة)، أبداً (صفر). وتدل الدرجة المرتفعة على تفضل البرامج التلفزيونية، بينما تدل الدرجة المنخفضة على عدم تفضيل البرامج التلفزيونية. وقد قام الباحثان بحساب معامل ثبات مقياس نوعية البرامج التلفزيونية الباحثة بحساب ثبات مقياس نوعية البرامج التلفزيونية باستخدام معادلة ألفا كرونباخ لفقرات المقياس (15 فقرة)، وكانت قيمة ألفا تساوي (0.69) وهي دالة عند مستوى 0.01.

مقياس العنف المدرسي (جنينة 2004)

تكون المقياس في صورته النهائية من (41) عبارة موزعة على أربعة مقاييس فرعية (العنف المادي نحو الآخرين, العنف اللفظي نحو الآخرين, العنف في الدفاع عن النفس, و الاتجاه نحو العنف), وكل منها يمثل نمط من أنماط العنف، وتتم الاستجابة على فقرات المقياس وفقاً لتدرج ثلاثي البدائل على طريقة ليكرت وهو (نعم، غير متأكد، لا). وتعطي لكل عبارة من العبارات كل أسلوب درجة معينة (2 – 1 – 0) على التوالي.

وتدل الدرجة المرتفعة على المقاييس الفرعية على اتجاه العنف، بينما تدل الدرجة المنخفضة على اللا عنف.

وقام الباحثان بحساب ثبات مقياس العنف المدرسي باستخدام معادلة ألفا كرونباخ لفقرات المقياس (41 فقرة)، وكانت قيمة ألفا تساوي (0.84) وهي دالة عند مستوى 0.01.

مقياس الصعوبات والتحديات: إعداد (ثابت, 2000)

تكون هذا المقياس من 25 بنداً، من ضمنها 14 بنداً تصف الصعوبات المدركة، و 15 بنداً تصف التحديات المدركة، وواحد حيادي (يتماشى مع ا للكبار عن للصغار). وكل بند من بنود الصعوبات المدركة مسجل على معيار من صفر– 2 (لا)، (أحياناً)، (نعم)، ولكن هناك خمسة من بنود القدرات المدركة (باستثناء البنود الشخصية والاجتماعية) مسجلة بشكل عكسي 2 (لا)، 1 (أحياناً)، صفر(نعم). وبنود هذا المقياس مُقسمة إلى النشاط الزائد، والمشاكل العاطفية، ومشاكل السلوك السيئ، ومشاكل العلاقة مع الأقران، والشخصية الاجتماعية، وكل 5 بنود معيار لمقياس فرعي. وتم تطبيق مقياس الصعوبات والتحديات في هذه الدراسة ثلاث مرات، حيث استجاب عليه في المرة الأولى الطلاب أنفسهم، ثم المدرسون في المرة الثانية، وأخيراً استجاب له الوالدين. كما قامت الباحثة بحساب ثبات مقياس الصعوبات والتحديات باستخدام معادلة ألفا كرونباخ لفقرات المقياس (25 فقرة) و كان معامل ألفا كرونباخ لنموذج التحديات والصعوبات للطالب(0.60), نموذج المدرس (0.84) و نموذج الوالدين (0.69).

طريقة تحليل البيانات

تم إدخال البيانات وتصنيفها وتحليلها باستخدام برنامج الرزم الإحصائية للعلوم الاجتماعية (SPSS) بواسطة الحاسوب(النسخة 18). و تم أستخدام الأساليب الاحصائية التالية : المتوسطات الحسابية.الانحرافات المعيارية.التكرارات والنسب المئوية. اختبار (ت): Independent Sample T test للكشف عن دلالة الفروق بين متوسطي درجات عينتين مستقلتين. اختبار تحليل التباين الأحادي: One Way ANOVA للكشف عن دلالة الفروق بين متوسطات ثلاث عينات مستقلة أو أكثر.

النتائج

فيما يلي النتائج المتعلقة بالخصائص الديموغرافية لأفراد العينة البالغ عددهم (392) من طلبة المرحلة الإعدادية بوكالة الغوث بمحافظات غزة من الجنسين، وقد استخدمت الباحثة التكرارات والنسب المئوية:

جدول (1): يبين الخصائص الديموغرافية لأفراد العينة

المتغير		العدد	%
الجنس	ذكور	210	53.6
	إناث	182	46.4
الصف	السابع	97	24.7
	الثامن	129	32.9
	التاسع	166	42.3
المحافظة	شمال غزة	76	19.4
	غزة	161	41.1
	خانيونس	80	20.4
	رفح	75	19.1
الإقامة	مخيم	257	65.6
	مدينة	122	31.1
	قرية	13	3.3
عدد أفراد الأسرة	5 فما ودون	56	14.3
	6 – 8 أخوة	205	52.3
	9 أخوة وفوق	131	33.4
الترتيب الميلادي	الأول	87	22.2
	الوسط	235	59.9
	الأخير	67	17.1
	الوحيد	3	0.8
تعليم الأب	إعدادي ودون	90	23
	ثانوي	112	28.6
	دبلوم متوسط	40	10.2
	جامعي وفوق	150	38.3
تعليم الأم	إعدادي ودون	99	25.3
	ثانوي	165	42.1
	دبلوم متوسط	43	11
	جامعي وفوق	85	21.7

عمل الأب	لا يعمل	89	22.7
	عامل	46	11.7
	عامل مهني	14	3.6
	موظف	193	49.2
	أخرى	50	12.8
عمل الأم	ربة بيت	12	3.1
	عاملة	63	16.1
	موظفة	317	80.9
الدخل الشهري	1000 ش فما دون	115	29.3
	1001 – 2000	111	28.3
	2001 – 3000	65	16.6
	3001 ش فما فوق	101	25.8

نوعيـــــة البرامـــج المفضلـــة

يتبين من الجدول التالي أن نوعية البرامج المفضلة تقع عند مستوى متوسط بمتوسط حسابي (30.49) بين أفراد العينة من الطلبة. ويتبين أن أعلى الفقرات التي تمثل البرامج التلفزيونية المفضلة لدى الطلبة كانت كما يلي: "أتابع الرسوم المتحركة مثل (توم وجيري – بوباي)" في المرتبة الأولى بمتوسط حسابي (2.59). "أفضل برامج المسابقات مثل (من سيربح المليون – وزنك ذهب)" بمتوسط حسابي (2.27). "أفضل البرامج السياسية (تحت الحصار – الاتجاه المعاكس)" بمتوسط حسابي (2.24). "تعجبني أدوار الشر في بطل المسلسلات والأفلام" بمتوسط حسابي (2.17). "أشاهد برنامج المصارعة الحرة والملاكمة" بمتوسط حسابي (1.72) وهي في أدنى مستوى. مما يشير إلى أن فقرات مقياس البرامج التلفزيونية المفضلة جميعها تقع عند مستوى متوسط فما فوق، أي أن الأطفال من طلبة المرحلة الإعدادية يفضلون مشاهدة جميع البرامج التلفزيونية التي وردت في المقياس، وبذلك فإن أفراد العينة من طلبة المرحلة الإعدادية يفضلون مشاهدة برامج العنف في التلفاز.

جدول (2) المتوسطات الحسابية والانحرافات المعيارية لمقياس البرامج التلفزيونية المفضلة

م	استبيان البرامج التلفزيونية المفضلة	متوسط الدرجات	الانحراف المعياري
1	أتابع الرسوم المتحركة مثل (توم وجيري – بوباي)	2.59	0.65
2	أفضل برامج المسابقات مثل (من سيربح المليون – وزنك ذهب)	2.27	0.76
3	أفضل البرامج السياسية (تحت الحصار – الاتجاه المعاكس)	2.24	0.78
4	تعجبني ادوار الشر في بطل المسلسلات والأفلام	2.17	0.76
5	أشاهد التليفزيون أكثر من 3 ساعات يومياً	2.14	0.75
6	أشاهد الأفلام البوليسية وأفلام الرعب في التليفزيون	2.12	0.81
7	اقلب القنوات علي نشرات الأخبار وصور الشهداء والجرحى	2.06	0.87
8	تعجبني فقرات السيرك وبرامج الحوادث و المطاردات	2.06	0.75
9	أتابع الأفلام الهندية والصينية في التلفيزيون	1.97	0.84
10	أقوم بتقليد دور البطل القوي الشجاع في الأفلام الهندية	1.94	0.76
11	لا يتدخل والدي في كمية ونوعية البرامج التي أشاهدها	1.88	0.81
12	أسجل أوقات إذاعة مسلسلات الأطفال مثل (أبطال الديجيتال – المحقق كونان)	1.83	0.78
13	أتأثر بمناظر القتل والجريمة في البرامج والمسلسلات	1.78	0.83
14	أشاهد المسلسلات والأفلام الأجنبية مثل (طرزان – سوبرمان – رامبو)	1.73	0.80
15	أشاهد برنامج المصارعة الحرة والملاكمة	1.72	0.79
	الدرجة الكلية للبرامج التلفزيونية المفضلة	30.49	4.03

العنف المدرسي

يتبين من الجدول التالي أن العنف المدرسي متوسط المستوى بين أفراد العينة من الطلبة بحيث يقع المتوسط الحسابي للعنف المدرسي ككل (64.75) فيما كانت المتوسطات الحسابية لأبعاد المقياس كما يلي، بحيث جاء العنف في الدفاع عن الذات في أعلى مرتبة بمتوسط حسابي (26.00)، يليه الاتجاه نحو العنف بمتوسط حسابي (14.08)، وثالثاً جاء العنف المادي نحو الآخرين بمتوسط حسابي (12.78)، وأخيراً جاء العنف اللفظي نحو الآخرين بمتوسط حسابي (11.89). وتم حساب الوزن النسبي حسب المعادلة التالية: المتوسط الحسابي/عدد لفقرات*3 *100.

و بينت الدراسة أن نسبة العنف المادي نحو الآخرين بلغت 53.25, و نسبة العنف اللفظي نحو الآخرين بلغت 44.03, ونسبة العنف في الدفاع عن الذات بلغت 54.16, ونسبة الاتجاه نحو العنف بلغت 58.66, ونسبة مجموع العنف المدرسي بلغت 52.64.

جدول (3) يبين المتوسطات الحسابية والانحرافات المعيارية لأبعاد العنف المدرسي

م	حالات العنف المدرسي	عدد الفقرات	متوسط الدرجات	الانحراف المعياري	الوزن النسبي
1	العنف المادي نحو الآخرين	8	12.78	2.89	53.25
2	العنف اللفظي نحو الآخرين	9	11.89	2.70	44.03
3	العنف في الدفاع عن الذات	16	26.00	5.03	54.16
4	الاتجاه نحو العنف	8	14.08	2.92	58.66
5	مجموع العنف المدرسي	41	64.75	10.97	52.64

الفروق في العنف المدرسي و باقي المتغيرات الديموغرافية

بالمقارنة بين متوسط درجات الذكور (ن= 210)، ومتوسط درجات الإناث (ن= 182) في درجاتهم على مقياس العنف المدرسي باختبار (ت) للفروق بين متوسطات درجات العينات المستقلة، والجدول التالي يبين المتوسط الحسابي والانحراف المعياري لدرجات أفراد المجموعتين من طلبة المرحلة الإعدادية في العنف المدرسي، إضافة لقيمة اختبار (ت)، مع بيان مستوى الدلالة: توجد فروق دالة إحصائياً عند مستوى دلالة 0.001 ومستوى 0.05،بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف المادي نحو الآخرين، والاتجاه نحو العنف، العنف المدرسي ككل، وكانت الفروق لصالح الطلاب الذكور. ولا توجد فروق دالة إحصائياً بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف اللفظي نحو الآخرين، والعنف في الدفاع عن النفس.

جدول (4): يبين الفروق في العنف المدرسي تبعاً للجنس (الذكور - الإناث)

العنف المدرسي	الذكور (ن= 210)		الإناث (ن= 182)		قيمة (ت)	مستوى الدلالة
	المتوسط الحسابي	الانحراف المعياري	المتوسط الحسابي	الانحراف المعياري		
العنف المادي نحو الآخرين	13.17	2.80	12.34	2.92	2.889	0.004
العنف اللفظي نحو الآخرين	11.94	2.71	11.83	2.70	0.413	0.680
العنف في الدفاع عن الذات	26.08	5.16	25.91	4.88	0.322	0.648
الاتجاه نحو العنف	14.66	2.85	13.41	2.87	4.319	0.001
العنف المدرسي ككل	65.85	10.96	63.48	10.88	2.138	0.033

*0.05 ≥ **0.01 ≥ ***0.001 ≥

قيمة (ت) الجدولية (د.ح = 390) عند مستوى دلالة 0.05 = 1.96، وعند مستوى 0.01 = 2.58

الفروق في العنف المدرسي و باقي المتغيرات الديموغرافيةي

كما تبين أنه لا توجد فروق دالة إحصائياً في العنف المدرسي بأبعاده ودرجته الكلية تعزى للصف الدراسي لأفراد العينة من طلبة المرحلة الإعدادية. لا توجد فروق دالة إحصائياً في جميع الأبعاد والدرجة الكلية للعنف المدرسي تعزى لعدد أفراد الأسرة لأفراد العينة من طلبة المرحلة الإعدادية. لا توجد فروق دالة إحصائياً في العنف المدرسي بأبعاده ودرجته الكلية تعزى لمتغير الدخل الشهري لأفراد العينة من طلبة المرحلة الإعدادية.

الصحة النفسيةعلى حسب مقياس الصعوبات والتحديات (Strength ad Difficulties Questionnaire)

تبين من الجدول الحالي أن الصعوبات والتحديات متوسطة المستوى بين أفراد العينة من الطلبة بحيث يقع المتوسط الحسابي للصعوبات والتحديات ككل بواسطة الطالب عند متوسط (11.27)، والمعلم عند متوسط (11.73)، والوالدين بمتوسط حسابي (11.77) على التوالي فيما كانت متوسطات المجالات كما هو موضح في الجدول.

جدول (5): المتوسطات الحسابية والانحرافات المعيارية لدرجات الصحة النفسية (الصعوبات والتحديات) بتقديرات الطلبة والمعلمين والوالدين (ن= 392)

مقياس الصعوبات والتحديات	عدد الفقرات	الطالب		المعلم		الوالدين	
		متوسط الدرجات	الانحراف المعياري	متوسط الدرجات	الانحراف المعياري	متوسط الدرجات	الانحراف المعياري
1. النشاط الزائد	5	3.03	2.05	3.49	2.20	3.66	2.30
2. المشاكل العاطفية	5	3.06	2.25	2.81	2.29	2.92	2.43
3. مشاكل السلوك السئ	5	2.24	1.76	2.34	2.19	2.36	1.85
4. مشاكل العلاقة مع الأقران	5	2.94	1.61	3.09	1.89	2.84	1.64
5. الشخصية الاجتماعية	5	7.75	1.84	7.31	2.21	7.77	2.17
الصعوبات والتحديات ككل	20	11.27	5.25	11.73	6.75	11.77	5.96

الفروق في مقياس الصعوبات والتحديات و باقي المتغيرات الديموغرافيةي

قد استخدم الباحثان اختبار (ت) للفروق بين متوسطات درجات العينات المستقلة، والجدول التالي يبين المتوسط الحسابي والانحراف المعياري لدرجات أفراد المجموعتين من طلبة المرحلة الإعدادية في الصعوبات والتحديات، إضافة لقيمة اختبار (ت)، مع بيان مستوى الدلالة: توجد فروق دالة إحصائياً عند مستوى دلالة أقل من 0.05، بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات النشاط الزائد/ طالب، والمشاكل العاطفية/ طالب، والصعوبات والتحديات ككل/ طالب، والشخصية الاجتماعية/ معلم، والمشاكل العاطفية/ الوالدين، والصعوبات والتحدايات ككل/ الوالدين، وكانت الفروق لصالح الإناث. كما توجد فروق دالة إحصائياً عند مستوى دلالة أقل من 0.05، بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات العلاقة

مع الأقران/ طالب ومعلم، السلوك السئ/ معلم، والصعوبات والتحـديات ككل/ معلم، وكانت الفروق لصالح الذكور. والفـروق فـي صـعوبات المشاكل العاطفية المشاكل العاطفية/ معلم كانت بين مجموعـة الصـف الدراسي السابع، والصف الدراسي التاسع، لصـالح مجموعـة الصـف الدراسي السابع. كما تبين أنه لا توجد فروق دالة إحصائياً فـي جميـع الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لعدد أفراد الأسرة لأفراد العينة من طلبة المرحلة الإعدادية. أن الفروق في مشاكل العلاقـة مع الأقران/ معلم والصعوبات والتحديات ككل/ معلم بين مجموعـة ذوي الدخل الشهري (1001 – 2000 شيكل) ومجموعة ذوي الدخل الشهري (3001 شيكل فأكثر)، لصالح مجموعة ذوي الدخل الشـهري (1001 – 2000 شيكل). في حين لم يستطع الاختبار الكشف عن اتجاه الفروق في مشاكل العلاقة مع الأقران/ الوالدين تبعاً لمتغير الدخل الشهري.

العلاقة بين مشاهدة برامج التلفزيون و الصحة النفسية (الصعوبات والتحديات)

تم استخدام مقياس بيرسون لمعرفة العلاقـة بـين مشـاهدة بـرامج التلفزيون و الصحة النفسية (الصعوبات والتحديات)، و تبين أنـه توجـد فروق دالة إحصائياً عند مستوى 0.05 في بعض الصعوبات والتحـديات والدرجة الكلية للصعوبات تعزى لمتغير ساعات المشاهدة لأفراد العينة من طلبة المرحلة الإعدادية.

والجدول التالي يبين المتوسطات الحسابية لدرجات أفراد العينة فـي أدائهم على الصعوبات والتحديات ذات الدلالة الإحصائية تبعـاً لمتغيـر ساعات المشاهدة: أن الفروق في النشـاط الزائـد/ طالـب، المشـاكل العاطفية/ طالب، النشاط الزائد/ معلم، النشاط الزائد/ الوالدين، الصعوبات والتحديات ككل/ الوالدين، بين مجموعة المشاهدة 5 ساعة مـن ناحيـة ومجموعتي 1–2 ساعة و3–4 ساعة، لصالح مجموعة المشاهدة 5 ساعة. و أن الفروق في الصعوبات والتحديات ككل/ الوالدين، المشاكل العاطفية/ الوالدين، بين مجموعة المشاهدة 5 ساعة ومجموعة 1–2 ساعة، لصالح مجموعة المشاهدة 5 ساعة. في حين لم يستطع الاختبار الكشف عن اتجاه الفروق في مشاكل السلوك السيئ/ طالب تبعاً لمتغير ساعات المشـاهدة. وتوجد فروق دالة إحصائياً عند مستوى 0.01 ومستوى 0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغيـر نوعيـة البرامج لأفراد العينة من طلبة المرحلة الإعدادية. وتبين أن الفروق فـي الصعوبات والتحديات ككل/ طالب كانت بين مجموعة بـرامج رياضـة ومجموعة برامج مسلسلات تاريخية، لصالح مجموعة برامج مسلسـلات تاريخية. ووجود علاقة ذات دلالة إحصائية عند مستوى 0.05 بين نوعية البرامج المفضلة من ناحية، وبين النشاط الزائد/ الوالـدين، والمشـاكل العاطفية/ الوالدين، ومشاكل السلوك السيئ/ المعلم والوالدين، الصعوبات والتحديات ككل/ الوالدين من ناحية أخرى.

جدول (6) معامل الارتباط بين نوعية البرامج المفضلة والصعوبات التحديات لأفراد العينة

الصعوبات والتحديات	نوعية البرامج المفضلة (ر)	مستوى الدلالة
النشاط الزائد / الوالدين	0.125	دالة عند 0.05
المشاكل العاطفية/ الوالدين	0.102	دالة عند 0.05
مشاكل السلوك السئ/ الوالدين	0.101	دالة عند 0.05
الصعوبات والتحديات ككل/ الوالدين	0.123	دالة عند 0.05

العلاقة بين العنف المدرسي بأبعاده و الصحة النفسية (الصعوبات والتحديات)

يبين الجدول التالي: وجود علاقة ذات دلالة إحصائية عند مستوى 0.01 بين العنف المدرسي بأبعاده ودرجته الكلية، ومعظم الصعوبات والتحديات بواسطة الطالب والمعلم والوالدين.

جدول (7): يبين معامل الارتباط بين العنف المدرسي والصعوبات والتحديات لأفراد العينة

الصعوبات والتحديات/كلي	العنف المدرسي				
	العنف المادي نحو الآخرين	العنف اللفظي نحو الآخرين	العنف في الدفاع عن النفس	الاتجاه نحو العنف	العنف المدرسي ككل
الصعوبات والتحديات / طالب	**0.36	**0.45	**0.518	**0.25	**0.51
الصعوبات والتحديات / معلم	**0.30	**0.32	**0.37	**0.26	**0.40
الصعوبات والتحديات / الوالدين	**0.30	**0.40	**0.38	**0.23	**0.42

*0.05 ≥ **0.01 ≥

قيمة (ر) الجدولية (د.ح= 390) عند مستوى دلالة 0.05= 0.113، وعند مستوى دلالة 0.01 = 0.148

المناقشة

مشاهدة التلفزيون

تبين الدراسة أن الأطفال من طلبة المرحلة الإعدادية يفضلون مشاهدة جميع البرامج التلفزيونية و خاصة مشاهدة برامج العنف في التلفاز.

العنف المدرسي

بينت الدراسة أن متوسط درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف المادي نحو الآخرين، والاتجاه نحو العنف، العنف المدرسي ككل، وكانت الفروق لصالح الطلاب الذكور.

يرى الباحثان أن نتائج الدراسة مطابقة للواقع فالعنف لدى الذكور يكون أكثر منه لدى الإناث, وذلك لأن الشخصية الأبناء تختلف عن شخصية البنات, وميول الذكور للعنف أكثر من ميول الإناث للعنف, وحيث أكدت نتائج الدراسة على وجود فروق دالة إحصائياً بين درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف المادي نحو الآخرين، والاتجاه نحو العنف، العنف المدرسي ككل، وكانت الفروق لصالح الطلاب الذكور. حيث جاء في دراسة (محيسن، 1999) أن للذكور سلوكاً عدوانياً أكثر من الإناث في كل من الدرجة الكلية للعدوان, العدوان البدني الموجه نحو الآخرين, العدوان اللفظي الموجه نحو الآخرين, أما دراسة (القططي، 2000) فوجدت فروق داله إحصائيا في مستوي السلوك العدواني بين الجنسين لصالح الذكور, وفي دراسة (الطويل، 2002) تفوق الطلاب في مستوي السلوك العدواني علي الطالبات. وفي دراسة (دحلان، 2003) أكدت الدراسة على ووجود فروق ذات دلالة إحصائية في السلوك العدواني لدي الأطفال المشاهدين لبرامج التلفاز تعزي لمتغير الجنس (ذكور, إناث) لصالح الأطفال الذكور في كل من العدوان المادي واللفظي والكلي ولصالح الإناث في السلوك السوي, ولم توجد فروق بين الجنسين في العدوان السلبي.

حيث أكدت الكثير من الدراسات على أنه لا توجد فروق في محددات العنف المدرسي وأبعاده تبعاً للعمر أو الصف الدراسي ومن هذه الدراسات دراسة (محيسن، 1999), ودراسة (القططي، 2000), ودراسة (الطويل، 2002), ودراسة (دحلان، 2003), وكانت نتيجة الدراسة عدم وجود فروق دالة إحصائياً في جميع الأبعاد والدرجة الكلية للعنف المدرسي تعزى لعدد أفراد الأسرة لأفراد العينة من طلبة المرحلة الإعدادية, حيث اتفقت مع نتيجة الدراسة دراسة (دحلان، 2003), (أبو حطب، 2002), (الطويل، 2002), (القططي، 2000).

ويختلف السلوك العدواني باختلاف المستوي الاقتصادي والاجتماعي, فقد أثبتت مجموعة من الدراسات أن أبناء الأسر التي تنتمي إلي مستويات اقتصاديه اجتماعية منخفضة سلوكهم العدواني أكثر من سلوك زملائهم المنحدرين من أسر تنتمي إلي مستويات اقتصادية اجتماعية مرتفعة كدراسة (الجميل، 1988).

واتفقت مع نتائج الدراسة دراسة (الطويل، 2002), ودراسة (القططي، 2000), ودراسة (محيسن، 1999), حيث لم تجد هذه الدراسة فروق دالة إحصائياً في العنف المدرسي بأبعاده ودرجته الكلية تعزى لمتغير الدخل الشهري لأفراد العينة من طلبة المرحلة الإعدادية واتفقت نتائج الدراسة مع دراسة كل من (دحلان, 2003), (أبوحطب,2002), (الطويل, 2002), (القططي, 2000), (محيسن, 1999) حيث أكدت الدراسات على أن الصعوبات والتحديات التي تواجهها الإناث أكثر من الصعوبات والتحديات لدى الذكور, والمتعمق في الواقع الذي نعيشه والعادات والتقاليد التي نربي أبنائنا على إتباعها يجد أن نتيجة البحث منطقية وعقلانية. وأكد ما جاء في الإطار النظري إن الإباء الذين يتسمون بالغلظة والقسوة مع أبناؤهم يتعلم أبنائهم السلوك العدواني, كما توصلت الدراسات إلي أن الآباء, الذين كانوا يشجعون أبناءهم علي المشاجرات مع الآخرين, وعلي الانتقام ممن يتعدي عليهم والحصول علي مطالبهم بالقوة والعنف, كانت درجة العدوانية لديهم أكبر من درجة العدوانية عند الآباء الذين لم يشجعوا أبناءهم علي السلوك العدواني بأي شكل من الأشكال, وهذا الأمر بمجمله يعد مؤثراً أساسياً على الصحة النفسية لدى ألأبناء, خصوصاً أن الحرية التي تمنح للذكور أكثر بكثير من الأتي تمنح للإناث وهذا يعد أهم صعوبات وتحديات تواجه الإناث (مختار,2001: 69). وترى الباحثة أن هذه النتيجة منطقية بالنسبة للعالم العربي أو بمعنى أخر للمجتمعات الإسلامية, لأن المسلم في الأول والأخير مرتبط بالعقيدة الإسلامية والثقافة الإسلامية التي تمنعه من عمل الكثير من الأمور التي تؤثر على دينه, أما المجتمعات الغربية التي لا تربطهم أي دين ولا ثقافات فإن درجة الحرية واحدة بين ذكورها وإناثها, والناظر إلى المجتمعات الغربية يلاحظ قلة الصعوبات التي تواجه أبناء هذه المجتمعات.

المشاكل النفسية

توجد فروق دالة إحصائياً عند مستوى دلالة أقل من 0.05، بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات النشاط الزائد/ طالب، والمشاكل العاطفية/ طالب، والصعوبات والتحديات ككل/ طالب، والشخصية الاجتماعية/ معلم، والمشاكل العاطفية/ الوالدين، والصعوبات والتحديات ككل/ الوالدين، وكانت الفروق لصالح الإناث. كما توجد فروق دالة إحصائياً عند مستوى دلالة أقل من 0.05، بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات العلاقة مع الأقران/ طالب ومعلم، السلوك السئ/ معلم، والصعوبات والتحديات ككل/ معلم، وكانت الفروق لصالح الذكور. والفروق في صعوبات المشاكل العاطفية المشاكل العاطفية/ معلم كانت بين مجموعة الصف الدراسي السابع، والصف الدراسي التاسع، لصالح مجموعة الصف الدراسي السابع. كما تبين أنه لا توجد فروق دالة إحصائياً في جميع الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لعدد أفراد الأسرة لأفراد العينة من طلبة المرحلة الإعدادية. أن الفروق في مشاكل العلاقة مع الأقران/ معلم والصعوبات والتحديات ككل/

معلم بين مجموعة ذوي الدخل الشهري (1001 – 2000 شيكل) ومجموعة ذوي الدخل الشهري (3001 شيكل فأكثر)، لصالح مجموعة ذوي الدخل الشهري (1001 – شيكل 2000). في حين لم يستطع الاختبار الكشف عن اتجاه الفروق في مشاكل العلاقة مع الأقران/ الوالدين تبعاً لمتغير الدخل الشهري.

وتتفق مع هذه النتيجة دراسة (دحلان, 2003), (الطويل, 2002) حيث أشارت هذه الدراسات إلى أن اختلاف العمر يؤثر على الصحة النفسية لدى الأبناء وأن كلما تقدم الأطفال في أعمارهم كلما زادت الصعوبات والتحديات لديهم إذا تركوا عرضة لمؤثرات المجتمع والضغوط النفسية والبيئية, وإذا تركوا دون توجيه صحيح وسليم . وقد ذكر كل من "بجوركفست ليجرسبتتر وكوكينين" أن العدوان الغير مباشر يتزايد في عمر الحادية عشرة لدي الإناث وأن العدوان الجسدي بين الذكور يقل خلال المراهقة ويستبدل بالعدوان اللفظي وإن ذلك غالباً ما يكون نتيجة لزيادة الذكاء الاجتماعي، فالنمو اللغوي يسهم في التعبير عن العدوان كما يسهم في إحداث تغيرات في توقعات المراهق لسلوك الآخرين وفهم القواعد الاجتماعية المرعية في إطار المجتمع (عبد الله ،1997: 231). ونفسر اهذه النتائج من خلال متانة العلاقات الموجودة بين أفراد الأسرة الواحدة في المجتمع العربي، حيث يبذل الآباء جهوداً كبيرة في العناية بأبنائهم ورعايتهم بشتى أنواع الرعاية بغض النظر عن عدد الأبناء، بالإضافة فإن العلاقة التي يسودها الحب والدفء تمثل مصدراً للوقاية من الآثار المترتبة على التعرض للأحداث الصعبة وضغوطات الحياة. أما إدراك الفرد لعدم وجود مساندة اجتماعية وخاصة من الأهل، فإنه يشعره بعدم القيمة وعدم القدرة على المواجهة، وتكون هنا بداية ظهور أعراض اكتئاب حيث يفتقد الفرد الشعور بالقيمة ويفتقد السند عند المحنة.

ونرى أن المساندة الاجتماعية المتمثلة في المساندة الوالدية – وهي أهم سند اجتماعي في حياة الطفل– والتي تتسم بحب الطفل والاهتمام بما يقوله ويفعله، تجعل الطفل يشعر بالقيمة والكفاية والقدرة على مواجهة الإحباطات، كما أن المساندة تعتبر من أهم مصادر الصحة النفسية للفرد، وفي حال غياب المساندة الاجتماعية فمن الأرجح أن يصبح الفرد عرضة للأمراض النفسية والجسمية. وهذه الأهمية للمساندة الاجتماعية وخاصة من قبل الوالدين تجعلهم في موضع المسؤولية وتحثهم علي تقديم كل عون لأبنائهم وخاصة إذا كانوا ما يزالون في مرحلة الطفولة أو المراهقة, وتتفق مع نتائج هذه الدراسة دراسة (الطويل، 2002), ودراسة (منير,1983), ودراسة (دحلان، 2003).

فقد أثبتت مجموعة من الدراسات أن أبناء الأسر التي تنتمي إلي مستويات اقتصاديه اجتماعية منخفضة سلوكهم العدواني أكثر من سلوك زملائهم المنحدرين من أسر تنتمي إلي مستويات اقتصادية اجتماعية مرتفعة . ويقوم المستوى الاقتصادي بدور جوهري في ظهور صعوبات وتحديات لدى الأبناء، فالأسر ذات المستوى الاقتصادي المنخفض(الفقيرة) تعاني من الضغوط أشد بكثير من الضغوط التي تتعرض لها الأسر ذات المستوى المرتفع (الغنية)، فانخفاض دخلها وعجزها عن إشباع حاجات أفرادها، يزيد من إمكانية ظهور الصعوبات والتحديات بين الأبناء، فلاشك أن الأحداث الضاغطة والمتعددة تزيد من إمكانية سوء معاملة الأطفال، فالإساءة والإهمال تحدث في ظل ظروف الحياة الضاغطة، وغالباً ما تكون الإساءة مرتفعة بين الأسر ذات الدخل المنخفض، ولقد توصلت الدراسات أن الضغوط الاقتصادية ونقص الموارد تقلل من أهمية ودور الأسرة في القيام بوظائفها، مما يؤدي ذلك إلى سوء المعاملة للأطفال, واتفقت هذه الدراسة مع دراسة (الطويل،2002), ودراسة (دحلان،2003), حيث أكدت معظم الدراسات على أهمية الوضع الاقتصادي المرتفع في تخفيض الصعوبات التحديات, واختلفت مع دراسة (محيسن، 1999) حيث لم يؤثر مستوى دخل الأسرة على تعرض أفراد العينة من الذكور، والإناث للصعوبات والتحديات. ويرى الباحثين أن هذه النتيجة منطقية ومقنعة في ظل عصر العولمة الذي نعيشه وفي ظل الغزو الفكري والغزو الإعلامي الذي نعيشه, والأدهى من ذلك الثقافة الغربية التي تنتشر بين الأجيال عن طريق مشاهدة التلفاز لساعات كثيرة, والمشكلة الأكبر إهمال الآباء لأبنائهم وعدم مراقبتهم لما يتابعونه بل يتركون لهم الحرية الكاملة في مشاهدة ما يشاءون. وهذا ما أكدته نتائج الدراسة حيث وجدت أن الصعوبات والتحديات تزيد بازدياد مدة مشاهدة الأبناء للتلفاز.

العلاقة بين مشاهدة التلفزيون و العنف

نجد أن التلفاز كوسيلة إعلامية جماهيرية يساهم مع غيره من المصادر الأخرى في شيوع ظاهرة العنف عموماً، والعنف المدرسي خصوصاً، أو في تنميتها أو تطويرها، وترى (جادو،2005 : 119) أن التلفاز وسيلة إعلامية، يزيد من شهية الإنسان إلى العنف، أو يضاعف من قوة العنف الكامنة في طبيعته الإنسانية، أو أنه يفسح المجال للتعبير عنه، أو يعلم الأطفال والشباب بعض الأساليب المناسبة لظهوره، أو للتخلص من المسؤولية المترتبة على ارتكابه، أو أنه يساعد على تخفيف الإحساس بالخطأ، أو الشعور بالخطأ عند ارتكابه.

واتفقت مع نتائج الدراسة دراسة (فيوليت إبراهيم, 1999)و(الجميل، 1988) حيث أشارة الدراسات أن طول فترة المشاهدة تزيد من الصعوبات والتحديات والأبناء يحاولون الهروب من الواقع الذي يعيشونه من خلال ما يشاهدونه من أفلام وبرامج تلفزيونية, ولكن في دراسة (Prmavera et al., 1996) لم تجد أي فروق دالة إحصائياً تبعاً لمتغير ساعات المشاهدة وإنما أرجعة الحالة النفسية للأبناء لسلوك الوالدين مع أبنائهم.

ويرى الشربيني أن الطفل قد يتعلم سلوكاً جديداً لمجرد مراقبته لفرد آخر يمارس هذا السلوك , وقد لوحظ ازدياد درجة العدوان لدي الأطفال الذين شاهدوا نماذج عدوانية لأشخاص مع لعب بلاستيكية أو أفلام مصورة عن أشخاص يتصرفون بعدوانية أو نماذج كرتونية تتصرف بعدوانية، وتحطم النماذج العدوانية الحواجز التي تحول دون الطفل وممارسة للعدوانية , فوجد الطفل بين مجموعة أطفال يمارسون هذا السلوك يشكل عاملاً رئيسياً في القضاء علي الحواجز التي تحول دون ممارسة الطفل لهذا السلوك (الشربيني,1994: 90).

العلاقة بين مشاهدة التلفزيون و المشاكل النفسية

أشارت نتائج الدراسة عن فروق دالة إحصائياً عند مستوى 0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغير ساعات المشاهدة لأفراد العينة من طلبة المرحلة الإعدادية. و كانت الفروق في النشاط الزائد/ طالب، المشاكل العاطفية/ طالب، النشاط الزائد/ معلم، النشاط الزائد/ الوالدين، الصعوبات والتحديات ككل/ الوالدين، بين مجموعة المشاهدة 5 ساعة من ناحية ومجموعتي 1-2 ساعة و3-4 ساعة، لصالح مجموعة المشاهدة 5 ساعة. ولكن الفروق في الصعوبات والتحديات ككل/ الوالدين، المشاكل العاطفية/ الوالدين، بين مجموعة المشاهدة 5 ساعة ومجموعة 1-2 ساعة، لصالح مجموعة المشاهدة 5 ساعة. و في حين لم يستطع الاختبار الكشف عن اتجاه الفروق في مشاكل السلوك السيئ/ طالب تبعاً لمتغير ساعات المشاهدة. وأشارت نتائج البحث عن وجود فروق دالة إحصائياً عند مستوى 0.05 في النشاط الزائد/ طالب تعزى لمتغير كيفية المشاهدة لدى أفراد العينة من طلبة المرحلة الإعدادية. وكشفت النتائج عن وجود فروق دالة إحصائياً عند مستوى0.001 ومستوى0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغير وقت المشاهدة لأفراد العينة من طلبة المرحلة الإعدادية. وأن الفروق في جميع الصعوبات التي ظهرت فيها فروق كانت بين مجموعة المشاهدة نهاراً ومجموعة المشاهدة في كل وقت، لصالح مجموعة المشاهدة في كل وقت. وأن الفروق في صعوبات النشاط الزائد/ الوالدين كانت بين مجموعة المشاهدة ليلاً ومجموعة المشاهدة في كل وقت، لصالح مجموعة المشاهدة في كل وقت. وأشارت نتائج الدراسة عن فروق دالة إحصائياً عند مستوى 0.01 ومستوى 0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغير نوعية البرامج لأفراد العينة من طلبة المرحلة الإعدادية. وأن الفروق في الصعوبات والتحديات ككل/ طالب كانت بين مجموعة برامج رياضة ومجموعة برامج مسلسلات تاريخية، لصالح مجموعة برامج مسلسلات تاريخية. وأثبتت الدراسة وجود علاقة ذات دلالة إحصائية عند مستوى 0.05 بين نوعية البرامج المفضلة من ناحية، وبين النشاط الزائد/ الوالدين، والمشاكل العاطفية/ الوالدين، ومشاكل السلوك السيئ/ المعلم والوالدين، الصعوبات والتحديات ككل/ الوالدين من ناحية أخرى. وأوضحت النتائج وجود علاقة ذات دلالة إحصائية عند مستوى 0.01 بين العنف المدرسي بأبعاده ودرجته الكلية، ومعظم الصعوبات والتحديات بواسطة الطالب والمعلم والوالدين. وكشفت نتائج الدراسة أنه لا توجد علاقة ذات دلالة إحصائية بين العنف المدرسي بأبعاده ودرجته الكلية، وبين مشاكل العلاقات مع الأقران/ الوالدين. وأشارت نتائج الدراسة أنه لا توجد علاقة ذات دلالة إحصائية بين العنف المادي نحو الآخرين والاتجاه نحو العنف، وبين مشاكل العلاقات مع الأقران/ طالب.

واتفقت مع نتائج هذه الدراسة دراسة كل من (فيوليت إبراهيم , 1998), ودراسة , ودراسة (الجميل، 1988), حيث أشارت هذه الدراسات إلى أن الأبناء يميلون إلى متابعة البرامج التي تنمي الشخصية لديهم. وتتفق مع نتائج الدراسة دراسة (محيسن، 1999), ودراسة (الطويل، 2002), ودراسة (أبو حطب، 2002), حيث أشارت معظم الدراسات التي تناولت العنف المدرسي إلى تأثيره المباشر على الصحة النفسية لدى طلبة المدارس وأن العنف المدرسي يزيد من الصعوبات والتحديات لدى طلبة المدارس.

التوصيات

وفي ضوء النتائج التي توصلت لها الدراسة فإننا تتقدم بالتوصيات التالية:

- زيادة الوعي بأنماط العنف وأثاره السلبية على الصحة النفسية والتوافق الاجتماعي والنفسي من خلال قنوات الإعلام المختلفة ومؤسسات المجتمع المعنية بالتربية والثقافة, وذلك بما تقدمه تلك المؤسسات من البرامج والتقارير و النشرات والندوات.
- التركيز على دور الوالدين باعتبارهم أهم العوامل البيئية التي يمكن أن تسهم في خفض العنف الأسري، وذلك من خلال تقديم العديد من الإرشادات التي تزيد من فهمهم للمشاكل الأسرية والسلوكيات التربوية وطرق حل هذه المشاكل بالوسائل الصحية التي تؤثر بالإيجاب نحو جميع أفراد الأسرة.
- إعداد برامج الدعم النفسي الاجتماعي للأطفال بما يحقق خفض السلوكيات العدوانية والتي تشتمل على الأنشطة النظامية كاللعب الجماعي الذي يستند إلى القوانين والأنظمة، وغيرها من الأنشطة التي تسهم في علاج المشكلات النفسية لدى الأبناء.
- تشجيع طلاب المرحلة الإعدادية على الاشتراك في الأنشطة والبرامج الثقافية والاجتماعية والرياضية الهادفة, ومنحهم الفرصة لممارسة الأنشطة الطلابية المختلفة داخل المدرسة

- عمل منشورات مدرسية لتوعية الطلاب حول المشاكل النفسية الناتجة عن العنف الأسري ووسائل الاتصال والتواصل الصحيح بين بعضهم البعض وبين أفراد عائلاتهم, وتعليم الطرق الصحية لتفادي العنف الأسري .
- إقامة دورات تدريبية للمعلمين والإداريين وأولياء الأمور في فن التعامل مع المشكلات السلوكية وفي خصائص النمو في مراحل التعليم المختلفة خصوصاً مرحلة التعليم الإعدادية لخصوصيتها وأهميتها كمرحلة انتقال من الطفولة إلى المراهقة.
- إقامة دورات تدريبية للطلاب في مهارات حل المشكلات البينية وإدارة الصراع, وحثهم على استخدام أسلوب الحوار والمناقشة.
- تنظيم برامج تربوية وإرشادية؛ للحد من ظاهرة العنف الطلابي سواء كانت في صورة محاضرات وندوات أو نشرات دورية توزع على أولياء الأمور، بغية توجيههم إلى أفضل الأساليب في تربية النشء، وإعداده إعدادًا جيدًا.

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آثـار مشاهـدة برامـج العنـف في التلفـاز علي الصحـة النفسيـة عنـد المراهقين في قطاع غزه

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ملخص الدراسة

هدفت هذه الدراسة إلي التعرف علي آثار مشاهدة برامج العنف في التلفاز علي الصحة النفسية لدي الأطفال وخصوصاً طلبه المرحلة الاعدادية بمدارس وكاله الغوث ، في ضوء متغيرات هي: الجنس، مكان السكن، عدد ساعات المشاهدة،

العينة: تم اختيار عينة عشوائية عنقودية بلغت (392) طالب وطالبة من المدارس الاعدادية التابعة لوكالة الغوث الدولية بمناطقها التعليمية الخمس في قطاع غزة .

الادوات: وقد تم تطبيق مقياس التحديات والصعوبات, ومقياس مدي انتشار العنف المدرسي , ومقياس نوعية البرامج المفضلة للاطفال لقياس آثار مشاهدة برامج العنف في التلفاز علي الصحة النفسية لدي الأطفال ، كما تم

النتائج : تبين من النتائج أن أعلى الفقرات التي تمثل البرامج التلفزيونية المفضلة لدى الطلبة كانت: "أتابع الرسوم المتحركة مثل (توم وجيري - بوباي), و أفضل برامج المسابقات مثل (من سيربح المليون - وزنك ذهب), و البرامج السياسية (تحت الحصار - الاتجاه المعاكس).

و بينت الدراسة أن نسبة العنف المادي نحو الآخرين بلغت 53.25%, و نسبة العنف اللفظي نحو الآخرين بلغت 44.03%, ونسبة العنف في الدفاع عن الذات بلغت 54.16%, ونسبة الاتجاه نحو العنف بلغت 58.66%, ونسبة مجموع العنف المدرسي بلغت 52.64%. تبين أن هناك فروق في العنف المادي نحو الآخرين، والاتجاه نحو العنف، العنف المدرسي ككل لصالح الطلاب الذكور.

تبين متوسط المشاكل النفسية على حسب مقياس الصعوبات والتحديات حسب رأي الطالب (11.27)، وحسب المعلم (11.73)، وحسب الوالدين (11.77)

تبين أن هناك علاقة مابين النشاط الزائد (طالب)، المشاكل العاطفية (طالب)، النشاط الزائد (معلم)، النشاط الزائد (الوالدين)، الصعوبات والتحديات ككل (الوالدين)، لصالح مجموعة الطلبة الذين يشاهون التلفيزسون لمدة 5 ساعات و أكثر عن مجموعتي المشاهدة لفترة 1-2 ساعة و3-4 ساعات.

تبين الدراسة كذلك وجود علاقة ذات دلالة إحصائية بين العنف المدرسي بأبعاده ودرجته الكلية، ومعظم فقرات و أبعاد مقياس الصعوبات والتحديات بواسطة الطالب والمعلم والوالدين.

التـوصيـات

وفي ضوء نتائج الدراسة وضع الباحثان عدة توصيات ومقترحات للآباء والمعلمين، والمرشدين النفسيين، والمربين والمسئولين عن التربية والتعليم في قطاع غزة، والباحثين في مجال علم النفس، والإرشاد النفسي، وواضعي المناهج في ضرورة الاهتمام بالحاجات والمتطلبات الأساسية لطالب المرحلة الاعدادية وكذلك وضع البرامج الإرشادية الهادفة إلي الحد من تلك الاثار الناجمه عن العنف، وحث المختصين علي مراعاة جميع الجوانب النفسية والاجتماعية والجسمية والمعرفية العقلية للطفل الفلسطيني في ظل المعاناة التي يتعرض لها.

مقدمـــــــــــــة

تعتبر وسائل الإعلام من أهم القنوات التي يستقي منها الطفل أنماط سلوكه العدواني والتي تشكل أهمية كبيرة في حياة الإنسان في هذا العصر, فلم يعد الإنسان المعاصر يستغني عن زاد يتزود به يومياً من المادة الإعلامية, سواء كانت مسموعة أم مقروءة أم مرئية, ولو استعرضنا وسائل الإعلام لأدركنا كم هي عميقة ومتنوعة, وكم هي تتباين بين الايجابية والسلبية, فوسائل الإعلام من التليفزيون والراديو والصحف والكتب والمجلات وغيرها, قد تلعب دوراً كبيراً في عمليات التثقيف والتعليم والتوعية, وقد تؤثر سلبياً إذا ما هيأت الأذهان لذلك, ويعتبر التليفزيون أكثر وسائل الإعلام تأثيراً, ويعتبر نافذة الطفل الأولى على العالم.

وعلى الرغم من أن التليفزيون الذي يعتبر أحد معجزات العصر الحالي, لم يمض وقت طويل على اكتشافه، فقد أصبح وسيلة فعالة من وسائل الإعلام التي تنقل الصوت والصورة والحركة واللون إلى المشاهدين, كما أنه يعتبر وسيلة اقتصادية للاتصال بالجماهير, مما أدى إلى استخدامه أداة فعالة في إحداث تعييرات اجتماعية واقتصادية وسياسية ملموسة وحيث أن التليفزيون جهاز لا يكاد يخلو منه بيت في فلسطين, كما أنه من أكثر وسائل الإعلام تأثيراً على الأطفال, لذا فقد أصبح له وجود ثقافي واجتماعي ونفسي شديد التأثير في حياتنا, حيث أن الأطفال يبدؤون بمشاهدة التليفزيون في سن العامين أو الثلاثة أعوام الأولي من حياتهم, ويقضي هؤلاء الأطفال وقتاً أمام التليفزيون أكثر مما يقضونه في متابعة دروسهم، وأمورهم الأسرية, وذلك يتضح من خلال ملاحظاتنا اليومية لطبيعة المشاهدة الأسرية (حسن:2002 :74).

ويؤكد المختصون أن أخطر آثار وسائل الإعلام والتلفاز هو ما سيظهر بشكل ملموس لاحقاً في جيل كامل من الأطفال الذين سيكبر من نجا منهم وهو يعاني من مشاكل نفسية، قد تقل خطورتها أو تزيد حسب استيعاب ووعي الأهل لكيفية مساعدة الطفل على تجاوز المشاهد المروعة التي عاشها أو شاهدها، ومن المؤكد أنه يمكن التقليل من الآثار النفسية السلبية في هذه الحالات، إذا تذكر الأهل الجانب النفسي للطفل في الأوقات العصيبة، واجتهدوا لمعالجتها في حينه. ونجد في هذا السياق العديد من الدراسات التي تناولت الآثار النفسية والاجتماعية غير المرغوبة الناجمة عن مشاهدة البرامج التليفزيونية، وفيما يتعلق بالتليفزيون وعلاقته بالأطفال فنجد العديد من الدراسات العربية التي أجريت في هذا المجال, والتي ركزت على علاقة التليفزيون بتثقيف الطفل والتحصيل الدراسي وأثر مدة المشاهدة على سلوك الأطفال, وايجابيات وسلبيات البرامج التليفزيونية في حين أننا نجد وفرة في الدراسات الأجنبية ففي دراسة ستيفن ومالسو (Stevens, and Mulsow,2006) والتي هدفت إلي دراسة الآثار العكسية لمشاهدة التلفاز في فترة الطفولة المبكرة وعلاقتها باضطراب لحركة الزائدة ونقص الانتباه, علي عينة من طلاب رياض الأطفال. وكانت نتائج الدراسة بأن هناك علاقة بين مشاهدة التلفاز و ADHDتشتت الانتباه و فرط الحركة لدى طلاب الصف الأول خلال مرحلة الروضة . اضافة الى دراسة دوارك وسكريل (Dworak & Schierl, 2007) : و هدفت الدراسة معرفة تأثير التعرض المفرط لألعاب الكمبيوتر والتلفاز على نمط النوم وأداء الذاكرة للأطفال بسن المدرسة , وقدبينت نتائج الدراسة أن ألعاب الكمبيوتر فقط تقلل من ساعات النوم وتمثيل الذاكرة والنطق ، لا تأثير على حركة العين التلقائية أثناء النوم ، وأن برامج التلفاز قللت من تأثير النوم ولكن لم تؤثر على نمط النوم.

كمـــا أن دراســـة كريســـتاكس وزيمرمـــان (Christakis and Zimmerman,2007) والتي هدفت إلى معرفة العلاقـــة بـــين مشـــاهدة برامج العنف في مرحلة ما قبـــل الدراســـة (2-5 ســـنوات) والســـلوك أللاجتماعي في عمر (7-10 سنوات) ، النتائج أظهـــرت أن العمـــر ، وتعليم الأسرة ، واكتئاب الأم ، والدعم المعرفي والعـــاطفي ، وبـــرامج العنف التليفزيونية ، كلها كانت ذات علاقة متزايدة من الخطر بسلوك

متسلسل وعنيف لدى الأطفال الذكور ولكن ليس لدى البنات. كما جاء في دراسة لاندوس و بولتون (Landhuis, and Poulton, 2007) والتي هدفت توضيح الجدل حول إذا ما كان مشاهدة التلفزيون في مرحلة الطفولة تسبب مشاكل في الانتباه في " دنيدن في نيوزلندا" بين نيسان 1972 ومارس 1973 ، وكانت نتائج الدراسة أن ربط متوسط عدد ساعات مشاهدة التلفاز أثناء الطفولة مع أعراض مشاكل الانتباه عند الكبر. كما هدفت دراسة (هامر Hamer,2009) إلي معرفة مستويات مشاهدة التلفاز والتسلية العالية ومستويات النشاط الجسدي المنخفضة, تتداخل لتزيد من مستوى عدم التوافق النفسي عند الأطفال الصغار , وقد أظهرت نتائج الدراسة بعد تحليل البيانات أن الصعوبات الشاملة لدى الطفال سجل ارتفاعاً غير عادي من 20–40 عند 4,2 % من العينة تقريباً و 25% من الأطفال كانوا يشاهدون التلفاز والتسلية على الأقل 3 ساعات يومياً وبشكل عام النماذج الخطية ومشاهدة التلفزيون و التسلية في الأسبوع ومستويات النشاط الجسدي كانت مرتبطة بشكل مستقل وبنقاط القوة والصعوبات في الاستبيان. الصعوبات الشاملة سجلت بعد التعديل للعمر والجنس ومستويات الحرمان. وفي دراسة سوينج وجينتايل (Swing & Gentile, 2010) لمعرفة نتائج التعرض للتلفاز وألعاب الفيديو وتفاقم مشكلات الانتباه. وقد كانت نتائج الدراسة أن كل من تعرض للتلفاز وألعاب الفيديو مرتبط بمشكلات متتابعة ومتزايدة في الانتباه في مرحلة الطفولة، فقد يبدو أن هناك ارتباط مماثل بين التلفزيون وألعاب الفيديو ومشاكل الانتباه في مرحلة الطفولة المتأخرة والرشد.

وعليه وضع الهدف العام لهذه الدراسة لمعرفة تأثير مشاهدة برامج العنف في التلفاز على الصحة النفسية عند الأطفال في قطاع غزة.

الطريقـــــــــــــــة

العينـــــــــــــة

تم اختيار (392) طالب وطالبة من طلبة مدارس وكالة غوث وتشغيل اللاجئين الفلسطينيين في قطاع غزة بطريقة المعاينة العشوائية العنقودية من الجنسين من طلبة الصفوف السابع والثامن والتاسع من المرحلة الإعدادية في الفصل الثاني من العام الدراسي 2010/ 2011م. وقد بلغ عدد الذكور (210) طالب بنسبة 53.6%، وعدد الإناث (182) طالبة بنسبة 46.4%، وقد تراوحت أعمارهم بين 12-16 سنة، بمتوسط عمر (13.94 سنة وانحراف معياري(1.03 سنة).

طريقـــــة جمـــع البيانـــــات

قبل تطبيق الأدوات على عينة الدراسة من الطلبة قام الباحثان بالأخذ بالاعتبارات الأخلاقية التالية:

الحصول على موافقة لجنة هلسنكي (وزارة الصحة), و تم توجيه رسالة خطية لإدارة التعليم في وكالة غوث وتشغيل اللاجئين الفلسطينيين في قطاع غزة بهدف تطبيق البحث، , وموافقة الطلاب و أهلهم، فقد تم التعهد للطلبة من عينة البحث بأن البيانات التي سيتم جمعها ستستخدم لأغراض الباحث العلمي فقط وأنها تخضع للسرية التامة. وقامت الباحثة الاولى بنفسها بزيارة المدارس التي دخلت عينة الدراسة ومن خلال التواصل مع مدير المدرسة وبمساعدة المرشد التربوي تم تطبيق أدوات الدراسة قائمة البيانات الديموغرافية و ومقياس نوعية البرامج التلفزيونية، ومقياس العنف المدرسي، ومقياس الصعوبات والتحديات في صوره الثلاثة الطالب والمدرس والوالدين، على عينة الدراسة من طلبة الصفوف السابع والثامن والتاسع من مدارس تابعة لوكالة الغوث بقطاع غزة.

استخدمت الأدوات البحثية التالية

قائمـــــة العوامـــــل الديموغرافيـــــة

تحتوي هذه القائمة على بعض البيانات الأولية لعينة البحث مثل: الجنس، والعمر، والصف، ونوع السكن، وعدد الأبناء في الأسرة، والترتيب الميلادي للطفل بين إخوانه، ومستوى تعليم ومهنة الوالدين، والدخل الشهري للأسرة.

مقياس نوعية البرامج التلفزيونية المفضلة (احمد دحلان2003)

أعد مقياس نوعية البرامج التلفزيونية المفضلة (احمد دحلان) و قد قام الباحثان بتقنين المقياس على البيئة الفلسطينية وتكون المقياس في صورته النهائية من (15) عبارة موزعة على أربعة مقاييس فرعية، كل منها يمثل أسلوباً من أنماط التفاعل داخل الأسرة وهو عبارة، تشير إلى خاصية لدى الطلبة من أفراد العينة في نوعية البرامج التلفزيونية التي يفضلون مشاهدتها.وتتم الاستجابة على فقرات المقياس وفقاً لتدرج رباعي البدائل على طريقة وهو غالباً (3 درجات)، أحياناً (2 درجات)، نادراً (1 درجة)، أبداً (صفر). وتدل الدرجة المرتفعة على تفضل البرامج التلفزيونية، بينما تدل الدرجة المنخفضة على عدم تفضيل البرامج التلفزيونية. وقد قام الباحثان بحساب معامل ثبات مقياس نوعية البرامج التلفزيونية الباحثة بحساب ثبات مقياس نوعية البرامج التلفزيونية باستخدام معادلة ألفا كرونباخ لفقرات المقياس (15 فقرة)، وكانت قيمة ألفا تساوي (0.69) وهي دالة عند مستوى 0.01.

مقيـــاس العنـــف المدرســـي (جنينـــة 2004)

تكون المقياس في صورته النهائية من (41) عبارة موزعة على أربعة مقاييس فرعية (العنف المادي نحو الآخرين, العنف اللفظي نحو الآخرين, العنف في الدفاع عن النفس, و الاتجاه نحو العنف), وكل منها يمثل نمط من أنماط العنف، وتتم الاستجابة على فقرات المقياس وفقاً لتدرج ثلاثي البدائل على طريقة ليكرت وهو (نعم، غير متأكد، لا). وتعطي لكل عبارة من العبارات كل أسلوب درجة معينة (2 – 1 – 0) على التوالي.

وتدل الدرجة المرتفعة على المقاييس الفرعية على اتجاه العنف، بينما تدل الدرجة المنخفضة على اللا عنف.

وقام الباحثان بحساب ثبات مقياس العنف المدرسي باستخدام معادلة ألفا كرونباخ لفقرات المقياس (41 فقرة)، وكانت قيمة ألفا تساوي (0.84) وهي دالة عند مستوى 0.01.

مقيـــاس الصعوبـــات والتحديـــات: إعـــداد (ثابت, 2000)

تكون هذا المقياس من 25 بنداً، من ضمنها 14 بنداً تصف الصعوبات المدركة، و 15 بنداً تصف التحديات المدركة، وواحد حيادي (يتماشى مع ا للكبار عن للصغار). وكل بند من بنود الصعوبات المدركة مسجل على معيار من صفر– 2 (لا)، (أحياناً)، (نعم)، ولكن هناك خمسة من بنود القدرات المدركة (باستثناء البنود الشخصية والاجتماعية) مسجلة بشكل عكسي 2 (لا)، 1 (أحياناً)، صفر(نعم). وبنود هذا المقياس مُقسمة إلي النشاط الزائد، والمشاكل العاطفية، ومشاكل السلوك السيئ، ومشاكل العلاقة مع الأقران، والشخصية الاجتماعية، وكل 5 بنود معيار لمقياس فرعي. وتم تطبيق مقياس الصعوبات والتحديات في هذه الدراسة ثلاث مرات، حيث استجاب عليه في المرة الأولى الطلاب أنفسهم، ثم المدرسون في المرة الثانية، وأخيراً استجاب له الوالدين. كما قامت الباحثة بحساب ثبات مقياس الصعوبات والتحديات باستخدام معادلة ألفا كرونباخ لفقرات المقياس (25 فقرة) و كان معامل ألفا كرونباخ لنموذج التحديات والصعوبات للطالب(0.60), نموذج المدرس (0.84) و نموذج الوالدين (0.69).

طريقـــــة تحليـــــل البيانـــــات

تم إدخال البيانات وتصنيفها وتحليلها باستخدام برنامج الرزم الإحصائية للعلوم الاجتماعية (SPSS) بواسطة الحاسوب(النسخة 18). و تم أستخدام الأساليب الاحصائية التالية : المتوسطات الحسابية.الانحرافات المعيارية.التكرارات والنسب المئوية. اختبار (ت): Independent Sample T test للكشف عن دلالة الفروق بين متوسطي درجات عينتين مستقلتين. اختبار تحليل التباين الأحادي: One Way ANOVA للكشف عن دلالة الفروق بين متوسطات ثلاث عينات مستقلة أو أكثر.

النتائـــــــج

فيما يلي النتائج المتعلقة بالخصائص الديموغرافية لأفراد العينة البالغ عددهم (392) من طلبة المرحلة الإعدادية بوكالة الغوث بمحافظات غزة من الجنسين، وقد استخدمت الباحثة التكرارات والنسب المئوية:

جدول (1): يبين الخصائص الديموغرافية لأفراد العينة

المتغير		العدد	%
الجنس	ذكور	210	53.6
	إناث	182	46.4
الصف	السابع	97	24.7
	الثامن	129	32.9
	التاسع	166	42.3
المحافظة	شمال غزة	76	19.4
	غزة	161	41.1
	خانيونس	80	20.4
	رفح	75	19.1
الإقامة	مخيم	257	65.6
	مدينة	122	31.1
	قرية	13	3.3
عدد أفراد الأسرة	5 فما ودون	56	14.3
	6 – 8 أخوة	205	52.3
	9 أخوة وفوق	131	33.4
الترتيب الميلادي	الأول	87	22.2
	الوسط	235	59.9
	الأخير	67	17.1
	الوحيد	3	0.8
تعليم الأب	إعدادي ودون	90	23
	ثانوي	112	28.6
	دبلوم متوسط	40	10.2
	جامعي وفوق	150	38.3
تعليم الأم	إعدادي ودون	99	25.3
	ثانوي	165	42.1
	دبلوم متوسط	43	11
	جامعي وفوق	85	21.7
عمل الأب	لا يعمل	89	22.7
	عامل	46	11.7
	عامل مهني	14	3.6
	موظف	193	49.2
	أخرى	50	12.8
عمل الأم	ربة بيت	12	3.1
	عاملة	63	16.1
	موظفة	317	80.9
الدخل الشهري	1000 ش فما دون	115	29.3
	1001 – 2000	111	28.3
	2001 – 3000	65	16.6
	3001 ش فما فوق	101	25.8

نوعيـــــة البرامـــــج المفضلـــــة

يتبين من الجدول التالي أن نوعية البرامج المفضلة تقع عند مستوى متوسط بمتوسط حسابي (30.49) بين أفراد العينة من الطلبة. ويتبين أن أعلى الفقرات التي تمثل البرامج التلفزيونية المفضلة لدى الطلبة كانت كما يلي: "أتابع الرسوم المتحركة مثل (توم وجيري – بوباي)" في المرتبة الأولى بمتوسط حسابي (2.59). "أفضل برامج المسابقات مثل (من سيربح المليون – وزنك دهب)" بمتوسط حسابي (2.27).

"أفضل البرامج السياسية (تحت الحصار – الاتجاه المعاكس)" بمتوسط حسابي (2.24). "تعجبني أدوار الشر في بطل المسلسلات والأفلام" بمتوسط حسابي (2.17). "أشاهد برنامج المصارعة الحرة والملاكمة" بمتوسط حسابي (1.72) وهي في أدنى مستوى. مما يشير إلى أن فقرات مقياس البرامج التلفزيونية المفضلة جميعها تقع عند مستوى متوسط فما فوق، أي أن الأطفال من طلبة المرحلة الإعدادية يفضلون مشاهدة جميع البرامج التلفزيونية التي وردت في المقياس، وبذلك فإن أفراد العينة من طلبة المرحلة الإعدادية يفضلون مشاهدة برامج العنف في التلفاز.

جدول (2) المتوسطات الحسابية والانحرافات المعيارية لمقياس البرامج التلفزيونية المفضلة

م	استبيان البرامج التلفزيونية المفضلة	متوسط الدرجات	الانحراف المعياري
1	أتابع الرسوم المتحركة مثل (توم وجيري – بوباي)	2.59	0.65
2	أفضل برامج المسابقات مثل (من سيربح المليون – وزنك دهب)	2.27	0.76
3	أفضل البرامج السياسية (تحت الحصار – الاتجاه المعاكس)	2.24	0.78
4	تعجبني ادوار الشر في بطل المسلسلات والأفلام	2.17	0.76
5	أشاهد التليفزيون أكثر من 3 ساعات يومياً	2.14	0.75
6	أشاهد الأفلام البوليسية وأفلام الرعب في التليفزيون	2.12	0.81
7	اقلب القنوات على نشرات الأخبار وصور الشهداء والجرحى	2.06	0.87
8	تعجبني فقرات السيرك وبرامج الحوادث و المطاردات	2.06	0.75
9	أتابع الأفلام الهندية والصينية في التلفيزيون	1.97	0.84
10	أقوم بتقليد دور البطل القوي الشجاع في الأفلام الهندية	1.94	0.76
11	لا يتدخل والدي في كمية ونوعية البرامج التي أشاهدها	1.88	0.81
12	أسجل أوقات إذاعة مسلسلات الأطفال مثل (أبطال الديجيتال – المحقق كونان)	1.83	0.78
13	أتأثر بمناظر القتل والجريمة في البرامج والمسلسلات	1.78	0.83
14	أشاهد المسلسلات والأفلام الأجنبية مثل (طرزان – سوبرمان – رامبو)	1.73	0.80
15	أشاهد برنامج المصارعة الحرة والملاكمة	1.72	0.79
	الدرجة الكلية للبرامج التلفزيونية المفضلة	30.49	4.03

العنف المدرسي

يتبين من الجدول التالي أن العنف المدرسي متوسط المستوى بين أفراد العينة من الطلبة بحيث يقع المتوسط الحسابي للعنف المدرسي ككل (64.75) فيما كانت المتوسطات الحسابية لأبعاد المقياس كما يلي، بحيث جاء العنف في الدفاع عن الذات في أعلى مرتبة بمتوسط حسابي (26.00)، يليه الاتجاه نحو العنف بمتوسط حسابي (14.08)، وثالثاً جاء العنف المادي نحو الآخرين بمتوسط حسابي (12.78)، وأخيراً جاء العنف اللفظي نحو الآخرين بمتوسط حسابي (11.89). وتم حساب الوزن النسبي حسب المعادلة التالية: المتوسط الحسابي/عدد لفقرات*3 *100. و بينت الدراسة أن نسبة العنف المادي نحو الآخرين بلغت 53.25%, و نسبة العنف اللفظي نحو الآخرين بلغت 44.03%, ونسبة العنف في الدفاع عن الذات بلغت 54.16%, ونسبة الاتجاه نحو العنف بلغت 58.66%, ونسبة مجموع العنف المدرسي بلغت 52.64%.

جدول (3) يبين المتوسطات الحسابية والانحرافات المعيارية لأبعاد العنف المدرسي

م	حالات العنف المدرسي	عدد الفقرات	متوسط الدرجات	الانحراف المعياري	الوزن النسبي
1	العنف المادي نحو الآخرين	8	12.78	2.89	53.25
2	العنف اللفظي نحو الآخرين	9	11.89	2.70	44.03
3	العنف في الدفاع عن الذات	16	26.00	5.03	54.16
4	الاتجاه نحو العنف	8	14.08	2.92	58.66
5	مجموع العنف المدرسي	41	64.75	10.97	52.64

الفروق في العنف المدرسي و باقي المتغيرات الديموغرافيية

بالمقارنة بين متوسط درجات الذكور (ن= 210)، ومتوسط درجات الإناث (ن= 182) في درجاتهم على مقياس العنف المدرسي باختبار (ت) للفروق بين متوسطات درجات العينات المستقلة، والجدول التالي يبين المتوسط الحسابي والانحراف المعياري لدرجات أفراد المجموعتين من طلبة المرحلة الإعدادية في العنف المدرسي، إضافة لقيمة اختبار (ت)، مع بيان مستوى الدلالة: توجد فروق دالة إحصائياً عند مستوى دلالة 0.001 ومستوى 0.05،بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف المادي نحو الآخرين، والاتجاه نحو العنف، العنف المدرسي ككل، وكانت الفروق لصالح الطلاب الذكور. ولا توجد فروق دالة إحصائياً بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف اللفظي نحو الآخرين، والعنف في الدفاع عن النفس.

جدول (4): يبين الفروق في العنف المدرسي تبعاً للجنس (الذكور – الإناث)

العنف المدرسي	الذكور (ن= 210)		الإناث (ن= 182)		قيمة (ت)	مستوى الدلالة
	المتوسط الحسابي	الانحراف المعياري	المتوسط الحسابي	الانحراف المعياري		
العنف المادي نحو الآخرين	13.17	2.80	12.34	2.92	2.889	0.004
العنف اللفظي نحو الآخرين	11.94	2.71	11.83	2.70	0.413	0.680
العنف في الدفاع عن الذات	26.08	5.16	25.91	4.88	0.322	0.648
الاتجاه نحو العنف	14.66	2.85	13.41	2.87	4.319	0.001
العنف المدرسي ككل	65.85	10.96	63.48	10.88	2.138	0.033

$0.05 \geq *$ $0.01 \geq **$ $0.001 \geq ***$

قيمة (ت) الجدولية (د.ح = 390) عند مستوى دلالة 0.05 = 1.96، وعند مستوى 0.01 = 2.58

الفروق في العنف المدرسي و باقي المتغيرات الديموغرافيةة

كما تبين أنه لا توجد فروق دالة إحصائياً في العنف المدرسي بأبعاده ودرجته الكلية تعزى للصف الدراسي لأفراد العينة من طلبة المرحلة الإعدادية. لا توجد فروق دالة إحصائياً في جميع الأبعاد والدرجة الكلية للعنف المدرسي تعزى لعدد أفراد الأسرة لأفراد العينة من طلبة المرحلة الإعدادية. لا توجد فروق دالة إحصائياً في العنف المدرسي بأبعاده ودرجته الكلية تعزى لمتغير الدخل الشهري لأفراد العينة من طلبة المرحلة الإعدادية.

الصحة النفسيةعلى حسب مقياس الصعوبات والتحديات (Strength ad Difficulties Questionnaire)

تبين من الجدول الحالي أن الصعوبات والتحديات متوسطة المستوى بين أفراد العينة من الطلبة بحيث يقع المتوسط الحسابي للصعوبات والتحديات ككل بواسطة الطالب عند متوسط (11.27)، والمعلم عند متوسط (11.73)، والوالدين بمتوسط حسابي (11.77) على التوالي فيما كانت متوسطات المجالات كما هو موضح في الجدول.

جدول (5): المتوسطات الحسابية والانحرافات المعيارية لدرجات الصحة النفسية (الصعوبات والتحديات) بتقديرات الطلبة والمعلمين والوالدين (ن= 392)

مقياس الصعوبات والتحديات	عدد الفقرات	الطالب		المعلم		الوالدين	
		متوسط الدرجات	الانحراف المعياري	متوسط الدرجات	الانحراف المعياري	متوسط الدرجات	الانحراف المعياري
1. النشاط الزائد	5	3.03	2.05	3.49	2.20	3.66	2.30
2. المشاكل العاطفية	5	3.06	2.25	2.81	2.29	2.92	2.43
3. مشاكل السلوك السئ	5	2.24	1.76	2.34	2.19	2.36	1.85
4. مشاكل العلاقة مع الأقران	5	2.94	1.61	3.09	1.89	2.84	1.64
5. الشخصية الاجتماعية	5	7.75	1.84	7.31	2.21	7.77	2.17
الصعوبات والتحديات ككل	20	11.27	5.25	11.73	6.75	11.77	5.96

الفروق في مقياس الصعوبات والتحديات و باقي المتغيرات الديموغرافية

قد استخدم الباحثان اختبار (ت) للفروق بين متوسطات درجات العينات المستقلة، والجدول التالي يبين المتوسط الحسابي والانحراف المعياري لدرجات أفراد المجموعتين من طلبة المرحلة الإعدادية في الصعوبات والتحديات، إضافة لقيمة اختبار (ت)، مع بيان مستوى الدلالة: توجد فروق دالة إحصائياً عند مستوى دلالة أقل من 0.05، بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات النشاط الزائد/ طالب، والمشاكل العاطفية/ طالب، والصعوبات والتحديات ككل/ طالب، والشخصية الاجتماعية/ معلم، والمشاكل العاطفية/ الوالدين، والصعوبات والتحديات ككل/ الوالدين، وكانت الفروق لصالح الإناث. كما توجد فروق دالة إحصائياً عند مستوى دلالة أقل من 0.05، بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات العلاقة مع الأقران/ طالب ومعلم، السلوك السئ/ معلم، والصعوبات والتحديات ككل/ معلم، وكانت الفروق لصالح الذكور. والفروق في صعوبات المشاكل العاطفية المشاكل العاطفية/ معلم كانت بين مجموعة الصف الدراسي السابع، والصف الدراسي التاسع، لصالح مجموعة الصف الدراسي السابع. كما تبين أنه لا توجد فروق دالة إحصائياً في جميع الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لعدد أفراد الأسرة لأفراد العينة من طلبة المرحلة الإعدادية. أن الفروق في مشاكل العلاقة مع الأقران/ معلم والصعوبات والتحديات ككل/ معلم بين مجموعة ذوي الدخل الشهري (1001 – 2000 شيكل) ومجموعة ذوي الدخل الشهري (3001 شيكل فأكثر)، لصالح مجموعة ذوي الدخل الشهري (1001 – 2000 شيكل). في حين لم يستطع الاختبار الكشف عن اتجاه الفروق في مشاكل العلاقة مع الأقران/ الوالدين تبعاً لمتغير الدخل الشهري.

العلاقة بين مشاهدة برامج التلفزيون و الصحة النفسية (الصعوبات والتحديات)

تم استخدام مقياس بيرسون لمعرفة العلاقة بين مشاهدة برامج التلفزيون و الصحة النفسية (الصعوبات والتحديات), و تبين أنه توجد فروق دالة إحصائياً عند مستوى 0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغير ساعات المشاهدة لأفراد العينة من طلبة المرحلة الإعدادية.

والجدول التالي يبين المتوسطات الحسابية لدرجات أفراد العينة في أدائهم على الصعوبات والتحديات ذات الدلالة الإحصائية تبعاً لمتغير ساعات المشاهدة: أن الفروق في النشاط الزائد/ طالب، المشاكل العاطفية/ طالب، النشاط الزائد/ معلم، النشاط الزائد/ الوالدين، الصعوبات والتحديات ككل/ الوالدين، بين مجموعة المشاهدة 5 ساعات من ناحية ومجموعتي 1–2 ساعة و3–4 ساعات، لصالح مجموعة المشاهدة 5 ساعة. و أن الفروق في الصعوبات والتحديات ككل/ الوالدين، المشاكل العاطفية/ الوالدين، بين مجموعة المشاهدة 5 ساعة ومجموعة 1–2 ساعة، لصالح مجموعة المشاهدة 5 ساعة. في حين لم يستطع الاختبار

الكشف عن اتجاه الفروق في مشاكل السلوك السيئ/ طالب تبعاً لمتغير ساعات المشاهدة. وتوجد فروق دالة إحصائياً عند مستوى 0.01 ومستوى 0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغير نوعية البرامج لأفراد العينة من طلبة المرحلةالإعدادية. وتبين أن الفروق في الصعوبات والتحديات ككل/ طالب كانت بين مجموعة برامج رياضة ومجموعة برامج مسلسلات تاريخية، لصالح مجموعة برامج مسلسلات تاريخية. ووجود علاقة ذات دلالة إحصائية عند مستوى 0.05 بين نوعية البرامج المفضلة من ناحية، وبين النشاط الزائد/ الوالدين، والمشاكل العاطفية/ الوالدين، ومشاكل السلوك السيئ/ المعلم والوالدين، الصعوبات والتحديات ككل/ الوالدين من ناحية أخرى.

جدول (6) معامل الارتباط بين نوعية البرامج المفضلة والصعوبات التحديات لأفراد العينة

الصعوبات والتحديات	نوعية البرامج المفضلة (ر)	مستوى الدلالة
النشاط الزائد / الوالدين	0.125	دالة عند 0.05
المشاكل العاطفية/ الوالدين	0.102	دالة عند 0.05
مشاكل السلوك السئ/ الوالدين	0.101	دالة عند 0.05
الصعوبات والتحديات ككل/ الوالدين	0.123	دالة عند 0.05

العلاقة بين العنف المدرسي بأبعاده و الصحة النفسية (الصعوبات والتحديات)

يبين الجدول التالي: وجود علاقة ذات دلالة إحصائية عند مستوى 0.01 بين العنف المدرسي بأبعاده ودرجته الكلية، ومعظم الصعوبات والتحديات بواسطة الطالب والمعلم والوالدين.

جدول (7): يبين معامل الارتباط بين العنف المدرسي والصعوبات والتحديات لأفراد العينة

الصعوبات والتحديات/ كلي	العنف المدرسي				
	العنف المادي نحو الآخرين	العنف اللفظي نحو الآخرين	العنف في الدفاع عن النفس	الاتجاه نحو العنف	العنف المدرسي ككل
الصعوبات والتحديات / طالب	**0.36	**0.45	**0.518	**0.25	**0.51
الصعوبات والتحديات / معلم	**0.30	**0.32	**0.37	**0.26	**0.40
الصعوبات والتحديات / الوالدين	**0.30	**0.40	**0.38	**0.23	**0.42

* ≤ 0.05 ** ≤ 0.01

قيمة (ر) الجدولية (د.ح= 390) عند مستوى دلالة 0.05= 0.113، وعند مستوى دلالة 0.01 = 0.148

المناقشـــــــــــة

مشاهـــدة التلفزيـــــون

تبين الدراسة أن الأطفال من طلبة المرحلة الإعدادية يفضلون مشاهدة جميع البرامج التلفزيونية و خاصة مشاهدة برامج العنف في التلفاز.

العنـــــف المدرســـي

بينت الدراسة أن متوسط درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف المادي نحو الآخرين، والاتجاه نحو العنف، العنف المدرسي ككل، وكانت الفروق لصالح الطلاب الذكور.

يرى الباحثان أن نتائج الدراسة مطابقة للواقع فالعنف لدى الذكور يكون أكثر منه لدى الإناث, وذلك لأن الشخصية الأبناء تختلف عن شخصية البنات, وميول الذكور للعنف أكثر من ميول الإناث للعنف, وحيث أكدت نتائج الدراسة على وجود فروق دالة إحصائياً بين درجات الذكور والإناث من طلبة المرحلة الإعدادية في العنف المادي نحو الآخرين، والاتجاه نحو العنف، العنف المدرسي ككل، وكانت الفروق لصالح الطلاب الذكور. حيث جاء في دراسة (محيسن، 1999) أن للذكور سلوكاً عدوانياً أكثر من الإناث في كل من الدرجة الكلية للعدوان, العدوان البدني الموجه نحو الآخرين, العدوان اللفظي الموجه نحو الآخرين, أما دراسة (القطط، 2000) فوجدت فروق داله إحصائيا في مستوي السلوك العدواني بين الجنسين لصالح الذكور, وفي دراسة (الطويل، 2002) تفوق الطلاب في مستوي السلوك العدواني علي الطالبات. وفي دراسة (دحلان، 2003) أكدت الدراسة على ووجود فروق ذات دلالة إحصائية في السلوك العدواني لدي الأطفال المشاهدين لبرامج التلفاز تعزي لمتغير الجنس (ذكور, إناث) لصالح الأطفال الذكور في كل من العدوان المادي واللفظي والكلي ولصالح الإناث في السلوك السوي, ولم توجد فروق بين الجنسين في العدوان السلبي.

حيث أكدت الكثير من الدراسات على أنه لا توجد فروق في محددات العنف المدرسي وأبعاده تبعاً للعمر أو الصف الدراسي ومن هذه الدراسات دراسة (محيسن، 1999), ودراسة (القطط، 2000), ودراسة (الطويل، 2002), ودراسة (دحلان، 2003), وكانت نتيجة الدراسة عدم وجود فروق دالة إحصائياً في جميع الأبعاد والدرجة الكلية للعنف المدرسي تعزى لعدد أفراد الأسرة لأفراد العينة من طلبة المرحلة الإعدادية, حيث اتفقت مع نتيجة الدراسة دراسة (دحلان، 2003), (أبو حطب، 2002), (الطويل، 2002), (القطط، 2000).

ويختلف السلوك العدواني باختلاف المستوي الاقتصادي والاجتماعي, فقد أثبتت مجموعة من الدراسات أن أبناء الأسر التي تنتمي إلي مستويات اقتصاديه اجتماعية منخفضة سلوكهم العدواني أكثر من سلوك زملائهم

المنحدرين من أسر تنتمي إلي مستويات اقتصادية اجتماعية مرتفعة كدراسة (الجميل، 1988).

واتفقت مع نتائج الدراسة دراسة (الطويل، 2002), ودراسة (القطط، 2000), ودراسة (محيسن، 1999), حيث لم تجد هذه الدراسة فروق دالة إحصائياً في العنف المدرسي بأبعاده ودرجته الكلية تعزى لمتغير الدخل الشهري لأفراد العينة من طلبة المرحلة الإعدادية واتفقت نتائج الدراسة مع دراسة كل من (دحلان, 2003), (أبوحطب,2002), (الطويل, 2002), (القطط, 2000), (محيسن, 1999) حيث أكدت الدراسات على أن الصعوبات والتحديات التي تواجهها الإناث أكثر من الصعوبات والتحديات لدى الذكور, والمتعمق في الواقع الذي نعيشه والعادات والتقاليد التي نربي أبنائنا على إتباعها يجد أن نتيجة البحث منطقية وعقلانية. وأكد ما جاء في الإطار النظري إن الإباء الذين يتسمون بالغلظة والقسوة مع أبناؤهم يتعلم أبنائهم السلوك العدواني, كما توصلت الدراسات إلي أن الآباء, الذين كانوا يشجعون أبناءهم علي المشاجرات مع الآخرين, وعلي الانتقام ممن يتعدي عليهم والحصول علي مطالبهم بالقوة والعنف, كانت درجة العدوانية لديهم أكبر من درجة العدوانية عند الآباء الذين لم يشجعوا أبناءهم علي السلوك العدواني بأي شكل من الأشكال, وهذا الأمر بمجمله يعد مؤثراً أساسياً على الصحة النفسية لدى ألأبناء, خصوصاً أن الحرية التي تمنح للذكور أكثر بكثير من الأتي تمنح للإناث وهذا يعد أهم صعوبات وتحديات تواجه الإناث (مختار,2001: 69). وترى الباحثة أن هذه النتيجة منطقية بالنسبة للعالم العربي أو بمعنى أخر للمجتمعات الإسلامية, لأن المسلم في الأول والأخير مرتبط بالعقيدة الإسلامية والثقافة الإسلامية التي تمنعه من عمل الكثير من الأمور التي تؤثر على دينه, أما المجتمعات الغربية التي لا تربطهم أي دين ولا ثقافات فإن درجة الحرية واحدة بين ذكورها وإناثها, والناظر إلى المجتمعات الغربية يلاحظ قلة الصعوبات التي تواجه أبناء هذه المجتمعات.

المشاكـــــــل النفسيـــــــة

توجد فروق دالة إحصائياً عند مستوى دلالة أقل من 0.05، بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات النشاط الزائد/ طالب، والمشاكل العاطفية/ طالب، والصعوبات والتحديات ككل/ طالب، والشخصية الاجتماعية/ معلم، والمشاكل العاطفية/ الوالدين، والصعوبات والتحديات ككل/ الوالدين، وكانت الفروق لصالح الإناث. كما توجد فروق دالة إحصائياً عند مستوى دلالة أقل من 0.05، بين متوسطي درجات الذكور والإناث من طلبة المرحلة الإعدادية في صعوبات العلاقة مع الأقران/ طالب ومعلم، السلوك السئ/ معلم، والصعوبات والتحديات ككل/ معلم، وكانت الفروق لصالح الذكور.

والفروق في صعوبات المشاكل العاطفية المشاكل العاطفية/ معلم كانت بين مجموعة الصف الدراسي السابع، والصف الدراسي التاسع، لصالح مجموعة الصف الدراسي السابع. كما تبين أنه لا توجد فروق دالة إحصائياً في جميع الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لعدد أفراد الأسرة لأفراد العينة من طلبة المرحلة الإعدادية. أن الفروق في مشاكل العلاقة مع الأقران/ معلم والصعوبات والتحديات ككل/ معلم بين مجموعة ذوي الدخل الشهري (1001 – 2000 شيكل) ومجموعة ذوي الدخل الشهري (3001 شيكل فأكثر)، لصالح مجموعة ذوي الدخل الشهري (1001 – شيكل 2000). في حين لم يستطع الاختبار الكشف عن اتجاه الفروق في مشاكل العلاقة مع الأقران/ الوالدين تبعاً لمتغير الدخل الشهري.

وتتفق مع هذه النتيجة دراسة (دحلان, 2003), (الطويل, 2002) حيث أشارت هذه الدراسات إلى أن اختلاف العمر يؤثر على الصحة النفسية لدى الأبناء وأن كلما تقدم الأطفال في أعمارهم كلما زادت الصعوبات والتحديات لديهم إذا تركوا عرضة لمؤثرات المجتمع والضغوط النفسية والبيئية, وإذا تركوا دون توجيه صحيح وسليم . وقد ذكر كل من "بجوركفست ليجرسبتتر وكوكينين" أن العدوان الغير مباشر يتزايد في عمر الحادية عشرة لدي الإناث وأن العدوان الجسدي بين الذكور يقل خلال المراهقة ويستبدل بالعدوان اللفظي وإن ذلك غالباً ما يكون نتيجة لزيادة الذكاء الاجتماعي، فالنمو اللغوي يسهم في التعبير عن العدوان كما يسهم في إحداث تغيرات في توقعات المراهق لسلوك الآخرين وفهم القواعد الاجتماعية المرعية في إطار المجتمع (عبد الله ،1997: 231). ونفسر اهذه النتائج من خلال متانة العلاقات الموجودة بين أفراد الأسرة الواحدة في المجتمع العربي، حيث يبذل الآباء جهوداً كبيرة في العناية بأبنائهم ورعايتهم بشتى أنواع الرعاية بغض النظر عن عدد الأبناء، بالإضافة فإن العلاقة التي يسودها الحب والدفء تمثل مصدراً للوقاية من الآثار المترتبة على التعرض للأحداث الصعبة وضغوطات الحياة. أما إدراك الفرد لعدم وجود مساندة اجتماعية وخاصة من الأهل، فإنه يشعره بعدم القيمة وعدم القدرة على المواجهة، وتكون هنا بداية ظهور أعراض اكتئاب حيث يفتقد الفرد الشعور بالقيمة ويفتقد السند عند المحنة.

ونرى أن المساندة الاجتماعية المتمثلة في المساندة الوالدية – وهي أهم سند اجتماعي في حياة الطفل– والتي تتسم بحب الطفل والاهتمام بما يقوله ويفعله، تجعل الطفل يشعر بالقيمة والكفاية والقدرة على مواجهة الإحباطات، كما أن المساندة تعتبر من أهم مصادر الصحة النفسية للفرد، وفي حال غياب المساندة الاجتماعية فمن الأرجح أن يصبح الفرد عرضة للأمراض النفسية والجسمية. وهذه الأهمية للمساندة الاجتماعية وخاصة

من قبل الوالدين تجعلهم في موضع المسؤولية وتحثهم علي تقديم كل عون لأبنائهم وخاصة إذا كانوا ما يزالون في مرحلة الطفولة أو المراهقة, وتتفق مع نتائج هذه الدراسة دراسة (الطويل، 2002), ودراسة (دحلان، 2003).

فقد أثبتت مجموعة من الدراسات أن أبناء الأسر التي تنتمي إلي مستويات اقتصاديه اجتماعية منخفضة سلوكهم العدواني أكثر من سلوك زملائهم المنحدرين من أسر تنتمي إلي مستويات اقتصادية اجتماعية مرتفعة . ويقوم المستوى الاقتصادي بدور جوهري في ظهور صعوبات وتحديات لدى الأبناء، فالأسر ذات المستوى الاقتصادي المنخفض(الفقيرة) تعاني من الضغوط أشد بكثير من الضغوط التي تتعرض لها الأسر ذات المستوى المرتفع (الغنية)، فانخفاض دخلها وعجزها عن إشباع حاجات أفرادها، يزيد من إمكانية ظهور الصعوبات والتحديات بين الأبناء، فلاشك أن الأحداث الضاغطة والمتعددة تزيد من إمكانية سوء معاملة الأطفال، فالإساءة والإهمال تحدث في ظل ظروف الحياة الضاغطة، وغالباً ما تكون الإساءة مرتفعة بين الأسر ذات الدخل المنخفض، ولقد توصلت الدراسات أن الضغوط الاقتصادية ونقص الموارد تقلل من أهمية ودور الأسرة في القيام بوظائفها، مما يؤدي ذلك إلى سوء المعاملة للأطفال, واتفقت هذه الدراسة مع دراسة (الطويل،2002), ودراسة (دحلان،2003), حيث أكدت معظم الدراسات على أهمية الوضع الاقتصادي المرتفع في تخفيض الصعوبات التحديات, واختلفت مع دراسة (محيسن، 1999) حيث لم يؤثر مستوى دخل الأسرة على تعرض أفراد العينة من الذكور، والإناث للصعوبات والتحديات. ويرى الباحثين أن هذه النتيجة منطقية ومقنعة في ظل عصر العولمة الذي نعيشه وفي ظل الغزو الفكري والغزو الإعلامي الذي نعيشه, والأدهى من ذلك الثقافة الغربية التي تنتشر بين الأجيال عن طريق مشاهدة التلفاز لساعات كثيرة, والمشكلة الأكبر إهمال الآباء لأبنائهم وعدم مراقبتهم لما يتابعونه بل يتركون لهم الحرية الكاملة في مشاهدة ما يشاءون. وهذا ما أكدته نتائج الدراسة حيث وجدت أن الصعوبات والتحديات تزيد بازدياد مدة مشاهدة الأبناء للتلفاز.

العلاقـــة بيـــن مشاهـــدة التلفزيـــون و العنـــف

نجد أن التلفاز كوسيلة إعلامية جماهيرية يساهم مع غيره من المصادر الأخرى في شيوع ظاهرة العنف عموماً، والعنف المدرسي خصوصاً، أو في تنميتها أو تطويرها، وترى (جادو،2005 : 119) أن التلفاز وسيلة إعلامية، يزيد من شهية الإنسان إلى العنف، أو يضاعف من قوة العنف الكامنة في طبيعته الإنسانية، أو أنه يفسح المجال للتعبير عنه، أو يعلم الأطفال والشباب بعض الأساليب المناسبة لظهوره، أو للتخلص من المسؤولية المترتبة على ارتكابه، أو أنه يساعد على تخفيف الإحساس بالخطأ، أو الشعور بالخطأ عند ارتكابه.

واتفقت مع نتائج الدراسة دراسة (فيوليت إبراهيم, 1999),و(الجميل، 1988) حيث أشارة الدراسات أن طول فترة المشاهدة تزيد من الصعوبات والتحديات والأبناء يحاولون الهروب من الواقع الذي يعيشونه من خلال ما يشاهدونه من أفلام وبرامج تلفزيونية, ولكن في دراسة (Prmavera et al., 1996) لم تجد أي فروق دالة إحصائياً تبعاً لمتغير ساعات المشاهدة وإنما أرجعة الحالة النفسية للأبناء لسلوك الوالدين مع أبنائهم.

ويرى الشربيني أن الطفل قد يتعلم سلوكاً جديداً لمجرد مراقبته لفرد آخر يمارس هذا السلوك , وقد لوحظ ازدياد درجة العدوان لدي الأطفال الذين شاهدوا نماذج عدوانية لأشخاص مع لعب بلاستيكية أو أفلام مصورة عن أشخاص يتصرفون بعدوانية أو نماذج كرتونية تتصرف بعدوانية، وتحطم النماذج العدوانية الحواجز التي تحول دون الطفل وممارسة للعدوانية , فوجد الطفل بين مجموعة أطفال يمارسون هذا السلوك يشكل عاملاً رئيسياً في القضاء علي الحواجز التي تحول دون ممارسة الطفل لهذا السلوك (الشربيني,1994: 90).

العلاقة بين مشاهدة التلفزيون و المشاكل النفسية

أشارت نتائج الدراسة عن فروق دالة إحصائياً عند مستوى 0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغير ساعات المشاهدة لأفراد العينة من طلبة المرحلة الإعدادية. و كانت الفروق في النشاط الزائد/ طالب، المشاكل العاطفية/ طالب، النشاط الزائد/ معلم، النشاط الزائد/ الوالدين، الصعوبات والتحديات ككل/ الوالدين، بين مجموعة المشاهدة 5 ساعة من ناحية ومجموعتي 1-2 ساعة و3-4 ساعة، لصالح مجموعة المشاهدة 5 ساعة. ولكن الفروق في الصعوبات والتحديات ككل/ الوالدين، المشاكل العاطفية/ الوالدين، بين مجموعة المشاهدة 5 ساعة ومجموعة 1-2 ساعة، لصالح مجموعة المشاهدة 5 ساعة. و في حين لم يستطع الاختبار الكشف عن اتجاه الفروق في مشاكل السلوك السيئ/ طالب تبعاً لمتغير ساعات المشاهدة. وأشارت نتائج البحث عن وجود فروق دالة إحصائياً عند مستوى 0.05 في النشاط الزائد/ طالب تعزى لمتغير كيفية المشاهدة لدى أفراد العينة من طلبة المرحلة الإعدادية. وكشفت النتائج عن وجود فروق دالة إحصائياً عند مستوى0.001 ومستوى0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغير وقت المشاهدة لأفراد العينة من طلبة المرحلة الإعدادية. وأن الفروق في جميع الصعوبات التي ظهرت فيها فروق كانت بين مجموعة المشاهدة نهاراً ومجموعة المشاهدة في كل وقت، لصالح مجموعة المشاهدة في كل وقت. وأن الفروق في صعوبات النشاط الزائد/ الوالدين كانت بين مجموعة المشاهدة ليلاً ومجموعة المشاهدة في كل وقت، لصالح مجموعة المشاهدة في كل وقت. وأشارت

نتائج الدراسة عن فروق دالة إحصائياً عند مستوى 0.01 ومستوى 0.05 في بعض الصعوبات والتحديات والدرجة الكلية للصعوبات تعزى لمتغير نوعية البرامج لأفراد العينة من طلبة المرحلة الإعدادية. وأن الفروق في الصعوبات والتحديات ككل/ طالب كانت بين مجموعة برامج رياضة ومجموعة برامج مسلسلات تاريخية، لصالح مجموعة برامج مسلسلات تاريخية. وأثبتت الدراسة وجود علاقة ذات دلالة إحصائية عند مستوى 0.05 بين نوعية البرامج المفضلة من ناحية، وبين النشاط الزائد/ الوالدين، والمشاكل العاطفية/ الوالدين، ومشاكل السلوك السيئ/ المعلم والوالدين، الصعوبات والتحديات ككل/ الوالدين من ناحية أخرى. وأوضحت النتائج وجود علاقة ذات دلالة إحصائية عند مستوى 0.01 بين العنف المدرسي بأبعاده ودرجته الكلية، ومعظم الصعوبات والتحديات بواسطة الطالب والمعلم والوالدين. وكشفت نتائج الدراسة أنه لا توجد علاقة ذات دلالة إحصائية بين العنف المدرسي بأبعاده ودرجته الكلية، وبين مشاكل العلاقات مع الأقران/ الوالدين. وأشارت نتائج الدراسة أنه لا توجد علاقة ذات دلالة إحصائية بين العنف المادي نحو الآخرين والاتجاه نحو العنف، وبين مشاكل العلاقات مع الأقران/ طالب.

واتفقت مع نتائج هذه الدراسة دراسة كل من (فيوليت إبراهيم , 1998), ودراسة , ودراسة (الجميل، 1988), حيث أشارت هذه الدراسات إلى أن الأبناء يميلون إلى متابعة البرامج التي تنمي الشخصية لديهم. وتتفق مع نتائج الدراسة دراسة (محيسن، 1999), ودراسة (الطويل، 2002), ودراسة (أبو حطب، 2002), حيث أشارت معظم الدراسات التي تناولت العنف المدرسي إلى تأثيره المباشر على الصحة النفسية لدى طلبة المدارس وأن العنف المدرسي يزيد من الصعوبات والتحديات لدى طلبة المدارس.

التوصيات

وفي ضوء النتائج التي توصلت لها الدراسة فإننا نتقدم بالتوصيات التالية:

- زيادة الوعي بأنماط العنف وأثاره السلبية على الصحة النفسية والتوافق الاجتماعي والنفسي من خلال قنوات الإعلام المختلفة ومؤسسات المجتمع المعنية بالتربية والثقافة, وذلك بما تقدمه تلك المؤسسات من البرامج والتقارير و النشرات والندوات.
- التركيز على دور الوالدين باعتبارهم أهم العوامل البيئية التي يمكن أن تسهم في خفض العنف الأسري، وذلك من خلال تقديم العديد من الإرشادات التي تزيد من فهمهم للمشاكل الأسرية والسلوكيات التربوية وطرق حل هذه المشاكل بالوسائل الصحية التي تؤثر بالإيجاب نحو جميع أفراد الأسرة.

إعداد برامج الدعم النفسي الاجتماعي للأطفال بما يحقق خفض السلوكيات العدوانية والتي تشتمل على الأنشطة النظامية كاللعب الجماعي الذي يستند إلى القوانين والأنظمة، وغيرها من الأنشطة التي تسهم في علاج المشكلات النفسية لدى الأبناء.

- تشجيع طلاب المرحلة الإعدادية على الاشتراك في الأنشطة والبرامج الثقافية والاجتماعية والرياضية الهادفة, ومنحهم الفرصة لممارسة الأنشطة الطلابية المختلفة داخل المدرسة
- عمل منشورات مدرسية لتوعية الطلاب حول المشاكل النفسية الناتجة عن العنف الأسري ووسائل الاتصال والتواصل الصحيح بين بعضهم البعض وبين أفراد عائلاتهم, وتعليم الطرق الصحية لتفادي العنف الأسري .
- إقامة دورات تدريبية للمعلمين والإداريين وأولياء الأمور في فن التعامل مع المشكلات السلوكية وفي خصائص النمو في مراحل التعليم المختلفة خصوصاً مرحلة التعليم الإعدادية لخصوصيتها وأهميتها كمرحلة انتقال من الطفولة إلى المراهقة.
- إقامة دورات تدريبية للطلاب في مهارات حل المشكلات البينية وإدارة الصراع, وحثهم على استخدام أسلوب الحوار والمناقشة.
- تنظيم برامج تربوية وإرشادية؛ للحد من ظاهرة العنف الطلابي سواء كانت في صورة محاضرات وندوات أو نشرات دورية توزع على أولياء الأمور، بغية توجيههم إلى أفضل الأساليب في تربية النشء، وإعداده إعدادًا جيدًا.

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جوائـز / تكريـــم شبكـــة العلـــوم النفسيـــة العـربيـــة 2014

"كرســـي العلـــوم النفسيـــة العربيـــة "

تكريما للرواد الراحلين من علماءنا في الطب النفسي و علم النفس

تكرم " الشبكة" سنة 2014، شخصية طبنفسية عربية

البروفيسور سليم عمار (تونس)

باطلاق اسمه على "كرسي البحث العلمي حول الفصام في البلاد العربية 2014"

"كرســي سليـم عمـار للأبحـاث العربيـة حـول الفصـــام 2014"

الاشراف :الاطبـاء النفسيـون التونسيـون (تنسيق الدكتور جمال التركي)

الراعي الرسمي:شبكـــة العلـــوم النفسيـــة العربيـــة

نـأمل منكمتكرم التواصل وارسال ما تجمع لديكم من اعمال و اصدارات للبروفيسور عمار.

- سيرة علمية مفصلة عن شخصية البروفيسور سليم عمار
- جمع و عرض كامل نصوص أعماله في اضطرابات الفصام
- عرض ملخصات جميع أعماله العلمية الأخرى
- اعداد فهرسة موسعة للابحاث العربية في اضطرابات الفصام
- اعداد فهرسة موسعة للاطروحات العربية في اضطرابات الفصام
- عرض نصوص كامل الابحاث والدراسات العربية المميزة المنشورة في الدوريات العالمية المحكمة و الفائزة بجوائز وطنية او عربية او عالمية

ندعوا من توفرت لديه عناوين الكترونية لاحد افراد اسرة البروفيسور عمارتكرم مدنا بها.

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Exposure to war traumatic experiences, post traumatic growth and resilience among university students in Gaza

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Abstract

Aim: This study aimed to establish the association between war traumatic experiences, post traumatic growth and resilience among universities students in the Gaza Strip after war on Gaza.

Method: The sample consisted of 381 randomly selected student's representing the four major universities in Gaza Strip. Students completed the following self-rated questionnaires: Gaza Traumatic Events Checklist, Resilience scale, and Posttraumatic Growth Inventory. Data collection was done on March -April 2015.

Results: Participants reported a range of traumatic events; the highest frequencies reported traumatic events were watching mutilated bodies in TV (94.5%), hearing shelling of the area by artillery (92.4%), hearing the loud voice of drones motors (87.4%), and inhalation of bad smells due to bombardment (78.7%). While, the least common traumatic experiences were: hearing killing of a friend (11%), and being arrested during the land incursion witnessing (18.9%). Mean traumatic events reported by universities students were 10 events. While, 6% reported mild, 36% moderate and 58% severe traumatic events. Male students reported more traumatic events than females. Mean post traumatic growth was 67.34, appreciation of life was 7.17, new possibilities were 12.25, the personal strength was 10.62, and spiritual change was 6.82. Males had significantly more post traumatic growth than females and females had significantly more spiritual changes than males. For resilience, mean resilience was 55, personal competence was 22.32, positive acceptance was 13.49, trust in one's instincts was 16.30, control was 7.96, and spiritual influences were 7.31.There were gender differences on resilience subscale. Males had significantly more positive acceptance than females, trust in others, control, spiritual influences, and females had significantly more spiritual changes than males. Traumatic events had no association with post traumatic growth and total resilience. However, resilience was positively correlated with post traumatic growth.

Conclusion: Universities students still experienced high levels of distress few months following war on Gaza, although they remained reported trauma. Trauma was not related to resilience and post traumatic growth. This finding highlights the need for establishing special community centers at the universities to help students to overcome the impact of trauma. New programs for psychosocial support and second level intervention for students, and these should continue beyond the end of hostilities. More training courses in the impact of trauma and ways of coping must be conducted for students in the universities.

Keywords: Gaza, post traumatic growth, resilience, trauma, war

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1. Introduction

Much research has focused on the negative consequences of trauma and on coping strategies to stressful life events such as loss or suffering, the possibilities for experiencing personal growth positive psychological changes following exposure to highly challenging life circumstances have received considerable attention since the 1990s. One of the first empirical studies of growth among war refugees (Powell et al., 2003) was conducted with adult former refugees and displaced people from Bosnia; the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) was applied to measure PTG, and the total mean score (M = 44.1) proved lower than in non-war samples. Salo et al (2005) investigated the possibility of personal growth following torture of Palestinian ex-prisoners from the Gaza strip and demonstrated the role of socioeconomic factors in enhancing PTG. However, high levels of torture among the prisoners hindered the capability of generating positive experiences and rather led to more negative emotions, contradicting reports of higher growth among more severely traumatized groups (Tedeschi, 1999; Tedeschi & Calhoun, 1996).

Pietrzaket al. (2010), in a study of 272 predominantly older Reservist/National Guard OEF-OIF Veterans, found that 72% of the sample endorsed a significant degree of posttraumatic growth in at least one of the areas assessed, the most common of which were changing priorities about what is important in life (52.2%), being able to better appreciate each day (51.1%), and being better able to handle difficulties (48.5%).

Resilience and posttraumatic growth (PG) theory and research are rooted in the philosophical stance that emphasizes the consideration of positive (salutogenic), rather than pathological or negative factors in trauma research (Tedeschi & Calhoun 2004). Distinctions should also be made between posttraumatic growth and the concepts of resilience, hardiness, optimism, and

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sense of coherence. All these concepts describe certain personal characteristics that allow people to manage adversity well. Resilience is usually considered to be an ability to go on with life after hardship and adversity, or to continue living a purposeful life after experiencing hardship and adversity. Smith (2006) defined resilience as a process that leads strength to aware, but psychological resilience may be operationally defined as strength awareness itself—that is, the belief that one can persevere or accomplish goal-relevant tasks across varied challenges and adverse situations. In this definition, psychological resilience would fall squarely within one of the most widely supported and influential theories—social cognitive theory (Bandura, 1997)—and would be consistent with Beck's (1967) theory and stress-coping theory, in which the individual assesses both the relevance of the environmental stressor (i.e., what he or she has at stake in the encounter) and his or her coping options before deciding on coping strategies to deal with the stressor. This theory's general "coping" is shown expanded to encompass "development". In contrast, posttraumatic growth refers to a change in people that goes beyond an ability to resist and not be damaged by highly stressful circumstances. Calhoun and Tedeschi (2000) defined posttraumatic growth as positive change that individual experiences as a result of the struggle with a traumatic event" (p. 135). In contrast to the construct resilience, in which the individual returns to baseline functioning following highly stressful or traumatic experience, posttraumatic growth is characterized by post-event adaptation that exceeds pre-event levels. Despite this interesting body of literature, there is still limited evidence on how living in areas of war and political conflict impact on university students, and which types of personal growth they may develop in response in relation to resilience. This study aimed to establish the association between war traumatic experiences, post traumatic growth and resilience among universities students in the Gaza Strip after war on Gaza.

2. Measures

Socio- demographic questionnaire

The researcher prepared a questionnaire which included; name, gender, name of the university, class, place of residence, and family monthly income.

Gaza Traumatic Events Checklist (GTEC - Thabet et al. 2014): This described the most common traumatic experiences the population could have faced during the 51 days war on Gaza on 2014. The checklist was revised from an earlier version (Thabet et al. 2009). This checklist consists of 28 items covering three domains of events typical of the war on Gaza: (1) hearing traumatic events (items number 1-4 include hearing about killing of relatives or friends) (2) witnessing trauma (items number 5-14, experiencing witnessing of home demolition, killing of others); and (3) personal experiences (items number 15-28, being personally the target of violence, being shot, injured, or beaten up by soldiers). The respondents rated whether they had been exposed to each of these events as (0) 'no' or (1) 'yes'. The scale had a total of 189) and split half was 0.85 (α =

Posttraumatic growth inventory (Tedeschi & Calhoun, 1996): The PTGI comprises 21 items, with response choices ranging from 0-4 (0= I did not experience this change; 5= I experienced this change to a very great degree as a result of my crisis). The PTGI measures five domains of growth: (a) relating to others better (seven items, e.g. I have a greater sense of closeness with others), (b) recognizing new possibilities (five items, e.g. New opportunities are available which wouldn't have been otherwise), (c) a greater sense of personal strength (four items, e.g. I discovered that I am stronger than I thought I was), (d) spiritual change (two items, e.g. I have a better understanding of spiritual matters), and (e) greater appreciation of life (three items, e.g. I have a greater appreciation for the value of my own life) (Tedeschi & Calhoun, 1996). This scale was translated to Arabic and back translated and was validated by Dr. Thabet .Internal consistency for the total PTGI score in this sample was also high (Cronbach's α = .86

The Connor–Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) Arabic Version (Thabet et al, 2007,2014): The Connor–Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) consists of 25 statements adapt when changes occur'). E the extent of agreement over the pas 4 = 'true nearly all of the t various samples showing high reliability, convergent and discriminant validity in the general population. Internal consistency for the total PTGI score in this sample was also high (Cronbach's α = .88).

3. Data collection procedures

The researcher implemented structured questionnaires to collect data directly from universities students. The permission was received from the four universities mentioned before. The researcher collected data by trained field workers through coordinated the public relation offices , to the students in the four universities, either in classroom settings or outside classroom in two weeks in the second semester of the Academic year 2014/2015. Each student has completed 4 scales on 15to 20 minutes.

4. Statistical analysis

Data was entered and analyzed using the Statistical Package for Social Sciences (SPSS) software version 20 computer program. Between-group comparison was explored by independent t-test, while the associations between different continuous variables were tested by Pearson correlation coefficient. Multiple linear regression models were used to predict the posttraumatic growth outcomes – New Possibilities (NP), Relating to Others

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(RO), Personal Strength (PS), Appreciation of Life (AL), Spiritual Change (SC).Trauma scores were entered as the independent variable, and either resilience or post traumatic growth scores entered as the dependent variables.

5. Results

Socio-demographic results of the study sample

Table 1 demonstrate that 180 (47.2%) of the university students of the study sample were males, and 201 (52.8%) were females, and the results show that the mean of age of the study sample is (20.6 years) and standard deviation SD is (2.57) years. The following table, the total numbers of sample selected for the current study was 381university students. They were 138 students from the first level (36.2%), 105 from second level (27.6%), 53 from the third level (13.9%), and 85 from forth level (23.3%). Regard university, 128 of the university students of the study sample were study Islamic University (33.6%), 89 were from Al-Azhar University (23.4%), 81 from Al-Quds open University (21.3%), and 83 from Al-Aqsa University (28.8%).

Table 1: Socio-demographic results of the study sample (N=381)

Variable	No.	%
Sex		
Male	180	47.2
Female	201	52.8
Level education		
First level	138	36.2
Second Level	105	27.6
Third Level	53	13.9
Four level	85	22.3
University		
Islamic university	128	33.6
Al Azhar university	89	23.4
Al-Quds open University	81	21.3
Al Aqsa university	83	21.8
Place of residence		
North Gaza	84	22
Gaza	190	49.9
Middle area	75	19.7
Khan Younis	23	6
Rafah area	9	2.4
Family monthly income		
Less than $ 250	154	40.4
$ 251-500	105	27.6
$ 501-750	64	16.8
$751 and more	38	10

Exposure to trauma

The highest frequencies of reported traumatic events were watching mutilated bodies in TV (94.5%), hearing shelling of the area by artillery (92.4%), hearing the loud voice of drones (87.4%), , and inhalation of bad smells due to bombardment (78.7%). While, the least common traumatic experiences were: Hearing killing of a friend (11%), and being arrested during the land incursion witnessing (18.9%). The mean total traumatic events were 10 (SD =4.7).

Severity of traumatic events due to 51 days war on Gaza

In order to find the severity of the traumatic experiences, total traumatic events were recorded in to mild trauma (0-5 events), moderate trauma (6-10 events) and severe trauma (11 events and more). The results showed that 6% reported mild, 36% reported moderate, and 58% reported severe traumatic events.

Differences in traumatic events according to socio-demographic variables

Independent t-test showed statistically significant gender differences, with male students experienced significantly more traumatic events than females (t= 4.56, p =0.001).

One-way ANOVA was conducted in which total traumatic events was entered as dependent variable and other socio-demographic variables as independent variables. No statistically significant differences in traumatic events according to place of residence (F = 1.15, p = 0.33) and family monthly income (F = 84, p = 0.49).

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Post traumatic growth

The most common items reported by universities students were : I believe more strongly in God (87.9%), I understand spiritual matters better (81.6%), I try to have the best relationships to others(73.5%), I have more self-confidence (67.7%), and I discovered that I am stronger than I thought I was(67.2%).

Mean and Standard deviations of the Post Traumatic Growth domains

The following table (4) described that the main results of the PTG domains was as follows: mean PTG was 67.34 (SD = 13.42), appreciation for life was 7.17 (SD = 2.49), new possibilities was 12.25 (SD = 3.74), the personal strength was 10.62 (SD = 3.14), relating to others mean was 18.15 (SD = 5.11), and spiritual change was 6.82 (SD = 1.53).

Table 2: Means and percent of domains of Post Traumatic Growth

	Mean	Std. Deviation
Total PTG	67.34	13.42
Appreciation for life	7.17	2.49
New possibilities	12.25	3.74
Personal strength	10.62	3.14
Relating to others	18.15	5.11
Spiritual change	6.82	1.53

Differences in post-traumatic growth according to sex of students

There were gender differences on post traumatic growth. Males had significantly more post traumatic growth than females (Mean = 69.19 vs. 65.68) (t = 2.57, = 0.01) and females had significantly more spiritual changes than males (Mean =6.46 vs. 7.1) (t = -4.50, p = 0.001). No significant differences in PTG and family monthly income.

Resilience in universities students

The most common resilience items were: Things happen for a reason (92.4%), sometimes fate or God can help (0.5%), tend to bounce back after illness or hardship (72.2%), and past success gives confidence for new challenge (72.1%).

Means and Standard deviation of resilience

For resilience, mean resilience was 55 (SD = 12.51), personal competence was 22.32(SD = 5.24), Positive acceptance was 13.49 (SD = 3.38), trust in one's instincts was 16.30 (SD = 4.89), control was 7.96 (SD = 2.23), and spiritual influences was 7.31 (SD = 1.33).

Table 3: Means and percent of domains of resilience

	Mean	Std. Deviation
Total resilience	55.22	12.51
Personal competence	22.32	5.24
Positive acceptance	13.49	3.38
Trust in one's instincts	16.3	4.89
Control	7.96	2.23
Spiritual influences	7.31	1.33

Differences in resilience according to socio-demographic variables

There were gender differences on resilience subscale. Males had significantly more positive acceptance than females (Mean = 13.9 vs. 13) (t = 2.46, = 0.01), trust in others (Mean = 17.22 vs. 15.46) (t = 3.65, = 0.001, control (Mean = 8.21 vs. 7.7) (t = 2.08, = 0.03), spiritual influences, and females had significantly more spiritual changes than males (Mean = 7 vs. 7.5) (t = 3.06, = 0.002).

Relationships between trauma, PTG, and resilience

A Pearson correlation test between trauma, resilience and post traumatic growth, as well as its subscales was conducted (Table 1). There were no associations between total traumatic events and total post traumatic growth (r = 0.04, p = 0.37) and total resilience (r = 0.02, p = 0.62). Total resilience was positively correlated with total post traumatic growth (r = 0.39, p = 0.001),

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Table 4: Pearson correlation test between trauma, resilience and post traumatic growth

		Trauma	PTG	Resilience
Trauma	Pearson Correlation	1	.04	.02
	Sig. (2-tailed)		.37	.62
	N	381	381	381
PTG	Pearson Correlation	.04	1	.38 **
	Sig. (2-tailed)	.370		.001
	N	381	381	381
Resilience	Pearson Correlation	.02	.39**	1
	Sig. (2-tailed)	.62	.001	
	N	381	381	381

Prediction of PTG by traumatic events

In a multivariate regression model, each traumatic event was entered as an independent variable, with total PTG scores as the dependent variable. Two traumatic events were significantly negatively associated with total post traumatic growth: deprivation from water or electricity during detention at home: (β =0.16, p=0.002); and hearing killing of a friend was positively associated with post traumatic growth (β =0.15, p=0.01).

Table 5: Multivariate regression model of each traumatic event with total PTG

Post traumatic Growth	Unstandardized Coefficients		Standardized Coefficients	t	p	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Deprivation from water or electricity during detention at home	-4.25	1.39	-0.16	-3.06	0.002	-6.98	-1.52
Hearing killing of a friend	6.12	2.28	0.14	2.69	0.01	1.65	10.60

Prediction of resilience by traumatic events

In a multivariate regression model, each traumatic event was entered as an independent variable, with total resilience as the dependent variable. Four traumatic events were significantly associated with total resilience: watching mutilated bodies in TV (β = 0 p=0.001), hearing killing of a friend (β = 0 . 2 7 p=0.001), hearing shelling of the area by artillery (β = 0 . 3 6 p=0.001), and hearing killing of a close relative (β = 0 . 1 6 p=0.002);

Table 6: Multivariate regression model of each traumatic event with total resilience

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	t	p	Lower Bound	Upper Bound
Watching mutilated bodies in TV	18.31	2.84	0.32	6.44	0.001	12.72	23.91
Hearing killing of a friend	15.98	2.41	0.27	6.64	0.001	11.24	20.71
Hearing shelling of the area by artillery	20.99	2.80	0.36	7.50	0.001	15.49	26.49
Hearing killing of a close relative	5.50	1.68	0.07	3.27	0.001	2.19	8.81

6. Discussion

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The study aimed to establish the association between war traumatic experiences, post traumatic growth and resilience among universities students in the Gaza Strip, 9 months after 51 days war on Gaza, and during a period of ongoing trauma exposure. The study showed that universities students still reported 10 traumatic events after nine months of ending the war. Such high reported traumatic events findings were consistent with previous studies in the area (Thabet et al, 2008, 2009, 2015). Moreover, male students experienced significantly more traumatic events than females. Such sex differences toward males were consistent with results of similar studies in Gaza Strip (Thabet et al, 2013, 2014). Our finding that males reported more traumatic events than girls could be due to the cultural factors in which males are more active in daily life and political activities and females are kept at home caring for other family members.

The study showed that mean posttraumatic growth reported by students was 67.34, mean appreciation of life was 7.17, new possibilities was 12.25, the personal strength was 10.62, relating to others mean was 18.15, and spiritual change was 6.82. Males had significantly more total post traumatic growth than females and females had significantly more spiritual changes than males. The results showed that trauma did not lead to positive impact on students. However, religious factors were the main positive roles used by students to overcome the trauma such as faith in religious beliefs and believe that God play a central role in guidance of people. This has important implications for traumatized Palestinian students who lack other personal and social resources due to closure and siege of Gaza Strip in the last 8 years. Our study findings were consistent with studies such as study of Kroo and Nagi (2011) of posttraumatic growth among traumatized Somali Refugees in Hungary, which showed that mean total PTG was 68.92 (58.6 for females and 71 for males). These findings demonstrate similarly to other PTG studies conducted with non-Western samples (Ai et al., 2007; Ho et al., 2004; Kilic, 2005; Powell et al., 2003; Salo et al., 2005; Schroevers & Teo, 2008; Taku et al., 2007)—that thriving following traumatic events is not only a ''Western'' phenomenon, but highly relevant among a var of cultures, which implies that posttraumatic growth may be a universal concept.

For resilience, mean resilience was 55.22, personal competence was 22.32, positive acceptance was 13.49, trust in one's instincts was 16.30, control was 7.96, and spiritual influences were 7.31. Males had significantly more positive acceptance, trust in others, control than females and females had significantly more spiritual changes than males. Such findings were consistent with previous study of impact of stress due to siege and closure and war trauma on Palestinians in the Gaza Strip which showed that people commonly used religion for coping with stressors and wars trauma (Thabet and Thabet, 2014). This study showed that religious beliefs were a strong source of resilience. This is consistent with various previous studies, Abbadsa and Thabet (2013) in study of Palestinians victims of community violence in Gaza Strip found that mean resilience was 60.84, Males had more resilience than females. Males were more committed, more able to control, and challenging than females. Furthermore, Scholte et al (2004) studied mental health symptoms following war and repression in Eastern Afghanistan, found that respondents valued (the Islamic god) as their main resource for emotional support when feeling sad, worried, or tense. Their second preferred resource was family support.

Our study showed that total resilience was positively correlated with total post traumatic growth Researchers reported that approaches to resilience and PTG are often confused in the literature (Levine et al., 2009; Tedeschi et al., 2007), and there is a debate as to whether or not PTG is a form of resilience. Several researchers have argued that growth is superior to resilience (Lepore & Revenson, 2006; Tedeschi et al., 2007; Westphal & Bonanno, 2007). Whereas others (Levine et al., 2009) have argued that resilience can be conceptualized and measured by a lack of posttraumatic stress disorder following adversity and is inversely associated with PTG.

7. Conclusions and implications

This study showed that universities students still experienced high levels of distress few months following war on Gaza, although they remained reported trauma. Trauma was not related to resilience and post traumatic growth. Findings of the present study add to the small but growing extant knowledge about influence of trauma due to war on resilience and post traumatic growth of universities students 9 months after war. The study showed that, beside wars trauma, level of daily stressors due to closure and political uncertainty in the Gaza Strip for their family, friends and university were not given students the time for positive changes and more resilience. These results indicate that mental health professionals should pay special attention to the treatment of severely traumatized students and allow more time for the development of positive self-changes. In the initial phase, the restoration of safety, trust, and hope should be the central focus of rehabilitation of such target. A focus of intervention and policy must be understanding and addressing this situation, in order to support these students in their efforts to fulfil their familial roles. This finding highlights the need for establishing special community centers at the universities to help students to overcome the impact of trauma. New programs for psychosocial support and second level intervention for students, and these should continue beyond the end of hostilities. More training courses in the impact of trauma and ways of coping must be conducted for students in the universities.

Further cross-cultural and longitudinal studies are needed to support this notion, with preliminary evidence already available.

8. Declaration of interest:

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

9. References:

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Impact of Trauma on Palestinian Children's and the Role of Coping Strategies

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Authors' contributions

This work was carried out in collaboration between all authors. Author AAMT designed the study, supervised the data collection and did data analysis and writing, while author PV did more statistical analysis, wrote the protocol, draft of the manuscript and edited the last version of the study.

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ABSTRACT

Aims: To investigate the impact of war trauma On child mental health; the mediating role of different coping strategies.
Methods: The sample was selected randomly from the five localities of the Gaza Strip that had been exposed to war16 months earlier. Children completed the Gaza Traumatic Events Checklist-20 items-War on Gaza, UCLA PTSD scale, Birleson Depression Scale, Child Revised Manifest Anxiety Scale, and Kidcope for children.
Results: Children reported many traumatic events (mean = 4). One third (32.5%) had partial and 12.4% had full criteria of PTSD. Children living in families with low family monthly income reported more emotional problems. There was significant association between exposure to traumatic events and developing PTSD. The rates of significant anxiety and depressive symptoms were 20.5% and

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22.3% respectively.
Girls reported significantly more depressive symptoms than boys. Children commonly used the following coping strategies: wishful thinking, problem-solving, emotional regulation, and distraction. Trauma was negatively correlated with social support and wishful thinking, and positively correlated with self-criticism. Lack of social support and wishful thinking predicted all three types of mental health problems, while social withdrawal specifically predicted depression.
Conclusions: Trauma can have long-standing impact on children's mental health. Community-based intervention programmes could enhance children's resilience. Parents, teachers, universal and specialist mental health practitioners have essential roles in the development and delivery of such programmes.

Keywords: War; Gaza; children; PTSD; depression; anxiety; coping.

1. INTRODUCTION

A number of studies from war zones and different cultures have reported high rates of posttraumatic stress disorder (PTSD) among children exposed to trauma. For example, in a study of Palestinian children in the Gaza Strip, 41% reported moderate to severe posttrauatic stress (PTS) reactions [1]. In addition to examining the prevalence of PTSD and other psychiatric disorders, subsequent research investigated risk factors, including the extent of exposure. In contrast to peacetime disasters, stressors during war are generally multiple, diverse, chronic, and recurrent such as the violent death of a parent, witnessing the killing of close family members, separation and displacement, terror attacks like bombardment and shelling [2,3]. In addition, Palestinian children continuously witness severe internal (familial and societal) and external violence (due to occupation).

Children emotional responses have been found to increase in line with the levels of violence encountered [4,5]. Another study with 309 Palestinian preschoolers also found that direct and indirect exposure to war trauma increased the risk of ill mental health from a young age [6]. Overall, the majority of studies conducted in the Occupied Palestinian Territories have emphasized the high rates of dysfunction and maladaptation in Palestinian children, and reported a high prevalence of common mental health problems and more severe disorders [3,7,8].

A review of studies on PTSD prevalence in youth exposed to a variety of traumas found a wide range of prevalence rates depending on the type of trauma exposure and measure used [9]. The highest rates of PTSD were found in studies of children and adolescents exposed to war or political violence and repression. In such a study in the Gaza Strip areas exposed to the war of 23 days, among 374 children aged 6-17 years, using self-report questionnaires, 29.9% suffered from moderate PTS reactions, and 61.5% from severe to very severe PTS reactions [10]. In a similar study with children six months after the Gaza war, 39.3% fulfilled partial and 9.8% full DSM-IV criteria for PTSD [11].

Coping is defined as "constantly changing cognitive and behavioural efforts to manage specific external or internal demands that are appraised as taxing or exceeding the resources to the person" [12]. There is no unifying theory regarding the underlying elements of child and adolescent coping, although three dimensions are most commonly used to categorize coping strategies: (a) problem-focused and emotion-focused coping, (b) primary and secondary control coping, and (c) engagement and disengagement coping (also referred to as approach versus avoidance coping) [13].

To date, much of the research with children and adolescents has been based on the framework by Folkman and Lazarus (albeit initially developed for adults), which emphasized the context in which the coping actions occur, the attempt rather than the outcome, and the fact that coping is a process that changes over time, as the person and the environment are continuously in a dynamic, mutually influential relationship [14,15,16]. This is often referred to as the transactional model of coping.

Coping can affect children's emotional well-being independently of their prior mental health status. It is equally likely that children experiencing poor mental health use different and fewer effective strategies than those with adaptive mental health. In a study with children of depressed parents, negative cognitions were associated

with three types of coping, i.e. primary control, secondary control, and disengagement. Furthermore, coping style and negative cognitions made independent contributions to depressive symptoms [17,18].

Young people in the Gaza Strip commonly used coping strategies such as self-reliance and optimism; engaging in activities that were demanding of themselves and within their control such as getting their bodies in shape and getting better grades; and exploring ways to figure out how to deal with problems or tensions on their own. Avoidance behaviour by drinking alcohol, or using illicit drugs were the least used coping strategies [19]. Maltreated male adolescents, also in the Gaza Strip, were found to rely on emotional and problem-solving coping strategies [20]. Similarly, in another study of 250 Palestinian children who had lost their fathers due to war conflict in the Gaza Strip, significant differences were found on mental disengagement, focus on and venting of emotion, use of instrumental social support, active coping, religious coping, restraint, and planning according to trauma levels all of which were mainly used by children exposed to severe traumatic events [21].

In research with other ethnic groups such as African American high school students, coping styles range from “getting through,” which included both an acceptance of community conditions; “getting along,” which included self-defense techniques; “getting away,” which included avoidance coping strategies; and “getting back,” which consisted of confrontational coping strategies. Boys are more likely to report confrontational coping styles than girls, who instead utilize more avoidance approaches [22]. Others found similar ways of coping with terrorism attacks. Moscardino et al. 2014, in study of 60 adolescents (aged 14–18 years) who survived the 2004 terrorist attack against a Russian school in Beslan, found that self-blame was related to increased risk of PTSD, which provided further evidence for the association between emotion-focused coping strategies and posttraumatic symptomatology [23].

Overall, coping strategies have been found to mediate and/or moderate the relationship between exposure to stressors and mental health in children and adolescent [24]. The aims of this study were to investigate: 1) the types and severity of traumatic events after 16 months of the war on Gaza on children; 2) the prevalence of PTSD, anxiety, and depressive symptoms; 3) the types of coping strategies used by children; and 4) the mechanisms between trauma, coping strategies and psychopathology.

2. METHODS

2.1 Setting and Sample

The Gaza Strip is a narrow elongated piece of land, bordering the Mediterranean Sea between Israel and Egypt, which covers 360 km^2. It has high population density. About 17% of the population lives in the north of the Gaza Strip, 51% in the middle, and 32% in the south area. There are high unemployment, socioeconomic deprivation, family overcrowding, and short life expectancy. Nearly two-thirds of the population are refugees, with approximately 55% living in eight crowded refugee camps. The remainder live in villages and towns [25].

The target population consisted of 462 children of 7 to 18 years, who were exposed to the war on the Gaza Strip between December 2008 and January 2009, and who lived in five localities of the Gaza Strip (North, Gaza, Middle, Khan Younis, Rafah) . The sample was selected randomly according to prepared list of number of boys and girls from each of the five areas. Of the total children of 462 who were contacted, 449 agreed to participate in the study, following informed consent from their parents, with a response rate of 97%. This high response rate was due to the type of Palestinian society in the Gaza with limited movements from their homes and families are staying for the same place for very long period and also insistence of the data collectors to do the interview even to visit the family more than 2-3 times.

The data collection was carried out by eight trained psychologists and social workers, under the supervision of the first author. They were trained for six hours in data collection and interviewing techniques. The data was collected during 2010. Children completed self-administered questionnaires at home with assistance from the researchers. The completion of the self-administrative measures took at least one hour for each child. Sociodemographic information was collected from the parents, while measures for exposure to traumatic events, PTSD, depression, anxiety, and coping strategies were completed by the children.

2.2 Measures

2.2.1 Gaza traumatic events checklist [5]

The checklist was developed to reflect the particular circumstances of the regional conflict, which cold not be captured by other war trauma measures, and has been reported previously [1,2]. This consists of 17 items covering three domains of events typical of the war on Gaza: (1) witnessing personally acts of violence (e.g., killing of relatives, home demolition, bombardment, or injuries); (2) experiencing loss or injury of family and other close persons; and (3) being personally the target of violence (e.g., being shot, injured, or beaten up by soldiers). The respondents rated whether they had been exposed to each of these events as (0) 'no' or (1) 'yes'. A total score was estimated. The Cronbach alpha for the Gaza Trauma Events Scale was 0.80 and the split half was 0.75.

2.2.2 Revised children's manifest anxiety scale (RCMAS) [26]

The RCMAS is a standardized 37-item self-report questionnaire for children of 6-19 years of age. It measures anxiety-related symptoms ('yes/no' answers) on 28 anxiety and 9 lie items. This instrument has been previously used by the authors in the Gaza Strip, including in a total population study, where 21.5% of children scored above the cut-off score for anxiety disorders [27].

In the current study, the internal consistency of the scale, calculated using the Cronbach's alpha, was high (α=0.86), as was its split half reliability (r=0.82).

2.2.3 Depression self-rating scale for children (DSRC) [28]

The Depression Self Rating Scale (DSRC) is an 18-item self-report questionnaire in which the child is asked to rate his/her own situation during the last week on a 3-point scale. Scores of 2, 1 or 0, respectively, in the direction of disturbance, refer to 'most of the time', 'sometimes' or 'never'. The DRSC includes 18 items. The Cronbach's alpha was α=0.63 and the split half reliability was r=0.61.

2.2.4 UCLA PTSD index for DSM IV - adolescent version [29]

The items of the UCLA PTSD indices are keyed to DSM-IV criteria and can provide preliminary PTSD diagnostic information. Self-reports for children and adolescents exist, as well as parent reports. The adolescent Version for aged 13 years and above includes 22 questions. A 5-point Likert scale from 0 (none of the time) to 4 (most all the time) is used to rate PTSD symptoms. Only 17 items were included in the total score, because two items did not constitute DSM-IV criteria and three items were repeated symptoms were used [29]. The original English version of this scale was adapted to the Palestinian context (Cronbach α for Arabic Palestinian version was 0.89) [30].

Reaction Index was highly satisfactory (Cronbach's alpha = 0.90), with a split half of 0.86.

2.2.5 Kidcope-young children [31]

The Kidcope is a brief self-report measure of children's and adolescent's use of coping strategies [31]. The 15-item is designed for children between the ages of 7 and 18 years. The framework underpinning its development is based on the theory that coping is a process of changes in cognitive and behavioral strategies rather than a stable personality trait. The Kidcope allows children to identify the problem they consider the most stressful in their lives, and to assesses ten coping strategies (distraction, social withdrawal, cognitive restructuring, self-criticism, blaming others, problem solving, emotional regulation, wishful thinking, social support, and resignation) related to this specific problem.

The Kidcope was administered in relation to the traumatic events of the war on Gaza, and was scored for positive coping style (the sum of responses to the cognitive restructuring, problem solving, emotional regulation, and social support subscales) and negative coping style (the sum of responses to the distraction, withdrawal, criticizing self, blaming others, wishful thinking, and resignation subscales). Each item/coping strategy is scored as 0 ('no') or 1 ('yes'). Earlier research established test–retest reliability coefficients for short intervals (3–7 days) ranging from 0.41 to 0.83 [32].

2.3 Statistical Analysis

The analysis was conducted on the SSPS for Windows (version 20). Questionnaire data was normally distributed, for this reason independent t-test was used to investigate differences between two groups. Associations between

continuous variables were measured by the Pearson's correlation coefficient test. One-way ANOVA post hoc Tukey was used to investigate differences between more than two groups. To test the fourth aim, a multivariate regression analysis was conducted, in which trauma scores were entered as the independent variable, each psychopathology score (depression, anxiety, PTSD) entered as the dependent variable, and coping strategies as covariates.

3. RESULTS

3.1 Sociodemographic Profile

As shown in table one, regard to the area of residence, 34.3% of children lived in Gaza area, 19.2% in Khan Younis, 18.3% in the middle area, 16.3% in the northern Gaza Strip, and 12% in the Rafah area. Most of them lived in cities (64.2%), 25.5% in refugee camps and 10.3% in villages. According to family monthly income, 73.4% of families had less than $300, 22.6% had $301-625, and only 4% had a monthly income of more than $626-750. In regards to employment status, 46.5% of children's fathers were unemployed, 8.1% Unemployed and received benefit, and 13.6% were government employees, 7.1% were simple workers, 6% were skilled workers, 13.6% were governmental employee 3.5% were United Nations Relief and Works Agency for Palestine Refugees (UNRWA) employee, 2.3% were given unemployment benefits, 3.2% were farmers, and 9.7% were working in other jobs (Table 1).

3.2 Exposure to Traumatic Events

As shown in table two, the most commonly reported traumatic events experienced by children during the last war were: watching mutilated bodies and injured Palestinians on television (90.4%); deprivation from water or electricity during detention at home (44.6%); and fforced to leave their home during the war (33.5%) (Table 2).

Overall, children reported a range of 0 to 17 traumatic events, with a mean number of 3.59 (SD=2.92). When these were grouped into mild (0-5 events), moderate (6-10) and severe (11 and above), 80.6% of children reported mild level of trauma, 16% moderate level, and 3.3% reported a severe level of trauma exposure. There were no significant differences between males and females in reporting traumatic events (t=-0.88, p=0.37). When children were grouped in the 7-11, 12-15 and 16-18 years age groups, there were no differences on reporting traumatic events (F=0.33, p<0.71). Furthermore, there were no differences in exposure to trauma according to place of residence or family monthly income.

Table 1. Sociodemographic characteristics (N = 439)

Items	No.	%
Gender		
Boys	233	51.9
Girls	216	48.1
Area of residence		
North Gaza	73	16.3
Gaza	154	34.3
Middle area	82	18.3
Khan Younis	86	19.2
Rafah	54	12
Type of residence		
City	274	64.2
Village	44	10.3
Camp	109	25.5
Monthly family income		
Less than $300	292	73.4
$301-625	90	22.6
$626-750	16	4
Father job		
Unemployed	202	46.5
Unemployed and received benefit	35	8.1
Simple worker	31	7.1
Skilled worker	26	6
Governmental employee	59	13.6
United Nations Relief and Works Agency for Palestine Refugees (UNRWA) employee	15	3.5
Unemployment benefit	10	2.3
Farmer	14	3.2
Other	42	9.7
Mothers job		
Housewives	422	94.0
Simple worker	6	1.3
Governmental employee	10	2.2
Other	11	2.4

3.3 Children's Post-traumatic Stress Reactions

Approximately one quarter (24.9%) of children did not experience any PTSD symptoms, 30.2% reported at least one criterion (B or C or D), 23.5% reported partial PTSD (B and C, C and D, or B and D), and 12.4% of children reported full criteria of PTSD. The most common post traumatic symptoms were: 43.4% reported that when something reminded them of what

happened during the war, they became very upset, afraid or sad; 31.5% were afraid that the event would happen again; 30.4% felt jumpy or easily startled, like when they heard a loud noise; and 30% tried to stay away from people, places, or objects that reminded them of what happened.

Post hoc test using Tukey showed that children aged 7-11 years reported more PTSD symptoms than the older age groups (F=4.28, p=0.01). Children from families with family income of less than $300 reported more PTSD symptoms (F=6.01, p=0.003). , as were children living in cites (F=4.05, p =0.01). Using the Pearson correlation test, there were significant association between total traumatic events reported by children and total PTSD (r=0.43, p = 0.01), intrusion (r=0.29, p = 0.01), avoidance (r=0.41, p = 0.01), and hyperarousal scores (r =0.45, p = 0.01).

In a multivariate regression model, each traumatic event was entered as an independent variable, with total PTSD scores as the dependent variable. Five traumatic events were significantly associated with total PTSD symptoms: deprivation of going to the toilet and leaving the room at home because of firing and shelling in the area: (B=0.40, p=0.001); loss of a friend or relative: (B=0.25, p=0.001); destruction of personal belongings and witnessing firing by tanks and heavy artillery at own home (B=0.13, p=0.004); being threatened of death by being used as a human shield by the army (B= 0.12, p=0.006); and shot by bullets, rockets, or bombs (B=0.12, p=0.006).

3.4 Anxiety Symptoms

Adopting, previously established cut-off scores, 89 children (20.5%) reported anxiety problems of clinical significance. There were no statistically significant differences according to gender (t=1.91, p <0.13) or age (t=1.28, p <0.27). Children coming from families with family income of less than $300 reported more anxiety symptoms. (F = 6.81, p =0.001). Using the Pearson correlation test, there was a significant association between total traumatic events reported by children and total anxiety scores (r=0.39, p=0.001).

In a multivariate regression with each traumatic event entered as an independent variable, and total anxiety scores as the dependent variable, four traumatic events were significantly associated with total anxiety symptoms deprived from water or electricity during detention at home (B=0.37, p=0.001); being detained at home during the war (B= 0.10. p=0.04); forced to leave your home during the war (B=0.10, p=0.03); and witnessing firing by tanks and heavy artillery at own home (B=0.09, p=0.04).

Table 2. Type of traumatic experiences

Traumatic events	Yes	No
Watching mutilated bodies in TV	90.4	9.6
Deprivation from water or electricity during detention at home	44.6	55.4
Forced to leave your home during the war	33.5	66.5
Witnessing demolition of neighbours homes	29.8	70.2
Witnessing firing by tanks and heavy artillery at neighbours homes	26.6	73.4
Being detained at home during the war	25.3	74.7
Threaten by shooting	22.6	77.4
Witnessing shooting of a friend	14.3	85.7
Destroying of your personal belongings during incursion	13.7	86.3
Witnessing killing of a friend	13.6	86.4
Witnessing firing by tanks and heavy artillery at own home	10.1	89.9
Shooting by bullets, rocket, or bombs	8.3	91.7
Witnessing killing of a close relative	7.6	92.4
Beating and humiliation by the army	6.3	93.7
Exposure to burn by bombs and phosphorous bombs	5.4	94.6
Threaten by shooting	4.1	95.9
Being exposed to danger by used as human shield by the Isralei army	4.1	95.9

3.5 Depressive Symptoms

Overall, 100 children (22.3%) reported depressive symptoms above the cut-off score. Girls reported significantly higher scores (t=15.9, df=1, p<0.001), as well as children coming from families with family income lower than $300 (F=3.58, p=0.01). Using the Pearson correlation test, there was a significant association between total traumatic events and total depression scores (r=0.34, p=0.001).

In a multivariate regression with each traumatic event entered as an independent variable, and total depression scores as the dependent variable, four traumatic events were significantly associated with total depression symptoms: deprived of going to the toilet and leaving the room because of firing and shelling (B=0.30, p=0.001); witnessed shooting of a relative (B= -0.17. p=0.001); watched mutilated bodies on TV screen (B=-0.15, p=0.004); and detained at home during incursion: (B=0.15, p=0.001) .

3.6 Coping Strategies

As shown in table three, the most commonly used coping strategies in the face of war stressors and trauma were: wishful thinking (96.2%), problem solving (96.2%), emotional regulation (95.3%), and distraction (93.5%). The least commonly reported coping strategies, were resignation (27.5%) and self-criticism (50.8%) (Table 3). Chi square test was conducted to investigate gender differences in relation to coping strategies. Only two coping strategies were significantly different, i.e. cognitive restructuring was reported less by girls than boys, 32.8% vs. 40.2% respectively (χ^2=4.7, df =1, p<0.02); and blaming others was more common in girls than boys, 36% vs. 34.2% respectively (χ^2=3.6, df=1, p< 0.03).

3.7 Coping Strategies as Mediating Factors between Trauma and Child Psychopathology

Three series of multivariate linear logistic regression analyses were performed to test the hypothesis of the mediating effect of coping strategies in children's psychological reactions to traumatic events. Total traumatic events were entered as an independent variable; PTSD, total anxiety and depression scores as the dependent variable in each model; and the Kidcope subscales as the covariant. Social withdrawal was associated with depression (F = 5.57, p = 0.02); wishful thinking was associated with depression (F = 5.31, p = 0.02), anxiety (F = 6.62, p = 0.01) and PTSD (F = 19.13, p = 0.001); and lack of social support was associated with depression (F = 28.39, p = 0.001), anxiety (F = 8.59, p = 0.001), and PTSD (F = 6.65, p = 0.01).

Table 3. Coping strategies used by traumatized children

Coping strategies	Yes		No	
	No.	%	No.	%
Wishful thinking	418	93.5	29	6.5
Problem-solving	403	90.0	45	10.0
Emotional regulation	123	27.5	325	72.5
Distraction	393	87.9	54	12.1
Social support	428	96.2	17	3.8
Social withdrawal	426	95.3	21	4.7
Cognitive restructuring	428	96.2	17	3.8
Blaming others	327	73.0	121	27.0
Self- criticism	314	70.2	133	29.8
Resignation	227	50.8	220	49.2

4. DISCUSSION

This study investigated the types and severity of traumatic events after 16 months of war on Gaza on children; the prevalence of PTSD, anxiety, and depressive symptoms; to types of coping strategies used by children; and the mediating effect of coping strategies between trauma and child psychopathology. The results showed that, even such a long period after the conflict, children continued to report many traumatic events. The explanation of the continuation of reporting of traumatic could be due to the on-going conflict, stressors and threats of a new war on Gaza. Severity of trauma exposure was significantly associated with scores total PTSD an all subscales scores. Our findings were consistent with those of the International Society for the Traumatic Stress Studies [33] i.e. that individuals who have already experienced trauma (survivors of war, immigrants, refugees, or those who have lived through periods of unemployment or discrimination) are more vulnerable to severe stress reactions following a traumatic event. These individuals may be at greater risk for mental-health problems, including depression, anxiety, and PTSD.

More specifically, 12.4% of children reported full criteria of PTSD, 20.5% suffered from anxiety problems, and 22.3% from depression

of sufficient severity to indicate the need for clinical assessment and possibly treatment. The PTSD rates were lowered in this study than those detected among adolescents injured during Al-Aqsa intifada and who sustained permanent disability [34]. They were more consistent with a previous study of children in the Gaza Strip, [35], although these rates subsequently increased when children exposed to continuous shelling (33.9%). Depression rates were high, although even higher prevalence was previously established during the conflict [33].

The most commonly used coping strategies were: wishful thinking problem solving, emotional regulation, and distraction. This finding was consistent with that of a multi-site study of 166 adolescents infected with HIV in three major US cities, which showed that passive emotional regulation (80%) was rated by youth as both the most frequently used and most helpful strategy. Blaming others was the least frequently used strategy and was perceived as among the least helpful [36]. In a study of African American high school students, collaborative religious coping protected against suicidal ideation, whereas self-directed coping (i.e. relying on oneself to manage a problem) acted as a risk factor [37].

Trauma exposure was negatively correlated with social support, wishful thinking; and was positively correlated with self-criticism. This could be explained by postulating that family and community support is disrupted because of the ongoing conflict. Children living in war zones witness a variety of traumatic events and share daily suffering with family members, which can lead to less wishful thinking and self-criticism. These mechanisms may underpin our findings. These are consistent with previous research, for example, Berman and colleagues, in a multiethnic youth sample, found that negative coping (e.g., criticizing, blaming others, wishful thinking) was related to PTSD symptoms [38]. They were also consistent with an earlier study in the Gaza Strip [39], which found that negative coping was significantly associated with PTSD, depression and anxiety; while positive coping was strategies were used by people with depression and anxiety, but not by those suffering from PTSD. Cognitive reframing, which is conceptually similar to avoidance of reminders of trauma and numbing feelings, may prospectively predict more PTSD symptoms because denying the severity of a problem and trying not to think about it may lead to more recurrent and intrusive recollections of the trauma. Living in areas with other stressors such as siege and threat of war are additional maintain factors of PTSD.

The relationship, however, may also be reciprocal, in that higher levels of coping can have the deleterious effect of increasing distress. Our findings were consistent with a transcultural study of adolescents from four countries, which found that both Palestinian and Colombian youth were noted to be more likely to seek to belong, focus on the positives, engage in social actions, problem-solving, and seek spiritual support, than were German and Australian adolescents. Australian adolescents predominantly used non-productive strategies such as tension reduction, self-blame, ignoring, keeping to self and, most noticeably, worrying and wishful thinking [40]. Adolescents who survived the school terrorist attack in Beslan, Russia and who reported PTSD symptoms were more likely to blame themselves, thus providing further evidence for the association between emotion-focused coping strategies and posttraumatic symptomatology following terrorism[41].Similar patterns have been reported following road traffic accidents [42].

This study had certainly limitations. Children's recollections over 16 months of war may have been affected by previous and emerging traumatic experiences and stressors. These reports were not corroborated with parents and teachers. Coping was assessed by a brief screening measure. As suggested by the scale's authors [32], using a brief measure may limit our ability to fully understand the adaptive and/or maladaptive nature of coping strategies and how these are applied by children. The way in which social withdrawal (an avoidance strategy) is assessed by this measure may overlap with the assessment of post traumatic stress, which brings to question the nature of this relationship.

5. CONCLUSION

This study found that, 16 months after war exposure, children continued to experience substantial trauma, and to suffer from associated mental health problems such as depression, anxiety, and PTSD. Children tried to cope with such reactions by using different strategies, mainly trying to feel better by spending time with family, grown-ups or friends; trying to sort out daily problems; and sharing with others. These findings highlight the need for community-based interventions to improve children mental health.

These could apply in schools and other community centers by psychologists and psychiatrists, or trained specialists. Parent training in early detection of child mental health problems and their management should be a key objective. In addition, community programmes should enhance children's resilience by helping them build adaptive individual and social strategies.

CONSENT

All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication of this report.

ETHICAL APPROVAL

All authors hereby declare that all the research proposal and scales had been examined and approved by the appropriate Palestinian ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Mental Health and Quality of Life of Disable Palestinian Children in the Gaza Strip

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Abstract

The aim of the study was to investigate the prevalence of mental health problems and quality of life among Palestinian disable children. The sample consisted of 391 disable Palestinian children in the Gaza Strip which was selected randomly from the data base of two NGOs working with such group of children. The age of children ranged from 6 - 18 years with mean age (11.73). Instruments: The children and adolescents demographic data were collected by questionnaire include sex, age, class, and place of residence, Gaza Child Health Study Scales (parents and children forms), and The Pediatric Quality of Life Inventory generic core (version 4.0) scale. The results showed that children reported mean conduct disorder was 1.33; oppositional disorder was 5; mean overanxious was 6.75; separation anxiety mean was 6.36; and depression was 7.57. There were statistically significant differences toward boys in depression. According to parents, mean conduct disorder mean was 1.94; mean oppositional disorder was 6.09; mean overanxious was 7.47; separation anxiety mean was 6.48; and mean depression was 9.6. The study showed that mean depression in boys was 10.4 compared to 8.9 in girls. There were statistically significant differences toward boys in depression. Parents of children with physical disabilities reported more overanxious problems in their children compared to other parents with other types of disabilities (vision, mental, and multiple). Also, parents of children with physical disability had more separation anxiety than other groups (mental and multiple disabilities). Quality of life of children was scored by children themselves; mean emotional functioning was 8.24; mean social functioning was 6.65; school functioning mean was 9.17; and cognitive functioning was 8.57. The study showed that

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mental health problems rated by children such as conduct disorder was positively correlated with emotional and cognitive functioning; oppositional disorder was correlated with emotional, social, and cognitive function; overanxious disorder was correlated emotional, school, and cognitive functioning; separation anxiety was correlated emotional functioning; and depression was correlated emotional, social, and cognitive functioning.

Keywords

Disabled Children, Mental Health Problems, Quality of Life, Gaza Strip

1. Introduction

Disability and incidence of disability in Arab countries are challenging subjects for some factors; few indexed publications, limited statistics; reliability is questionable, sociability in definitions and different methodologies.

According to the WHO, disability is "an umbrella term, covering impairments, activity limitations, and participation restriction. Thus, disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives" [1].

In a meeting in Cairo in 2002, UN-ESCWA recommended some measurements to have reliable date, including training interviews to improve the quality of data collection, sensitivity training, and better phrasing of questions [2]. For example, Jordan's official 2001 estimated disability in 12.6% of population [3], 10 times higher than the 1994 figure of 1.2% [2].

Persons living with some form of disability account for about 15% of the world population [4]. The records of National Society for Rehabilitation and Palestinian Medical Relief Society in Gaza Strip showed that 35,866 persons were identified with one disability at least according to WHO criteria, which represented 2.5% of total population of the Gaza Strip. According to place of residence, 13.8% live in North Gaza; 28.2% live in Gaza; 23.4% live in Middle zone; 24.6% live in Khan Younis area; and 10% live in Rafah. Of this number, 57.3% were males and 42.7% were females. For age, 36.4% were under 18 years old and 63.6% above 18 years old. The data showed that the most common type of disability was vision 33.24%, followed by physical disability 31.78%, speech impairment 4.69%, learning impairment 5.48%, mental problems 2.36%, hearing disability 7.78%, multiple disabilities 14.23%, and other disabilities 0.44% [5].

From the mid-1990s onwards Goodman and colleagues conducted and reported a series of studies undertaken in children with hemiplegia identified from the London area.

In an intensive study of 428 children with hemiplegia aged 2.5 - 16 years using standardized measures, with a subset of these children undergoing individual psychiatric assessment. The rate of psychiatric problems was high with more than half the children (61%) having psychiatric problems, based on individual assessment or as judged by their parents (54%). The types of disorders experienced by the children studied intensively included emotional disorder (25%), which tended to be anxieties and fears; conduct disorder (24%), which most often presented as irritability and oppositional behaviours in contrast to antisocial behaviours; situational hyperactivity (13%) and pervasive hyperactivity (10%); with autistic and other disorders occurring rarely (3% respectively) [6]. Even among the most able children with hemiplegia (mild motor impairment, IQ more than 90, at mainstream school without a history of seizures) the rate of psychiatric problems was 39%. Follow-up data (four years later) were available for 90% of the children included in the above study. In another longitudinal study of stability of psychiatric problems in a sample of children with hemiplegia and found that the majority of children with hemiplegia assessed at time one still had psychiatric problems by time two (70%). In addition, a further 30% of children without problems at time one developed difficulties by time two [7].

A study examined in detail the social experiences of 55 children with hemiplegia at mainstream school. These children were part of the larger cohort, and all had an IQ greater than 60. The study involved matching the children with hemiplegia to 55 classmate controls and undertaking a number of interviews and sociometric measures to explore peer relations of children with hemiplegia. Overall children with hemiplegia were twice as likely as their peers to be rejected; they were twice as likely to have no or few friends; they were three times more likely to be victimized and; according to teacher reports, they were less likely than their classmate control

to initiate aggressive or bullying behaviours with other children—which suggested they were not initiating all the difficulties [8].

Despite something of a mixed picture presented by single studies, meta-analyses and systematic reviews [9] had concluded that the balance of evidence would indicate that children with chronic illnesses and disabilities were indeed at increased risk for emotional and behavioural disturbance and that this risk was exacerbated if neurological deficits were implicated. Also, a study of 818 children with cerebral palsy, aged 8 - 12 years, identified from population-based registers of cerebral palsy in eight European regions and from multiple sources in one further region. Main outcome measures: The Strengths and Difficulties Questionnaire (SDQ) and the Total Difficulties Score (TDS), about a quarter of the children had TDS > 16 indicating significant psychological symptoms, most commonly in the domain peer problems. Better gross motor function, poorer intellect, more pain, having a disabled or ill sibling and living in a town were independently associated with TDS > 16. Among parents who reported their child having psychological problems, 95% said they had lasted over a year; 37% said they distressed their child and 42% said they burdened the family at least "quite a lot" [10]. Furthermore, in a cross-sectional study, children with CP between 6 and 12 years of age in Canada showed 27.6% of the sample scoring in the clinically abnormal range and an additional 11.8% reporting borderline total scores. Peer problems were the most common (55.3%), followed by emotional symptoms (40.8%), hyperactivity (30.3%), lack of prosocial behaviours (27.6%) and conduct problems (22.4%). Moreover, a study of 160 adolescents with cerebral palsy in Canada using SDQ, showed that difficulties score was 36.9% of the sample and included 18.8% of the adolescents who scored in the clinically abnormal range, and 18.1% in the borderline range. When combining borderline and abnormal scores, the most frequent difficulties were: peer problems (61.9%), emotional symptoms (4.4%), conduct problems (21.3%), hyperactivity (20.0%), and lack of prosocial behaviors (15.6%) [11].

Many quality of life (QOL) definitions have been put forward in the international literature. Good quality of life (QoL) is a key outcome for the individual child and is what society wants for all children [12]. Quality of life is defined by WHO as "an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns" [13]. However, QoL seems to contain similar major ideas: (a) a life of quality is based on individual needs, choices, and control and is experienced when his or her needs are met and when he or she has the opportunity to pursue life enrichment in major life environments across the life span [14]; and (b) QOL, including both subjective and objective aspects, is a multidimensional construct consisting of personal and environmental factors [15]. Quality of life (QoL) is therefore, subjective and so must be reported by the individual concerned whenever possible. This is a challenge when assessing children's QoL because they have typically been regarded as unreliable respondents [16]. Evidence is accumulating that children can be self-report QoL reliably if their emotional development, cognitive ability, and reading level are taken into account [17]. Interest in the measurement of health-related quality of life (HRQoL) has increased considerably over the past years, with a growing appreciation of the importance of the patient's perspective [18]. According to the World Health Organization, HRQoL is to be regarded as a multi-dimensional concept that includes physical, social, cognitive and emotional functioning [19]. The subjective perception and appraisal of functioning are as important as objective health, because individuals with the same objective health status may report very different quality of life [20]. For assessing HRQoL in pediatric populations, there is wide agreement that instruments should be multidimensional, sensitive to cognitive development, easy to complete, and encompass the broadest age range possible. Furthermore, they should meet the psychometric requirements of sensitivity, reliability and validity [16] [21]-[23]. According to reports in the literature, children with cerebral palsy report lower quality of life scores than healthy children across most dimensions, and these scores do not appear to improve over time [24]. Others reported different results: psychosocial domains were less severely affected than physical domains. According to parental reports, children with CP have reduced quality of life (as measured by a quality of life inventory), and the degree of impact is related to the severity of the condition [25]. In the vastness of difference that can occur in the symptomology of children with CP, it is important to remember that true physical disability may or may not be different than the disability perceived by the child. The significance of this relates to identifying methods and types of potential interventions if true disability and perceived disability have similar psychosocial implications [26]. Moreover, larger studies with sufficient power to control for relevant factors have shown that quality of life is very similar in children with cerebral palsy and non-disabled children [27] [28].

The aim of the study was to investigate the prevalence of mental-health problems among disable Palestinian children and their quality of life in relation to types of disability and other sociodemographic factors.

2. Method

2.1. Participants

The sample chosen was a stratified random sample based on the records of the database of both the National Society for Rehabilitation (NSR) and Palestinian Medical Relief Society (PMRS), whereas the Gaza Strip was divided into five governorates (the North, Gaza, Mid Zone, Khan Younis, and Rafah), selected children and adolescents were from the active cases (cases are currently involved in the services) and inactive cases (cases received services in the past) in the period 2005-2009. The sample size was determined by the intention to reach a 95% confidence level. The study sample was 400 Palestinian. Only 391 children data were collected, nine children who did not complete the questionnaires during the interviews in their homes with response rate of 97.7%. They aged ranged from 6 - 18 years old (Mean = 11.73 (SD = 3.52), and there were no gender differences according to age ($F(1,384) = 0.42$, p = ns.).

2.2. Study Procedure

Before starting the data collection, the principal investigator conducted training for one day for data collectors (25 male and females) inside their organization (National Society for Rehabilitation—NSR). On this day, we explained the aim of the study and discussed with them the different obstacles that they could face and how to interview the children with the already prepared questionnaire. The field work was conducted by community based rehabilitation workers who give support for such target group. They visited the families according to prepared lists of number of names of children selected from the Database of the NSR (National Society for Rehabilitation) & PMRS (Palestinian Medical Relief Society). The field workers presented an information letter to the parents and asked for their consent to allow participation of their children in the study. Children were interviewed individually at their homes and each an interview lasted approximately 60 minutes. The interviewers informed children that there was no right or wrong answers, provided guidance infilling-up the scales. Children and parents were also informed that they were free to withdraw from the study at any time.

3. Measures

3.1. Sociodemographic Data

The children and adolescents demographic data was were collected by questionnaire include sex, age, class, and place of residence.

3.2. Revised Ontario Child Health Study Scales [29]

Revised Ontario child health study (OCHS) scales measure conduct disorder, oppositional disorder, attention deficit hyperactivity disorder, overanxious disorder, separation anxiety and depression based on DSM-III-R symptom criteria and contains items adapted from the Child Behavior Checklist [30]. Questionnaires were developed to be completed by parents, teachers of children in school, and adolescents aged 12 - 16. A value of 0, 1 or 2 was assigned to represent the symptom. For internalizing (e.g., worries about things in the future; needs to be told over and over that things are okay) there are three subscales; overanxious (7 items), separation anxiety (9 items), depression (9 items) and externalizing (e.g., kicks, bites, or hits other children; defiant, talks back to adults) symptoms there were three subscales; conduct (12 items), oppositional defiant (9 items) and attention deficit (14 items). The Arabic version was validated by translation and back translation of the English version, and was sent to panel of experts to validate the items of the scale. The reliability test of the subscales was done for both parents and children scales. Cronbach's alpha for parents reported conduct disorder, attention deficit disorder, oppositional defiant disorder, overanxious disorder, separation anxiety, and depression was (0.80, 0.88, 0.87, 0.85, 0.77, and 0.77). While, Cronbach's alpha for children reported conduct disorder, attention deficit disorder, oppositional defiant disorder, overanxious disorder, separation anxiety, and depression was (0.80, 0.89, 0.85, 0.72, 0.85, and 0.74).

3.3. The Pediatric Quality of Life Inventory Generic Core (Version 4.0) Scale Arabic Versions [31]

It is a brief, 28-item multidimensional instrument designed for measuring pediatric health-related quality of life. The Pediatric Quality of Life Inventory consists of 4 generic core scales: 1) Physical Functioning, 2) Emotional Functioning, 3) Social Functioning, and 4) School Functioning. For this study, the parent proxy-report format was used [21]. The instructions ask how much of a problem each item has posed over the past month. The response scale uses a 5-point Likert-type format, ranging from 0 (never a problem) to 4 (almost always a problem). The raw score for each item is reverse-scored and transformed to a scale from 0 to 100 (0 - 100, 1 - 75, 2 - 50, 3 - 25, and 4 - 0), with higher scores indicating better health-related quality of life To create the total scale score, the mean is computed as the sum of the items divided by the number of items answered on all scales. To determine the psychosocial health summary score, the sum of items divided by the number of items answered on the emotional, social, school and cognitive functioning scales was computed. In this study we used the Arabic version of the scale and we excluded the physical component of the scale due to the specifity of the disabled children [31]. Cronbach's alpha for emotional, social, school and cognitive functioning scales was (0.71, 0.71, 0.62, and 0.91).

3.4. Statistical Analysis

The data was analyzed using the statistical package for social sciences (SPSS) program (version 18.0). Descriptive techniques were used to examine the similarities and differences of variables associated with type of disabilities of children and quality of life and mental health problems. The statistical significance of differences was assessed using two-tailed independent samples t-tests ($p < 0.05$). One Way ANOVA test was performed to test the statistical significance of between more than two group differences for distributions and means. The Pearson correlation was used to examine the relationship between quality of life and mental health problems.

4. Results

4.1. Sociodemographic Characteristic of the Study

As shown in **Table 1**, the sample responded to the interview were 391 participants with response rate of 97.7%, it consisted of 192 males (49.1%) and 199 girls (50.9%). The age of children ranged from 6 - 18 years with mean age of 11.53 years (SD = 3.5). According to place residence 14.3% of children were from North Gaza, 27.6% were from Gaza, 18.8% were from Middle area, 13.8% were from Khan Younis, and 25.3% were from Rafah area (south of Gaza). According to type of residence, 43.7% of children live in cities, 43.5% live in villages, and 12.8% live in camps. In looking for the family monthly income, 29.9% had no income, 51.9% of the families monthly income was less than $250 per month, 15.1% earned $251 - 500, and only 3.1% earned more than $501.

4.2. Characteristics of the Disability of the Children

As shown in **Table 2**, the study showed that 40.66% of disabled children have physical disability, 34.8% had vision disability 13.3% had multiple disability whereas, 4.6% had hearing impairment, 3.32% had speech disability, and 3.32% had mental disability. Also, it was noticed from the results that 23.8% of disability was attributed to heredity factors, 48.6% for congenital, 9% for the last war on the Gaza Strip. The majority of children 80.6% reported that their disability is back to several years, 19.4% was before 6 months of the study. Regard rehabilitation status of cases, 56.3% of the disabled children were currently active cases (currently receiving services) with both societies, and 43.7% were inactive (currently not receiving services) and their files were closed.

4.3. Means and Standard Deviations of Mental Health Problems Rated by Parents and Children

As shown in **Table 3**, the results showed that mean conduct disorder by children mean was 2 (SD = 2.83) and by parents was 1.9 (SD = 2.94), attention deficit hyperactivity rated by children was 10.97 (SD = 7.19) and by parents was 7.2 (SD = 5.24), oppositional defiant disorder by children was 4.67 (SD 4.2) and by parents was 6.09 (SD = 4.7), mean overanxious disorder by children was 4.86 (SD = 3.11) and by parents was 5.91 (SD = 3.3),

Table 1. Sociodemographic characteristics of the study sample (N = 381).

	N	%
Sex		
Boys	192	49.1
Girls	199	50.9
Age	Mean 11.73 (SD = 3.5 years)	
Address		
North Gaza	56	14.3
Gaza	108	27.6
Middle area	74	18.9
Khan Younis	54	13.8
Rafah area	99	25.3
Place of residence		
City	171	43.7
Village	170	43.5
Camp	50	12.8
Family monthly income		
No income	117	29.9
Less than $250	203	51.9
$251 - $500	59	15.1
More than $501	12	3.1
Job		
Student	168	48.8
Unemployed	119	34.6
Employee	30	8.7
Merchant	3	0.9
Simple worker	23	6.7
Others	1	0.3

Table 2. Characteristics of the disable children.

Type of disability	**N**	**%**
Physical	159	40.66
Visual	136	34.78
Multiple	52	13.30
Hearing	18	4.60
Speech	13	3.32
Mental	13	3.32

Continued

Cause of disability		
Inherited and congenital	283	72.7
War on Gaza in 2009	35	9
Home accidents	23	5.9
Road traffic accidents	15	3.8
Date of disability		
Less than 6 months	76	19.4
One - 5 years	54	13.8
More than 5 years	261	66.8
Rehabilitation status		
Active (currently receiving services)	220	56.3
Not active (currently not receiving services)	171	43.7

Table 3. Means and standard deviations of mental health problems rated by parents and children.

	Children		Parents	
	Mean	SD	Mean	SD
Conduct disorder	2	2.83	1.9	2.94
Attention deficit disorder	10.97	7.19	7.2	5.24
Oppositional defiant disorder	4.67	4.2	6.09	4.7
Overanxious disorder	4.86	3.11	5.91	3.3
Separation anxiety	6.28	4.31	5.79	4.49
Depression	4.35	3.65	4.52	3.44

separation anxiety mean by children was 6.28 (SD = 4.31), and by parents was 5.79 (SD = 4.49), mean depression by children was 4.52 (SD = 3.44).

4.4. Differences in Mental Health Problems Rated by Parents and Children According to Sex and Age of Children

The study showed that there were no statistically significant differences in mental health problems rated by parents and children and gender and age.

4.5. Differences in Mental Health Problems According to Type of Disabilities

In order to find the differences in mental health problems according to types of disabilities, One-Way ANOVA was conducted. Post hoc test using LSD test showed that parents of children with physical disabilities reported more overanxious problems in their children compared to other parents with other types of disabilities (vision, mental, and multiple) ($F = 2.44$, $p < 0.05$). Also, parents of children with physical disability had reported more separation anxiety in their children than other groups (parents of children with mental and multiple disabilities) ($F = 3.07$, $p < 0.01$).

Parents of children with visual disabilities reported more separation anxiety problems in their children than parents of children with mental health problems. However, no other differences in other mental health problems such as conduct, depression, oppositional, attention-deficit and type of disabilities rated by parents.

4.6. Differences in Mental Health Problems Rated by Children Themselves According to Sex

In order to differences in mental health problems according to sex of children, t independent test was conducted in which sex was dependent variable and other mental health problems as independent variables. The results showed that mean depression in boys was 8.3 (SD = 7.1) compared to 6.8 (SD = 5.7) in girls. There were statistically significant differences toward boys in depression (t-test = 2.36, $p < 0.02$). However, no sex differences in other mental health problems.

4.7. Differences in Mental Health Problems Rated by Children Themselves According to Age of Children

The results showed that there was statically significant correlation between age of the handicapped children and attention deficit disorder, older aged children had more attention deficit problems than younger age group ($r = -0.11$, $p < 0.04$). No age differences in other mental health problems.

4.8. Differences in Mental Health Problems Rated by Children Themselves According to Type of Disabilities

In order to find the differences in mental health problems according to types of disabilities, One-Way ANOVA was conducted. Post hoc test using LSD test showed that children with physical and visual disabilities reported more overanxious problems compared to children with other types of disabilities (hearing and mental disabilities) ($F = 2.32$, $p < 0.05$). Also, children with physical and visual disabilities reported more separation anxiety in children compared to children with other types of disabilities (hearing and mental disabilities)) $F = 2.49$, $p < 0.05$). Children with physical disabilities reported more depression compared to children with children with visual disabilities ($F = 2.52$, $p < 0.05$).

4.9. Differences in Mental Health Problems According to Cause of Disabilities

In order to find the differences in mental health problems according to causes of disabilities, One-Way ANOVA was conducted. Post hoc test using LSD test showed that children with disabilities due to war on Gaza reported less separation anxiety compared to children with disability due to home accidents and genetic problems, but they had more separation anxiety than children with disabilities due to home accidents ($F = 3.38$, $p < 0.05$). Also children with disability due to home accidents were more overanxious than other group (disability due to war on Gaza).

4.10. Quality of Life in Handicapped Children

4.10.1. Emotional Functioning

The study showed that 16.88% of children said they feel afraid and scared, 16.62% were worried about what will happen, and 15.86% feel angry. 11.25% having trouble sleeping and 9.72% of children said they are feeling sad or blue.

4.10.2. Social Functioning (SF)

The social function of the children showed that 10.74% had difficulty keeping up with others and 9.21% had trouble getting along with peers.

4.10.3. School Functioning (SC)

The study showed that 37.34% said they keep up with schoolwork, and 23.02% said they pay attention at class.

4.10.4. Cognitive Functioning (CG)

The study showed that 13.04% said that they have difficulty remembering more than one thing at a time and 11.76% said they had difficulty thinking quickly.

4.11. Means and Standard Deviation of QOL and Subscales

As shown in **Table 4**, the study showed that mean Total Quality of life was 30.85 (SD = 14.48), mean emotional

Table 4. Means and Standard deviation of QOL and subscales.

QOL	No. of items	Mean	SD
Total quality of life	21	30.85	14.48
Emotional functioning	5	8.24	5.17
Social functioning	5	6.65	4.82
School functioning	5	9.17	4.51
Cognitive functioning	6	8.57	6.67

functioning was 8.24 (SD = 5.17), mean social functioning was 6.65 (SD = 4.82), school functioning mean was 9.17 (SD = 4.51), and cognitive functioning was 8.57 (SD = 6.67).

4.12. Differences in Quality of Life Rated by Children According to Sex

In order to differences in quality of life according to sex of children, t independent test was conducted in which sex was dependent variable and subscales of quality of life as independent variables. There were no statistically significant differences in total quality of life between boys and girls, there was statistically significant difference in cognitive functioning toward boys that girls ($t = 2.20$, $p < 0.03$).

4.13. Differences in Quality of Life Rated by Children According to Age of Children

The results showed that there was statistically significant differences between age of the handicapped children and quality of life, older aged children had less social functioning than younger age group ($r = -0.11$, $p < 0.02$). No age differences in other total quality of life and other subscales.

4.14. Relationship between Mental Health Problems in Disable Children According to Parents and Children Themselves, and Quality of Life of Children

In order to find the relationship between quality of life and mental health problems rated by parents and children, Pearson coefficient correlation test was conducted.

As shown in **Table 5**, for parents report, the study showed that emotion functioning was negatively correlated with conduct ($r = -0.14$, $p = 0.001$), oppositional defiant disorder ($r = -0.20$, $p = 0.001$), attention deficit disorder ($r = -0.18$, $p = 0.001$), overanxious disorder ($r = -0.24$, $p = 0.001$), and separation anxiety ($r = -0.18$ $p = 0.001$). While, social functioning was positively correlated with conduct ($r = 0.11$, $p = 0.001$), oppositional defiant disorder ($r = 0.32$, $p = 0.001$), attention deficit disorder ($r = 0.23$, $p = 0.001$), overanxious disorder ($r = 0.32$, $p = 0.001$), and separation anxiety (0.26 $p = 0.001$), and depression ($r = 0.27$, $p = 0.001$). Also, school functioning was positively correlated with oppositional defiant disorder ($r= 0.14$, $p = 0.001$), attention deficit disorder ($r = 0.17$, $p = 0.001$), and depression ($r = 0.27$, $p = 0.001$). Moreover, cognitive functioning was positively correlated with conduct ($r = 0.11$, $p = 0.001$), oppositional defiant disorder ($r = 0.15$, $p = 0.001$), attention deficit disorder ($r = 0.11$, $p = 0.001$), and overanxious disorder ($r = 0.16$, $p = 0.001$).

For children report, emotional functioning of children was negatively correlated with conduct ($r = -0.13$, $p = 0.001$), oppositional defiant disorder ($r = -0.21$, $p = 0.001$), attention deficit disorder ($r = -0.19$, $p = 0.001$), overanxious disorder ($r = -0.23$, $p = 0.001$), and separation anxiety (-0.19 $p = 0.001$). Moreover, social functioning was positively correlated with conduct ($r = 0.21$, $p = 0.001$), oppositional defiant disorder ($r = 0.29$, $p = 0.001$), attention deficit disorder ($r = 0.25$, $p = 0.001$), overanxious disorder ($r = 0.36$, $p = 0.001$), separation anxiety ($r = 0.27$, $p = 0.001$), and depression ($r= 0.13$, $p = 0.001$).

Also, social functioning was positively correlated with conduct ($r = 0.15$, $p = 0.001$), oppositional defiant disorder ($r= 0.20$, $p = 0.001$), attention deficit disorder ($r = 0.14$, $p = 0.001$), overanxious disorder ($r = 0.12$, $p =0.001$), and depression ($r = 0.24$, $p = 0.001$).

Also, school functioning was positively correlated with conduct ($r = 0.15$, $p = 0.001$), oppositional defiant disorder ($r = 0.20$, $p = 0.001$), attention deficit disorder ($r = 0.14$, $p = 0.001$), overanxious disorder ($r = 0.12$, $p =0.001$), and depression ($r = 0.24$, $p = 0.001$). Moreover, cognitive function was positively correlated with

Table 5. Correlation Coefficients between mental health problems in disable children according to parents, self, and quality of life of children.

	Emotional function	Social function	School function	Cognitive function
Conduct disorder—parents report	−0.14**	0.11*	0.08	0.06
Oppositional defiant disorder—parents	−0.20**	0.32**	0.14**	0.08
Attention deficit disorder—parents	−0.18**	0.23**	0.17**	0.09
Overanxious—parents report	−0.24**	0.32**	0.02	0.13**
Separation anxiety—parents	−0.18**	0.26**	0.06	0.10
Depression—parents reports	−0.09	0.27**	0.27**	0.10*
Conduct disorder—self report	−0.13*	0.21**	0.15**	0.11*
Oppositional defiant disorder—self	−0.21**	0.29**	0.20**	0.15**
Attention deficit disorder—self	−0.19**	0.25**	0.14**	0.11*
Overanxious—self	−0.23**	0.36**	0.12*	0.16**
Separation anxiety—self	−0.19**	0.27**	0.08	0.09
Depression—child reports	−0.07	0.13**	0.24**	0.06

conduct (r = 0.11, p = 0.001), oppositional defiant disorder (r = 0. 15, p = 0.001), attention deficit disorder (r = 0.11, p = 0.001), and overanxious disorder (r = 0.16, p = 0.001).

4.15. Quality of Life and Children Mental Health Problems

Regression analyses about the predictive mental health problems of quality of life are presented in **Table 5**. The models were significant for overanxious disorder reported by the child and oppositional disorder reported by the parents, explaining, however, only 10% of the variation. Significant β-values indicate that children reported overanxious disorder (β = 0.17, t = 4.14, p < 0.002) and oppositional disorder by parents (β = 0.17, t = 3.06, p < 0.002) were associated by quality of life.

5. Discussion

This study showed that the main causes of disability in Palestinian children in the Gaza Strip were attributed to heredity and congenital factors; other causes of disability were war, home accidents, and road traffic accidents. This high level of heredity cause could be attributed to the first-degree-cousin consanguinity marriage in the Gaza Strip. This is consistent with study in Egypt suggested that genetic diseases may be responsible for two-thirds of childhood blindness in Arab societies, ranging from 47% in Tunisia to 86% in Kuwait [32]. Studies had found a higher prevalence rate of disabilities in rural areas in developing countries [4].

In a study of disability and poverty in developing countries found, disability is significantly associated with higher multidimensional poverty in most of the developing countries under study. In other words, as a group, persons with disabilities, on average, experience multiple deprivations at higher rates and in higher breadth, depth, and severity than persons without disabilities [33].

The results showed that parents reported mean attention deficit hyperactivity was 9.62, conduct disorder was 1.94, oppositional disorder was 6.09, overanxious was 7.47, separation anxiety was 6.48, and depression was 9.6. While children themselves reported that mean attention deficit hyperactivity was 3.64, conduct disorder was 1.31, oppositional disorder was 5, overanxious was 6.75, separation anxiety was 6.36, and depression was 7.57. This is consistent with study of in study of an Australian children reported that 40% of 454 children with intellectual disabilities aged 4 - 18 met criteria for psychiatric caseness, compared with 14% of Australian children without intellectual disabilities identified in a random community sample [34]. Also, in the UK, a secondary analysis of surveys of representative samples of 18,415 children aged 5 - 15 reported that 36% of 641 children operationally defined as intellectually disabled met criteria for an ICD-10 psychiatric disorder compared with 8%

of 17,774 children without intellectual disabilities. In terms of specific psychiatric disorders, this study reported significantly higher rates of emotional disorder, anxiety disorder, hyperkinesis, conduct disorder, autistic-spectrum disorder and tic disorder although there were no significant differences in the prevalence of depressive disorder or eating disorder [35].

The study showed that mean emotional functioning was 8.24 (SD = 5.17), mean social functioning was 6.65 (SD = 4.82), school functioning mean was 9.17 (SD = 4.51), and cognitive functioning was 8.57 (SD = 6.67). Others reported slightly different results: Psychosocial domains were less severely affected than physical domains [25]. According to parental reports, children with CP have reduced quality of life (as measured by a quality of life inventory, and the degree of impact is related to the severity of the condition. In a study of quality of life of cerebral palsy children showed significant deficits in health related quality of life (HRQOL) for children with cerebral palsy (CP). Most of the effects were related to physical functioning issues and impact on the parents or caregivers. Psychosocial HRQOL was better than physical HRQOL. The relations among increasing number of medical problems, severity of CP, and reduced HRQOL were not surprising. A significant brain insult resulting in severe symptoms [36].

6. Conclusion

This study highlights the suffering of children with different disabilities and showed that their quality of life is low compared to other normal children. According to reports in the literature, children with CP report lower quality of life scores than healthy children across most dimensions, and these scores do not appear to improve over time [24]. This study is the first study in this area which tackles problem of disability in children and impacts on children wellbeing and quality of life. Also, the study findings highlighted the need for training courses of behavioural and emotional problems in children and ways of dealing with such problems including behavioural management and using new coping strategies to overcome the adversities of disabilities and other stressors in daily life.

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Mental Health of Disabled Palestinian Adults in the Gaza Strip

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Authors' contributions

This work was carried out in collaboration between all Authors. Authors AAMT, KAQ, HP and DH designed the study, wrote the protocol, and with help of staff of author KAQ data was collected. Authors AAT, KAQ, PV wrote the first draft of the manuscript. Authors HP and DH managed the literature searches. Author AAMT and PV analyses of the study performed the spectroscopy analysis and wrote the final draft.

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ABSTRACT

Aim: The aim of the study was to investigate the prevalence of mental health problems among disabled people, and Psychological problems in association with other sociodemographic factors.
Methods:
Subjects: The sample responded to the interview were 416 participants with response rate of

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100%, it consisted of 263 males (63.21%) and 153 females (36.79%). The age ranged from 19-70 years with mean age was 33.56 years. The results showed that 222 of participants had physical disability (53.4%), and 194 had other disability (vision, multiple, mental, hearing, and speech disability) (46.6%).

Measures: The participants were interviewed with self-reported questionnaire: including sociodemographic scale, Beck Depression Inventory, General Health Questionnaire, and Brief Symptom Inventory.

Results: The results showed that the mean psychological symptoms was 81.19, somatization mean = 11.05, obsessive compulsive symptoms mean was 10.84, interpersonal sensitivity mean = 6.56, depression mean was 9.59, anxiety mean was 10.50, hostility mean was 7.63, phobic anxiety mean was 7.9, paranoid mean was 7.26, and psychosis mean was 6.86. For differences between the two groups, participants with other disability showed statistically significant paranoia symptoms than those with physical disability. The results showed that there were no statistically significant differences in psychological symptoms in both physical and other disability according to sex. However, for general sample, disabled females reported more anxiety than males.

According to GHQ-28, 54% of the sample (316) said that their feelings about general health were worse to very worse. Also, 89.1% said that they found themselves wishing they were dead and away from it all and 74.2% found at times they couldn't do anything because their nerves were too bad more than usual. The study showed than mean GHQ-28 was 12.12, somatization mean was 3.21, anxiety mean was 3.31, social dysfunction mean was 3.34, and depression mean was 2.27.

The result showed that 42.6% of the physically disabled adults were rated as psychiatric morbidity cases according to GHQ-28 scale compared to 37.3% of other disability.

Also, there were no significant differences in mental health according to GHQ scale and subscales (somatization, anxiety, depression, and social function) and participants with physical or other disability.

The most common depressive symptoms were: self-criticism (28.2%) and irritability (24.2%). Our results showed that 10.1% of participants with physical disability had moderate to severe depression compared to 6.6% with other disability. There were no statistically significant differences between the two groups in prevalence of depression.

Conclusion and Clinical Implications: This is the first study of disabled people in the Gaza Strip which showed that 42.6% of the physically disabled adults were rated as psychiatric morbidity cases compared to 37.3% of participants with other disability that 10.1% of participants with physical disability had moderate to severe depression compared to 6.6% with other disability. These findings highlight the need for training of the staff working in such target group to enable them of early detection of those with mental health problems and being able to deliver community mental health interventions such as counseling and support therapy for them and their families. Also, more supervision from the specialized organizations working in the field of mental health to support the staff working in different organizations working with such group to increase the level of networking and referral system for cases need more psychological intervention.

Keywords: Physical; other disability; psychological problems; depression; Gaza strip.

1. INTRODUCTION

In May 1976, the WHO adopted a resolution at the 29th World Health Assembly to approve the publication, for trial purposes, of the International Classification of Impairments, Disabilities and Handicaps (ICIDH) [1]. This ICIDH classification scheme was proposed as a supplement to the ICD and is illustrated by the disablement model [1]; 1) Impairment: Any loss or abnormality of psychological, physiological or anatomical structure or function; 2) Disability Any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being; 3) Handicap: Disadvantage for a given individual, resulting from an impairment or a disability that limits or prevents the fulfillment of a role that is normal (depending on age, sex, social, and cultural factors) for that individual.

1.1 The International Classification of Functioning, Disability and Health

International Classification of Impairments, Disabilities and Handicaps (ICIDH) reinvented

our understanding of health and disability [2] and standardized language to facilitate communication. Endorsed by the World Health Organization in 2001 as the international standard to describe and measure these concepts, the International Classification of Functioning, Disability and Health is a classification system that addresses each individual's status in a holistic framework The International Classification of Functioning, Disability and Health includes domains of Body Functions and Structures as well as Activities and Participation. These domains are complemented by the contextual factors of Environmental and Personal Factors.

The specifics of the International Classification of Functioning, Disability and Health domains are straightforward. Functioning (what one does) is counterbalanced by disability (how one is limited) and these concepts together embody health.

Body Functions and Structure refers to physiology (including psychological functions) and anatomy of the body respectively and abnormalities of these are referred to as impairments, examples of which would include muscle weakness, poor attention span, periventricular leukomalacia or joint contracture. Body functions and structures are often the target of medical interventions in efforts to improve overall health.

The World Health Organization's Terminology and Classification: Application to Severe Disability''. Body functions and structure refers to physiological and psychological functioning of body systems and body structure (e.g., anatomical parts such as organs, limbs, and their components). Similar to impairment level used in ICIDH, individual level activities refers to execution of a task or activity; similar to disability level used in the ICIDH. Society level participation (Individual and society level) Refers to an individual's involvement in a life situation; is significantly different from the handicap concept used in the ICIDH in that the emphasis is on the interaction between the individual and the environment, and the person's self-control and autonomy [2].

1.2 Mental Health of Disabled People

The reported occurrence of mental health problems is approximately 2 to 3 times increased in people with Intellectual Disabilities compared to the general population [3,4]

However, occurrence figures vary greatly between studies. The point prevalence of mental health disorders (psychotic, affective, and anxiety disorders) according to the Diagnostic and Statistical Manual of Mental Disorders (DSM) or International Statistical Classification of Diseases and Related Health Problems (ICD) classification criteria ranges from 7% to 23% in some studies, and when behavior disorders are included the percentages are often more than doubled [5].

In study of general outpatient normative 1.155 adults who had not previously been referred for diagnosis. Using the Psychiatric Assessment Schedule for Adults with Developmental Disabilities to establish prevalence rates, they found that 20% of the total sample had psychopathological problems [6].

Some mental disorders have more impact than others, adjusted for gender, age and mental and/or physical comorbidity, the five mental disorders with the strongest impact were: dysthymia, major depressive episode, PTSD, panic disorder and social phobia. The impact of mental vs. physical disorders on quality of life is rather specific, with mental disorders impacting on 'mental' quality of life and physical disorders on 'physical' quality of life. (v) Overall, the impact of mental disorders on disability and quality of life seems similar or stronger than the impact of common chronic physical disorders [7].

Others, reported that the prevalence of serious psychological distress, as assessed by the dichotomously coded Kessler 6 (K6) scale of nonspecific psychological distress, is nearly 7 times higher among adults with disabilities compared to those without [8].

Recently, in study of adults with intellectual disabilities located in the English midlands, south Wales and central Scotland, who had been identified as having problems with anger control, their key-workers and home carers all rated the service users' trait anger, using parallel versions of the same instrument (the Provocation Inventory). In addition, service users completed a battery of mental health assessments (the Glasgow Depression Scale, Glasgow Anxiety Scale and Rosenberg Self-Esteem Scale), and both groups of caregivers completed a battery of challenging behaviour measures (the Hyperactivity and Irritability domains of the Aberrant Behavior Checklist and the Modified Overt Anger Scale). Results Participants had high levels of mental health problems

(depression: 34%; anxiety: 73%) and severe challenging behaviour (26%) [9]. Depression is the leading cause of disability worldwide and a major contributor to the global burden of disease [10]. Dysthymia is characterized by less severe depressive symptoms than major depressive disorder (MDD) [11].

The aim of the study was to investigate the prevalence of mental health problems among disabled Palestinian adults and association with socio-demographic variables.

2. METHODS

2.1 Participants and Procedure

This was a stratified random sample, which composed of adults with disability that was based on the records of the database of both the National Society for Rehabilitation (NSR) and Palestinian Medical Relief Society (PMRS), whereas the Gaza Strip was divided into 5 governorates (the North, Gaza, Mid Zone, Khan Younis, and Rafah), noting that the selected persons were from the active cases and inactive cases in the period 2005-2009. The sample size was determined by the intention to reach a 95% confidence level. The sample responded to the interview were 418 participants with response rate of 100%, it consisted of 264 males (63.2%) and 154 females (36.8%). The age ranged from 19-70 years with mean age was (*M* = 33.56+ 12.4). The original sample consisted of 430 adults, and the drop out was thus 3.3% consisting of 14 participants who did not complete the questionnaires with response rate of 96.7%. The field worker was conducted by 25 community workers who had been working and give support for such target group for long time and they were familiar with them in the community. They were trained for 4 hours on this research objective and were introduced to the questionnaires for this study. For data collection, they visited the families according to prepared lists of number of participants selected to the data base of the Non-Governmental Organizations working with such group. The field workers presented an information letter to the participants, and if agreed, they obtained a written permission for participation. Subjects were interviewed individually in their homes and each interview lasted approximately 60 minutes. Participants were also informed that they were free to withdraw from the study at any time. The data collection was done between September and October 2009.

2.2 Instruments

2.2.1 Sociodemographic data

The participants demographic data was collected by questionnaire include sex, age, class, and place of residence.

2.2.2 Characteristics of disability data

This scale asked about type, duration, cause of disabilities, and rehabilitation status.

2.2.3 Beck depression inventory [12]

The original form of (BDI-II) contains 21 items and aims to assess the severity of depression. It also clarifies some of the cognitive aspects of depression. The Arabic version of the scale was used in the current study. The severity of depression is classified on the basis of the total score. In a normal community sample, a BDI score <20 suggests no or minimal depression, 21 to 31 represents mild to moderate depressive affects, 32 to 41 is moderate to severe, and <= 42 indicates a severe level of depression. The reliability of the Arabic version used in this study was ascertained (Cronbach's alpha = 0.88, split half = 0.81).

2.2.4 General health questionnaire [13]

Women maternal mental health ratings were based on the General Health Questionnaire (GHQ-28). It covers severe depression and suicidal risk, anxiety and insomnia, social dysfunction, and somatic symptoms (59). Emphasis is on changes in condition, so items compare the present mental state to the person's normal mental health status. GHQ-28 scores above the cut-off of 4/5 are considered to be possible psychiatric 'cases'. This scale had been validated in Arabic culture and showed reliability and validity. The internal consistency of the scale calculated using Cronbach's alpha, was α=0.91 and split half was 0.88 [14]. In this study the Cronbach's alpha was α=0.88 and split half was 0.74.

2.2.5 Brief Symptom Inventory [15]

The BSI is a 53-item self-report symptom inventory designed to assess the psychological symptom patterns of psychiatric, medical, and community non patient respondents. It provides scores in nine primary symptom dimensions and

three global indices. Internal consistency for the nine dimensions is very good, with alpha coefficients ranging from a low of .71 to a high of .85 and test-retest reliability coefficients ranging from .68 to .91. Cronbach's alphas for the current sample were as follows: somatization (.85), obsessive compulsive (.92), depression (.90), Psychotisicm (.79), anxiety (.90), hostility (.84), and phobic anxiety (.88). In this study the Cronbach's alpha =0.95 and split half was 0.90.

2.3 Statistical Analysis

The Statistical Package for the Social Sciences (SPSS) Version 20 was used to analyze the data. The frequencies of categorical data were presented. Differences between two groups were measured by t independent test such differences in mental health and sex of physically and other disability. While, differences between three groups were measured by One Way ANOVA such as differences in physical disability other types of disability and other sociodemographic variables.

3. RESULTS

3.1 Sociodemographic Characteristic of the Study

The sample responded to the interview were 418 participants with response rate of 100%, it consisted of 2643 males (63.2%) and 154 females (36.8%). The age ranged from 19-70 years with mean age was 33.56 (SD=12.4). According to place of residence, 12% were from North Gaza, 30.1% were from Gaza, 28.7% were from Middle area, 19.1% were from Khan Younis, and 10% were from Rafah area (south of Gaza). According to type of residence, 50.1% live in cities, 34% live in villages, and 15.9% live in camps. In looking for the family monthly income, 39.7% had no income, 46.9% of the families monthly income was less than 250 US $ per month, 10.8% earned 251-500 US $, and only 2.6% earned more than 501 US $.

3.2 Characteristics of Disability

The results showed that 222 of participants had physical disability (53.4%), and 194 had other disability (vision, multiple, mental, hearing, and speech disability) (46.6%). According to cause of disability, 10.1% reported that their disability was attributed to heredity factors, 24.76% due to congenital problem, 8.25% due to road traffic accidents (RTA), 7.28% due to home accidents, and 29.61% due to last Gaza war. According to time of disability, 60.7% reported that their disability was back to several years, 16.3% was back to less than one year, and 22.9% was before 6 months of the study. Regarding the rehabilitation status of cases, 56.3% of the disabled persons were currently active cases with both societies, and 43.7% were closed.

Table 1. Sociodemographic characteristic of the study sample (N = 416)

Variable	N	%
Sex		
Males	263	63.2
Females	153	36.8
Total	416	100.0
Age	Mean =33.46 years	
Address		
North Gaza	50	12
Gaza	126	30.1
Middle area	120	28.7
Khan Younis	80	19.1
Rafah area	42	10
Education		
Uneducated	71	17.1
Elementary	70	16.8
Primary	108	26
Secondary	89	21.4
Vocational	3	0.7
Diploma	27	6.5
University	48	11.5
Place of residence		
City	205	50.1
Village	139	34
Camp	65	15.9
Family monthly income		
No income	165	39.7
Less than 1000 NIS	195	46.9
1001-2000 NIS	45	10.8
More than 20001 NIS	11	2.6
Job		
Student	25	6.5
Unemployed	232	60.6
Employee	37	9.7
House wife	46	12
Simple worker	43	11.2

Table 2. Characteristics of sample disability

Type of disability	N	%
Physical	222	53.4
Visual	101	24.3
Multiple	37	8.9
Mental	23	5.5
Hearing	21	5
Speech	12	2.9
Total	416	100
Cause of disability		
War	102	29.61
Congenital	30	24.76
Others	122	19.90
Inherited	42	10.19
Road traffic accidents	34	8.25
Home accidents	82	7.28
Duration of disability		
Less than 6 months	94	22.9
Less than one year	67	16.3
More than one year	249	60.7
Rehabilitation state of the case		
Active	220	56.3
Not active	171	43.7

3.3 Differences in Means and Standard Deviations of Psychological Symptoms (BSI and subscales) of Physical and Other Disabilities

As shown in table, the results showed that the only differences in psychological symptoms was in paranoia, participants with other disability showed statistically significant paranoia symptoms than those with physical disability (t = -.2.07, p = 0.04).

3.4 Differences in Psychological Symptoms between Participants with Physical and Other Disabilities and Sociodemographic Variables (BSI-53)

In order to find differences in gender and psychological symptoms, independent *t* test was conducted in which total mental health problems and subscales were entered separately as the dependent variable and sex of physical and other disability as independent variable. The results showed that there were no statistically significant differences in psychological symptoms according to sex (Males vs. Females was 80.94 vs. 87.37) (t = -1.14, p = 0.26). Also, there were no statistically significant differences in psychological symptoms according to sex in participants with other disability (Males vs. Females was 82.25 vs 87.32) (t = -0.90, p = 0.37).

3.5 Differences in Psychological Symptoms Using GHQ-28 and Socio-demographic Variables

In order to find differences in gender and psychological symptoms scored by GHQ-28, independent *t* test was conducted in which total mental health problems and subscales were entered separately as the dependent variable and sex of physical and other disability as independent variable. The results showed that there were no significant differences in mental health according to GHQ scale and participants with physical disability. Also, were no significant differences in mental health according to GHQ scale and subscales (somatization, anxiety, depression, and social function) and participants with other disability.

3.6 Differences in Prevalence of Mental Health Problems between Participants with Physical and Other Disabilities Using GHQ-28

Using the previous cut-off point of the GHQ-28 (4/5), the result showed that 42.6% of the physically disabled adults were rated as psychiatric morbidity cases compared to 37.3% of other disability.

3.7 Differences in Depression Level between Participants with Physical and Other Disability Adults

Using the established cutoff score on the BDI-II [16] where a score ‹20 = no depression, 21-31= mild depression, 32-41 = moderate depression, and 42 and above = severe depression. Chi square test was conducted. The study showed that 26% of participants with physical disability had no depression compared to 25.1% with other disability, 17% of participants with physical disability had mild depression compared to 15.2% with other disability, 7.4% of participants with physical disability had moderate depression compared to 4.9% with other disability, 2.7% of participants with physical disability had severe depression compared to 1.7% with other disability. There were no statistically significant differences between the two groups in prevalence of depression (χ^2 = 1.602, df = 3, p = 0.65).

Table 3. Differences in means and standard deviations of psychological symptoms (BSI and subscales) of physical and other disabilities

		Mean	SD	Mean difference	t	p
Somatization	Physical disability	11.38	6.65	0.66	1.00	0.32
	Other disability	10.72	6.54			
Obsessive compulsive	Physical disability	10.62	4.67	-0.44	-0.90	0.37
	Other disability	11.05	5.13			
Interpersonal sensitivity	Physical disability	6.47	4.26	-0.21	-0.51	0.61
	Other disability	6.68	4.04			
Depression	Physical disability	9.37	5.57	-0.36	-0.62	0.53
	Other disability	9.73	5.91			
Anxiety	Physical disability	10.64	5.00	0.20	0.38	0.71
	Other disability	10.45	5.60			
Hostility	Physical disability	7.89	4.54	0.56	1.29	0.20
	Other disability	7.33	4.17			
Phobic anxiety	Physical disability	7.69	4.50	-0.32	-0.71	0.48
	Other disability	8.02	4.65			
Paranoia	Physical disability	6.79	4.47	-0.91	-2.07	0.04
	Other disability	7.70	4.38			
Psychoticism	Physical disability	6.61	4.56	-0.41	-0.94	0.35
	Other disability	7.02	4.25			

Table 4. Differences in Means and standard deviation of the GHQ-28 of physical and other disabilities

		Mean	SD	Mean Difference	t	p
GHQ-Total	Physical disability	12.36	7.59	.81	.61	.42
	Other disability	11.75	7.53			
Somatization	Physical disability	3.19	2.44	.02	.01	.98
	Other disability	3.19	2.48			
Anxiety	Physical disability	3.32	2.47	.28	.07	.78
	Other disability	3.25	2.37			
Social dysfunction	Physical disability	3.56	2.31	2.11	.50	.04
	Other disability	3.05	2.50			
Depression	Physical disability	2.29	2.15	.14	.03	.89
	Other disability	2.26	2.11			

Table 5. Differences in prevalence of mental health problems between participants with physical and other disabilities using GHQ-28

		N case	Case	Total
Physical disability	No.	44	178	222
	%	10.5	42.6	53.1
Other disability	No.	40	156	196
	%	9.6	37.3	46.9
Total	No.	84	334	418
	%	20.1	79.9	100.0

$\chi^2 = 1.602$, $df = 3$, $p = 0.65$

Table 6. Differences in depression level between participants with physical and other disability adults

	No depression (less than 20)	Mild depression (21-31)	Moderate depression (32-41)	Severe depression (above 42)
Physical	106	69	30	11
	26.0	17.0	7.4	2.7%
Other disability	102	62	20	7
	25.1	15.2	4.9	1.7%
Total	208	131	50	18
	51.1	32.2	12.3	4.4%

4. DISCUSSION

In the Palestinian territories, people with disability (PWDs) have been challenging with harsh socio-economic situation and political uncertainty. Though legislation is a significant sign of acknowledging the needs for people with disability (PWDs), but lack to financial resources, continuation of occupation, imposing extreme siege on people's mobility on Gaza in particular deny access to travel freely abroad, lack of good infrastructure in all important sectors either in public or private, all these factors make the situation unique in Palestine.

The prevailing disability for adults (65.6% of the sample) shows that 34.77% was attributed to heredity and congenital; this is attributed to the first-degree-cousin consanguinity (26.61% of recorded people with disability are close-relatives and 12.7% from same tribe or family, compared to 26.34% non-relatives).

Study of genetic diseases in Arab countries suggested that genetic diseases may be responsible for two-thirds of childhood blindness in Arab societies, ranging from 47 percent in Tunisia to 86 percent in Kuwait [17]. It is, internationally estimated that 50 percent of hearing impairment in infants is due to genetic factors. The other factors cause disability are referred to 29.6% for war, 7.28% for home accidents, and 8.25% for road traffic accidents; [18], suggested a high rate of accident-related disability in Arab countries.

Our study participants with other disability showed statistically significant paranoia symptoms than those with physical disability. The results showed that there were no significant differences in mental health according to GHQ scale and participants with physical and other disability. For GHQ-28, the result showed that 42.6% of the physically disabled adults were rated as psychiatric morbidity cases compared to 37.3% of participants with other disability. The results showed that there significant differences in mental health according to GHQ scale and causes of disabilities. Physically disabled people had more general mental health problem than visually disabled and less than those with multiple causes people with hearing disability had less somatization than those with mental disability and multiple causes, visually impaired people had less somatization than those with physically disabled people had more somatization than visually disabled and less than those with multiple causes, people with hearing disability had less somatization than those with mental disability and multiple causes, visually impaired people had less somatization than those with mental disability and multiple disability.

Our study consistent with another study which found that if challenging behaviour and autistic spectrum disorders are included, over 40% of the adult population with intellectual disabilities can be said to have additional mental health needs [19]. In another study, Morgan and colleagues [20] cross linked Western Australian psychiatric and disability registers to identify the prevalence of psychiatric disorder and service use in people with Intellectual disability (ID) in two birth cohorts, 1950–1964 and 1965–1979. Overall 31.7% of people with ID had a psychiatric disorder. Schizophrenia, but not mood disorders, was overrepresented among people with ID, at 3.7–5.2%, for the younger and older birth cohorts, respectively. Our results showed that 10.1% of participants with physical disability had moderate to severe depression compared to 6.6% with other disability.

Our study consistent with other studies which suggested that adults with intellectual disability are four to six times more likely to experience a depressive disorder in their lifetime than are adults without intellectual disability [21]. In study of 49 young adults with Down syndrome. All were on a contact list of the Down Syndrome Research Program, The University of Queensland and all had previously had measures of intelligence conducted in adulthood and received a diagnosis of intellectual impairment. Found that depression was the most prevalent diagnosis, confirming the relative susceptibility of those with Down syndrome to this disorder in contrast to other diagnoses [22].

In study of cross-sectional data from the 2007 Behavioral Risk Factor Surveillance System were used for this study (U.S. adult population). Severity of psychological distress was assessed using the Kessler 6 scale of nonspecific psychological distress. Logistic regression analyses were performed to estimate predicted marginal and prevalence ratios. Nine percent of adults had mild to moderate psychological distress and 3.9% had serious psychological distress. The overall prevalence of moderate psychological distress was more than twice as high and the prevalence of severe psychological distress was almost 7 times higher among adults with disability compared with those without disability [23]. In a study of eighty-four adults with

mild and concomitant impairments in adaptive behavior) were recruited from 11 disability service providers in the Rocky Mountain region of the USA between 2007 and 2009. The study found that adults with mild ID self-reported a higher frequency of affective and cognitive depressive symptoms than staff reported on the informant questionnaire. Also, older adults with mild ID were reported by staff to exhibit a higher frequency of somatic depressive symptoms than younger adults with mild ID [24].

4.1 Study Implications

This study is the first studies done in the Gaza Strip to evaluate prevalence of mental health problems among disabled adults. The study showed that participants with other disability showed statistically significant paranoia symptoms than those with physical disability. For other psychological problems rated by GHQ-28 the result showed that 42.6% of the physically disabled adults were rated as psychiatric morbidity cases compared to 37.3% of participants with other disability. Our results showed that 10.1% of participants with physical disability had moderate to severe depression compared to 6.6 % with other disability. These findings highlight the need for training of the staff working in such target group to enable them of early detection of those with mental health problems and being able to deliver community mental health interventions such as counseling and support therapy for them and their families. Also, more supervision from the specialized organizations working in the field of mental health to support the staff working in different organizations working with such group to increase the level of networking and referral system for cases need more psychological intervention. There are needs to do training for handicapped people in the field of stress management and how to deal with their feelings of inferiority and low self-esteem by training courses through different community based organizations. There is need to keep data base in different organizations including the mental health profile and other disability data concerning the adults with disability.

5. CONCLUSION

This is the first study of disabled people in the Gaza Strip which showed that 42.6% of the physically disabled adults were rated as psychiatric morbidity cases compared to 37.3% of participants with other disability. For depression the study showed that 10.1% of participants with physical disability had moderate to severe depression compared to 6.6% with other disability.

Such findings showed that this target population in need for more psychological help service providing local community based organizations.

CONSENT

All authors hereby declare that study had been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Prevalence of Smoking among Patients Attending Cardiac Clinic in Gaza Strip

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Authors' contributions

This work was carried out in collaboration between both authors. Author HAAT designed the study, wrote the protocol, and collected the data, AT wrote the first draft of the manuscript. Author HAAT managed the literature searches. Author AAT analyses of the study performed the spectroscopy analysis and wrote the final draft. Both authors read and approved the final manuscript.

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ABSTRACT

The aims of the study were to determine the prevalence of tobacco smoking among patients attending private clinic and to examine the socio-demographic correlates of smoking in Gaza City. A retrospective study was carried out. The case records of all patients attending private chest clinic Abu Tawelia in Gaza City from 2006-2014 were included. A total number of 1034 records of patients was included. The sample consisted of 514 males (49.85%) and 518 females (50.15%). The patients age ranged from 18 to 90 years with mean age of 54.7 years. Overall, the smoking prevalence was of 19.2%. Males smoked more than females (16.3% vs. 2.9% of total sample). Most current smokers smoked cigarettes (82.5%), but the use of Shisha was also common (17.5%). Mean smoking years was 26.16. Smoking prevailed in patients with age ranging from 28

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to 58 years (48.5%). A bit less than 40% of smokers has started before 20 years of age.
Health-promotion activities should be established to decrease the prevalence of smoking and prevent future adverse health outcomes.

Key words: Cardiac clinic; Gaza Strip; prevalence; tobacco smoking.

1. INTRODUCTION

Based on the estimates done by the World Health Organization, in 2015 cigarette use will cause an excess of deaths of 50% when compared with HIV/AIDS; and 10% of the world's death rate will be connected to cigarette use. Between 2002 and 2030, death rates in developed countries caused by cigarette use will be decreased by 9% [1].

Smoking rates are reported to be reducing in most western countries. By contrast, smokers are increasing in many developing areas, including Muslim countries.

In Syria, the prevalence of smoking was reported to be 18.6% [2]. In the Turkey GATS conducted in 2012 has shown that 41.5% of men, 13.1% of women, and 27.1% overall currently smoked tobacco. Among smokers, 37.3% of men and 10.7% of women smoked daily. A part of current smokers, 1.1% of men and 0.5% of women smoked water pipe [3]. In the 2009 Egypt GATS, overall, 19.4% of adults currently smoked tobacco; 37.7% men and 0.5% women. Ninety-five per cent of current smokers were daily smokers. Manufactured cigarettes were the most popular type of product smoked by men (31.7%), followed by shisha (6.2%); with regard to women smokers, 0.2% smoked manufactured cigarettes and 0.3% smoked shisha. Among daily cigarette smokers, men smoked on average 19.4 cigarettes per day [4]. Another study compared smoking habits in the Middle East in a large general population sample of individuals aged 40 years. Overall, smoking rates were 53.9% in Lebanon, 39.5% in Turkey, 38.1% in Jordan, 34.5% in Syria, 29.6% in Egypt [5].

Few data on smoking habits are available from Gaza. According to the Palestinian Central Bureau of Statistics (PCBS), the smoking rate among Palestinian youth was 27%, overall [6]. A later PCBS study has reported a higher rate of smoking among youth (19.8%) [6]. Moreover, Musmar, (2012) in study aimed to explore the rate of and attitudes towards smoking among 954 randomly selected full-time students at An-Najah National University in Palestine. The study showed that 34.7% of the study sample were cigarette or water pipe (Shisha) smokers, and this rate was higher among males than females (52.7% versus 16.5%) [7].

The aims of the study were to determine the prevalence of tobacco smoking among patients attending the private cardiac clinic Abu Tawelia and to examine the sociodemographic correlates of smoking in Gaza City.

2. METHODS

2.1 Sampling

The case records of all patients consecutively attending the private clinic Abu Tawelia Cardiac Clinic in Gaza City from 2010-2014 were included. A total number 1034 records of patients were evaluated.

2.2 Measures

2.2.1 Patient records

2.2.1.1 Demographic characteristics

Demographic indicators included patient gender, age, level of education, and current employment status was presented in the record.

2.3 Smoking

Regular smokers were those patients who reported that they currently smoke daily or occasionally. Patients who responded as having previously smoked daily but did not smoke at all at the time of the interview were classified as former smokers (quitters). Patients who smoked every day at the time of the interview were classified daily smokers. Nonsmokers are patients who had never smoked tobacco. Lifetime exposure to tobacco is estimated in pack years by multiplying the average number of cigarettes smoked per day divided by 20 and multiplied by the duration of smoking years. This is based on the assumption that there are 20 cigarettes in one packet.

2.4 Statistical Analysis

The data were analyzed using SPSS software version 20.0 (Chicago, Illinois). Initially,

Continuous variables were expressed as mean± standard deviation (SD) and percentage was calculated for categorical variables. Comparison of continuous and categorical variables was done in both male and female groups using chi-squared test and any statistically significant difference was noted. For the purpose of the study, P value<0.05 was considered statistically significant. Multiple logistic regression analysis was used to examine the prediction of smoking by other socio-demographic variables such as sex, level of education, place of residence and working condition.

3. RESULTS

The sample consisted of 514 males (49.85%) and 518 females (50.15%). The age of ranged from 18-90 years with mean age 54.74 years (SD = 15.91). Other demographic details have been reported in Table 1.

Six-hundred-ninety subjects were non smokers (66.9%), 144 were former smokers (14%), and 198 were smokers (19.2%). Regard type of smoking, 160 of smokers smoked cigarettes (82.5), and 34 of them smoked Shisha (17.5%). Other findings of smoking habits have been shown in Tables 2-5.

Table 6 details a binary logistic regression analysis where smoking status was the dependent variable (in which smokers were coded as 1 and nonsmokers as 0) and some socioeconomic variables as independent variables. There was a strong statistically significant association of smoking with sex (male) ($\beta = -1.89$, $P < 0.001$). Age and type of work age (> 20 years) were also statistically significant predictors of smoking ($P< 0.05$). Three was no significant association between risk of smoking and residence and education.

4. DISCUSSION

This study aimed to determine the prevalence of tobacco smoking among patients attending a private clinic in Gaza City. Current smokers were 19.2%, overall, 16.3% males and 2.9% females. Smoking in males was more commonly than in females. However, females smoked Shisha more than males (24.1% vs. 16.3%). Waterpipe (Shisha) smoking use was relatively low, but it was more frequent in women when compared to cigarette smoking. Importantly, waterpipe smoking is also very dangerous for heart [8] and, unfortunately is largely increasing in the Middle East [9].

Table 1. Sociodemographic characteristics of the study sample (N= 1032)

		No	%
Sex	Male	514	49.8
	Female	518	50.2
Age	18 and less years	4	0.4
	19-28 years	65	6.3
	29-38 years	106	10.3
	39-48 years	199	19.3
	49-58 years	191	18.5
	59-68 years	241	23.4
	69 and more years	226	21.9
Place of residence	North	170	16.5
	Gaza	703	68.1
	Middle area	128	12.4
	Khan Younis	5	.5
	Rafah	26	2.5
Work	Not working	20	1.9
	Simple worker	74	7.2
	Skilled worker	45	4.4
	Employee	196	19.0
	Merchant	86	8.3
	Retired	114	11.0
	Others	42	4.1
	Housewife	455	44.1
Education	Not educated	179	17.4
	Elementary	166	16.1
	Secondary	410	39.9
	University	213	20.7
	High-education	60	5.8

Only 40% of the patients started smoking before age of 20 years. This finding is not typical of western countries, but it is reported in Muslim countries [1]. This gender difference in smoking rates was commonly found in this region of the world [10]. A main cause could be that women in many Muslim countries have restricted access to public places where cigarettes are traditionally smoked, such as cafes and markets. Moreover, smoking by men is traditionally seen as common and “normal”, while smoking by women may be considered inappropriate and shameful. Our smoking rates was lower than found in Turkey, Jordan, Lebanon. However, our findings are not generalizable to the whole Gaza population, as only pertained to patients attending a private cardiac clinics in Gaza.

Few comparison data are available in those countries. A study was conducted in Jordan to evaluate the prevalence of the 4 conventional risk factors in 5000 individuals including 1692 (34%) women. Coronary heart disease CHD was present in 1534 (31%) individuals (1202 men and 332 women). Among coronary heart disease (CHD) patients, at least one risk factor was present in the majority of men (95%) and women (96%). Compared with women who had CHD, men had significantly higher prevalence of smoking (45% vs. 11) [11]. Likewise, cigarette smoking is particularly prevalent among Middle-Eastern patients presenting with acute coronary syndrome [12].

Table 2. Smoking status of the study sample

		No	%
Smoking status	Smoker	198	19.2
	Non smoker	690	66.9
	Former smoker	144	14.0
Type of smoking	Cigarettes	164	82.8
	Shisha	34	17.2
Age of starting smoking (y)	<16	36	20.1
	17-20	35	19.6
	21-25	53	29.6
	>26	55	30.7
Years of smoking	Less than 10 years	28	14.1
	11-15 years	18	9.1
	16-20 years	42	21.2
	21-25 years	14	7.1
	above 26 years	96	48.5

Table 3. Sex differences in smoking status and forms from total sample (N =1032)

	Male (168+126+220)		Female (30+18+470)		$\chi 2$	p
Smoking						
	No.	**%**	**No.**	**%**		
Smoker	168	16.3	30	2.9	267.75	0.001
Former smoker	126	12.2	18	1.7		
Non smoker	220	21.3	470	45.5		
Type of smoking (N= 194)						
Cigarettes	138	71.1	22	11.3	1.03	0.21
Shisha	27	13.9	7	3.6		

Table 4. Education level and smoking

Education		Former smoker (144)	Non smoker (690)	Smoker (198)	Total
Uneducated	No.	12	163	6	181
	%	1.2	15.8	.6	17.5
Elementary	No.	25	115	26	166
	%	2.4	11.1	2.5	16.1
Secondary	No.	60	259	93	412
	%	5.8	25.1	9.0	39.9
University	No.	36	117	60	213
	%	3.5	11.3	5.8	20.6
High-education	No.	11	36	13	60
	%	1.1	3.5	1.3	5.8
Total	No.	144	690	198	1032
	%	14.0	66.9	19.2	100.0

($\chi 2 = 65.69$, $df = 8$, $p < 0.001$)

Table 5. **Age and smoking**

Age		Smoker	Former smoker	Non smoker
18 and less years	No.	0	0	4
	%	0.0	0.0	.4
19-28 years	No.	14	2	49
	%	1.4	.2	4.7
29-38 years	No.	36	6	64
	%	3.5	.6	6.2
39-48 years	No.	61	26	112
	%	5.9	2.5	10.9
49-58 years	No.	46	25	120
	%	4.5	2.4	11.6
59-68 years	No.	26	42	173
	%	2.5	4.1	16.8
69 and more years	No.	15	43	168
	%	1.5	4.2	16.3

($\chi 2 = 82.80$, $df = 8$, $p < 0.001$)

Table 6. Multiple regression analysis of smoking and socio demographic variables (n = 1032)

Smoking		OR	95% CI	*p*-value
Sex (M/F)	F	0.15	(0.09-0.26)	0.001
	M	0.98	(0.96-0.99)	
Age (age class)	<=40	0.82	(0.73-0.92)	
	>40	0.81	(0.62-1.07)	0.001
Type of work	work	1.03	(0.99-1.07)	0.001
	Not work	0.15	(0.09-0.26)	
	Housewife	0.98	(0.96-0.99)	
Place of residence (Gaza yes/not)	Gaza	0.82	(0.73-0.92)	0.13
	Not Gaza	0.81	(0.62-1.07)	
Education level (lower/upper)	upper	1.03	(0.99-1.07)	0.09
	lower			

Patients with acute coronary syndrome in the Middle East are younger than in developed countries and have higher rates of diabetes and smoking [13].

4.1 Implications for Practice

This study showed that smoking among patients attending private cardiac clinic is 19.2% which may be generalized to the adult population in the Gaza Strip. Such rate need more campaigns for cessation of smoking in sport clubs, community based organization, schools, universities and other place where adolescents available and spending their time. School-based intervention programs must be started to overcome the increasing number of adolescents smoking and to increase their awareness about the dangerous on health consequences of smoking and ways of avoiding such risks.

The study showed that there is need to do more prevalence studies in prevalence of smoking in other groups such as the university students and other risk and protective factors. Also, to evaluate the risk and protective factors in adolescents smoking Shisha which spread in the last decade among adolescents and young men in Gaza?

More taxes should be imposed in each pack of cigarettes for making buying cigarettes difficult and unavailable for number of smokers.

A public policy for preventing smoking in public places such as civil buildings, hospitals, and other places serving the people must be implemented.

5. CONCLUSION

This is the first study of cases referred to private clinic in Gaza Strip which showed that 19.2% were smokers, males smoked more than female patients. Females smoked Shisha more than males (24.1% vs. 16.3%). Such findings highlight the need for more community programs to increase awareness of smoking hazards on health and public laws must prevent smoking in public places.

CONSENT

It is not applicable.

ETHICAL APPROVAL

All authors hereby declare that study had been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Prevalence of Psychosomatic Symptoms among Traumatized Palestinian Adolescents in the Gaza Strip

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Authors' contributions

This work was carried out in collaboration between all authors. Authors TA and NAS designed the study, wrote the protocol and NA did data collection while author TA supervised the work. Authors TA and DKK performed the statistical analysis. Author TA managed the analyses of the study. Author NAS wrote the first draft of the manuscript. Authors TA, NAS and DKK managed the literature searches and edited the manuscript. Author PV managed the final editing and discussion. All authors read and approved the final manuscript.

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ABSTRACT

Aims: To estimate the prevalence of psychosomatic symptomsamong traumatized Palestinian adolescents in Gaza Strip.
Methods: The study sample consisted of 380 adolescents randomly selected from secondary schools in Gaza Strip, of whom 171 were boys and 209 were girls between 15-18 years. Data was collected using a socio-demographic checklist, the Gaza Traumatic Events Checklist, and the Psychosomatic Symptoms Scale. For statistical analysis, questionnaire data was normally distributed, for this reason independent t-test was used to investigate differences between two groups. Associations between continuous variables were measured by the Pearson's correlation coefficient test. One-way ANOVA post hoc Tukey was used to investigate differences between more than two groups.
Results: The most common reported traumatic events due to the war on Gaza were: watching mutilated bodies and wounded people in TV (92.3%), and hearing shelling of the area by artillery (89.4%). The mean number of traumatic events experienced by Palestinian adolescents was 14. Boys reported significantly more traumatic events than girls. Adolescents from family with monthly income less than 150 US $ experienced more traumatic events than the other groups.
Mean psychosomatic symptoms was 48.19, digestive system symptoms was 19.97, cardiovascular symptoms was 10.23, respiratory system symptoms was 3.82, urogenital system symptoms was 2.98, skeletal musculature symptoms was 5.29, and skin symptoms was 7.34. Boys scored more in total psychosomatic and skin symptoms. There was a significant relationship between traumatic experiences and psychosomatic symptoms.
Conclusion: Palestinian adolescents experienced significant traumatic events due to the war on Gaza Strip which were significantly associated with developing psychosomatic symptoms. Such findings highlight the urgent need for establishing community mental health school based programs to help adolescents with such symptoms and increase awareness about their nature and management. Also there is need for conducting training courses for teachers and school counsellors to increase their knowledge about general mental health problems in schools and ways of dealing with such problems. Also, training courses for primary care and hospital physicians, who might attribute to physical causes, and liaison between physical and mental health services.

Keywords: Adolescents; Gaza; psychosomatic symptoms; trauma; war.

1. INTRODUCTION

Each year millions of children are exposed to variable types of extreme traumatic stressors. These include natural disasters (e.g., tornadoes, floods, and hurricanes), motor vehicle accidents, life-threatening illnesses and associated painful medical procedures (e.g., severe burns, cancer, and limb amputations), physical abuse, sexual assault, witnessing domestic or community violence, kidnapping, and sudden death of a parent [1].

Children of Gaza have been subject to a wide range of traumatic and violent events over the last few decades, which, when considered alongside other risk factors such as gender, socio-economic status and previous mental health history, these have led to significant psychosocial problems [2]. On Saturday 27th December 2008, there was a new political escalation and violence against the Palestinians in the Gaza Strip. Within the first 20 minutes the Israeli air force bombarded the security positions in the Gaza Strip, leaving hundreds of killed people and more than a thousand of injured. This war on Gaza continued for 23 days. The total toll of this war was 1,330 killed persons and 5,500 injured [3].

A number of studies showed the negative psychological consequences of traumatic experiences on child development and well-being. During the war in Bosnia-Hercegovina, a community sample of 2,976 children aged between 9 and 14 years was selected. Children reported a high prevalence of posttraumatic stress symptoms and grief reactions. Girls reported more distress than boys, but there were few meaningful age effects within the age band studied [4].

In a study in the Nangarhar province in Afghanistan, a sample of 1011 Afghani aged 15 years or older was selected. During the previous ten years, 43.7% of them had experienced

between 8 and 10 traumatic events, and 14.1% had experienced 11 or more traumatic events. The study showed that 38.5% of participants reported symptoms that fulfilled clinical criteria for depression, 51.8% reported anxiety, and 20.4% reported posttraumatic stress disorder [5].

In a study of Palestinian adolescents exposed to both political and domestic violence, whereas there was no significant gender difference in the level of exposure to political violence, female adolescents exhibited higher levels of psychological symptoms compared to their male counterparts. Girls also reported higher levels of exposure to domestic violence and lower levels of family functioning than boys [6]. In another study of 358 Palestinian adolescents, the mean number of traumatic events reported by adolescents was 13.3. The most frequently reported traumatic experiences were watching mutilated bodies on TV (90.8%) and hearing shelling of the area by heavy artillery (88.5%). Almost one third of the young people (29.8%) reported symptoms meeting criteria for a full post traumatic stress disorder (PTSD) [7].

Overall, previous research has primarily focused on the impact of trauma on a range of emotional disorders. Surprisingly, there has been limited evidence on the prevalence of psychosomatic symptoms and disorders, or on their relationship with trauma exposure, despite the well documented link of such presentations with emotional psychopathology. Psychosomatic disorders are typically defined as those in which psychological factors are thought to contribute significantly to the development, exacerbation, or maintenance of the illness [8]. Psychosomatic symptoms and somatization are distinct from malingering in that the patient is truthfully reporting his or her bodily sensations and not consciously using these symptoms to manipulate or control others or the situation [9]. Recently, the definition of psychosomatic disorder has been changing according to the Diagnostic and Statistical Manual of Mental Disorders (DSM). The term psychosomatic disorder refers to physical symptomatology appeared to be caused, influenced or worsened by psychological factors rather than by an underlying physical illness [10].

Depending on the sample and measures, the prevalence rate of psychosomatic complaints in children and adolescents has been found to be between 10 and 25% [11,12].

Such symptoms were particularly high among Palestinian University students who had suffered sexual abuse, together with depressed mood, withdrawal, suicidal or self-injurious behaviors, illegal acts, running away, and substance abuse [13].

Another study of 1,828 children aged 6 to 16 years, of whom 842 had been affected by a devastating earthquake in Wenchuan County in the Northwest Sichuan Province of China and 986 lived in a non-affected area, total psychosomatic symptoms were significantly higher among those exposed [14]. As there has been limited knowledge on the presentation of psychosomatic symptoms following war conflict, this was the rationale of this study with traumatized Palestinian adolescents in the Gaza Strip.

2. METHODS

2.1 Participants and Procedure

The sample consisted of 380 adolescents. The age ranged from 15 to 18 years, with a mean of 16.6 years (SD=0.08). The sample was randomly selected from ten schools in the Gaza Strip (two schools from each of the five governorates of the Gaza Strip - one all-boys and one all-girls school). From each school, three classes were selected randomly (10^{th}, 11^{th} and 12^{th} class), following which we selected randomly the sample from each class registration book. At the end of the selection process, the sample consisted of 171 boys (45%) and 209 girls (55%).

2.2 Research Procedure

We trained three mental health professionals (two male and one female) on data collection for three hours, during which the aim of the study was explained, the sampling, questionnaires and interview techniques. The study was approved by the Palestinian Ministry of Health Ethics Committee. Also, an official letter was obtained from the General Director of the Ministry of Education in order to conduct the study in governmental secondary schools and to facilitate the process of data collection. Each young person received an explanatory letter explaining the aim of the study and that the information gathered would be kept confidential for the purpose of the research only. A similar letter to the parents was send with the participants, and if agreed, they obtained a written permission for

their adolescent's participation. Data collection took place in the classroom during April 2010.

3. MEASURES

3.1 Socio-demographic Checklist

Information was collected from the adolescents on gender, age, place of residence, number of siblings, parents' education and employment status, and family income.

3.1.1 War on Gaza traumatic events checklist [15]

This had been used in the same area [15] and during this period of conflict, It was modified to include 30 items covering different types of traumatic events that adolescents may have been exposed to in the particular circumstances of the 2008-2009 war on Gaza Strip. This checklist covers three domains of trauma. The first domain cover hearing experiences such as hearing to the killing or injury of friends or relatives (item number 1-5). The second domain describes witness acts of violence such as the killing of relatives, home demolition, bombardment, and injury of others (item number 6-17). The third domain covers personal experiences of traumatic events such as being shot or beaten (item number 18-30). The checklist can be completed by children aged 6-16 ('yes' or 'no'). In this study the reliability of the scale using Cronbach's alpha was 0.92 and the split half was 0.86.

3.1.2 Psychosomatic symptoms scale [16]

The scale consists of 59 items that describe different types of psychosomatic symptoms. This scale covers six psychosomatic domains such as digestive system symptoms (23 items), cardiovascular symptoms (7 items), respiratory system (6 items), skin (12 items), urogenital system (5 items), and muscular-skeletal system symptoms (6 items). The items of the scale are rated on a 5-point scale: 1=not at all (0 point), 2= a little bit (1 point), 3= moderately (2 points), 4=quite a bit (3 points) and 5=extremely (4 points). This scale was validated in the Arabic culture (Egypt) [16]. The internal consistency of the Arabic version was satisfactory (Cronbach's alpha = 0.98) and its split half was 0.98. This scale had been previously used in the Gaza Strip, with similar psychometric properties Cronbach's alpha = 0.98) and split half= 0.98 [17]. In this study, the reliability of the scale using Cronbach's alpha was 0.97 and its split half was 0.84.

3.2 Statistical Analysis

Data was entered and analyzed using the Statistical Package for Social Sciences (SPSS) software version 18. The questionnaire data was normally distributed, for which reason an independent t-test was used to investigate between-group differences. Associations between continuous variables were measured by the Pearson's correlation coefficient test. One-way ANOVA post hoc Tukey was used to investigate differences between more than two groups.

4. RESULTS

4.1 Socio-demographic Characteristics (Table 1)

The sample consisted of 380 adolescents, 171 of whom were male (45%) and 209 were female (55%) between the ages of 15-18 years (mean=16.6, SD=0.08). Regarding the place of residence, 26.1% lived in North Gaza, 18.9% in Gaza city, 23.2% in the middle area, 14.2% in Khan Younis area, and 17.6% lived in the Rafah area (13.4%).

Table 1. Demographic characteristics of the study sample (N=380)

	No	%
Sex		
Male	171	45
Female	209	55
Age in years, MEAN age was 16.64 years		
15 y	30	7.9
16y	131	34.5
17y	165	43.4
18y	54	14.2
Place of residence		
North Gaza	99	26.1
Gaza	72	18.9
Middle area	88	23.2
Khan Younis	54	14.2
Rafah area	67	17.6
Family monthly income		
Less than 150 US $	129	33.9
151- 300 US $	86	22.6
301 – 650 US $	102	26.8
More than 651 US $	63	16.6

4.2 Frequency of Traumatic Events Due to War on Gaza

The most commonly reported traumatic events due to the war on Gaza were: 92.3% watched mutilated bodies and wounded people on TV, 89.2% heard shelling of the area by artillery, and 89.2% heard the sonic booms from jetfighters.(Table 2).

4.3 Traumatic Events and Socio-demographic Variables

Traumatic experiences were recoded into three categories (hearing: items 1-5; witnessing: items 5-16; and direct: items 17-30). The mean number of total traumatic experiences were 14.21, mean hearing experiences was 3.61, mean witnessing experiences 5.76, and mean direct experiences 4.84. Boys reported significantly more traumatic events than girls (t-test = 2.19, p <0.04); also, boys reported more hearing traumatic experiences than girls (t-test = 2.81, p <0.01). However, there were no gender differences on reporting witnessing and personal experiences.

Adolescents with family monthly income less than 150 US$ had experienced more traumatic events than the other groups with higher family income (F=3.23, p=0.02).

4.4 Psychosomatic Symptoms

As shown in Table 3, the mean number of psychosomatic symptoms was 48.19 (SD= 27.94) with estimated weight 20.42% (mean/No of items 59*4(0-4 scale)*100), digestive system symptoms was 19.97 (SD= 11.85),

Table 2. Frequency of traumatic events due to war on Gaza

No	Traumatic events	Yes	%
1	Watching mutilated bodies in TV	350	92.3
2	Hearing shelling of the area by artillery	339	89.4
3	Hearing the sonic sounds of the jetfighters	338	89.2
4	Witnessing the signs of shelling on the ground	336	88.7
5	Witnessing firing by tanks and heavy artillery at neighbors homes	265	69.9
6	Witnessing assassination of people by rockets	261	68.9
7	Hearing of arrest of someone or a friend	242	63.9
8	Forced to leave your home during the war	235	62
9	Hearing killing of a friend	235	62
10	Witnessing of a friend home demolition	235	62
11	Deprivation from water or electricity during detention at home	234	61.7
12	Hearing killing of a close relative	216	57
13	Threaten by shooting	198	52.5
14	Being detained at home during incursion	159	42
15	Witnessing killing of a friend	136	35.9
16	Witnessing firing by tanks and heavy artillery at own home	128	33.8
17	Witnessing of own home demolition	128	33.8
18	Destroying of your personal belongings during incursion	127	33.5
19	Threaten of family member of being killed	121	31.9
20	Witnessing shooting of a friend	120	31.7
21	Witnessing shooting of a close relative	115	30.3
22	Witnessing killing of a close relative	115	30.3
23	Deprivation from going to toilet and leave the room at home where you was detained	114	30.1
24	Exposure to burn by bombs and phosphorous bombs	100	26.4
25	Beating and humiliation by the army	100	26.4
26	Threatened to death by being used as human shield to arrest your neighbors by the army	97	25.6
27	Shooting by bullets, rocket, or bombs	89	23.5
28	Threaten of being killed	89	23.5
29	Being arrested during the last incursion	83	21.9
30	Physical injury due to bombardment of your home	83	21.9

Table 3. Independent t- test for mean traumatic experiences and sex of adolescents

	Sex	N	Mean	SD	t	p
Total trauma	Male	171	15.01	6.23	2.03	0.04
	Female	209	13.56	7.40		
Hearing trauma	Male	171	3.60	1.11	-0.23	0.82
	Female	209	3.62	1.08		
Witnessing trauma	Male	171	6.21	2.66	2.81	0.01
	Female	209	5.40	2.92		
Personal trauma	Male	171	5.20	4.04	1.52	0.13
	Female	209	4.54	4.32		

cardiovascular symptoms was 10.23 (SD = 11.85), respiratory system symptoms was 3.82 (SD = 3.51), urogenital system symptoms was 2.98 (SD = 2.91), skeletal musculature symptoms was 5.29 (SD =3.76), and skin symptoms was 7.34 (SD = 6.7) (Table 4).

4.5 Psychosomatic Symptoms and Socio-demographic Variables

There were significant gender differences in skin symptoms (boys > girls: 8.32 vs. 6.54; t = 2.64, p = 0.01). No statistically significant gender differences were detected in other psychosomatic symptoms.

4.6 Relationship between Trauma and Psychosomatic Symptoms

Table 5 shows that total psychosomatic symptoms was significantly correlated positively with total traumatic events (r = 0.17, p = 0.01), hearing trauma (r = 0.12, p = 0.01), witnessing trauma (r = 0.10, p = 0.01), and personal trauma (r = 0.18, p = 0.01).

Table 4. Means, standard deviations of psychosomatic symptoms (N=380)

	Mean	Std. deviation
Total psychosomatic symptoms	48.19	27.94
Digestive system symptoms	19.97	11.85
Cardiovascular symptoms	10.23	6.37
Respiratory system symptoms	3.82	3.51
Urogenital system symptoms	2.98	2.91
Skeletal musculature symptoms	5.29	3.76
Skin symptoms	7.34	6.74

Table 5. Pearson correlation coefficient test between trauma and psychosomatic symptoms

		Total trauma	Hearing trauma	Witnessing trauma	Direct trauma
Total psychosomatic symptoms	r	0.17	0.12	0.10	0.18
	P	0.01	0.05	0.10	0.00
	No.	380	380	380	380
Digestive system symptoms	r	0.15	0.10	0.12	0.15
	P	0.01	0.07	0.04	0.01
	No.	380	380	380	380
Cardiovascular symptoms	r	0.19	0.15	0.08	0.19
	P	0.00	0.00	0.13	0.00
	No.	380	380	380	380
Respiratory system symptoms	r	0.13	0.10	0.05	0.13
	P	0.02	0.05	0.36	0.01
	No.	380	380	380	380
Urogenital system symptoms	r	0.16	0.13	0.05	0.16
	P	0.00	0.01	0.30	0.00
	No.	380	380	380	380
Skeletal musculature symptoms	r	0.16	0.15	0.07	0.15
	P	0.00	0.01	0.19	0.01
	No.	380	380	380	380
Skin symptoms	r	0.21	0.16	0.10	0.21
	P	0.00	0.00	0.08	0.00
	No.	380	380	380	380

4.7 Prediction of Psychosomatic Symptoms by Types of Traumatic Events

In a univariate linear regression analysis, each traumatic event was entered as an independent variable, with total psychosomatic symptoms and subscales scores as the dependent variable. Two traumatic events were significantly associated with total psychosomatic symptoms: being detained at home during incursion (B=0.16, p=0.01); and destroying of child personal belongings during incursion (B=0.14, p=0.03) (Table 6).

5. DISCUSSION

The results of our study showed that Palestinian adolescents had experienced a variety of traumatic events as a result of the War on the Gaza Strip in 2008-2009, as on average they reported a mean 14 traumatic events. The most commonly reported traumatic events were watching mutilated bodies on TV (92.3%). These findings were consistent with research on previous conflicts in the are [7,15]. An earlier study of 600 adolescents aged 12-16 years from South Lebanon and the Gaza Strip found that 29.8% of adolescents had experienced at least one high-magnitude traumatic event in their lifetime due to war; 19.8% involved a family member being killed, 12.5% a family member being injured, and 13.6% had had their house demolished [18]. Our result showed that boys experienced more traumatic events than girls was also consistent with other research [7,15,19]. This may be explained by the socialization of girls in the contemporary Palestinian society. Girls remain at home under stricter surveillance and protection, whereas boys participate in activities and events outside their home, which make them more vulnerable to exposure to trauma. In particular, according to the Arabic culture, girls are expending their time at home helping their mothers in homework.

There were also significant differences in experiencing traumatic events according to monthly family income, which indicates that adolescents of lower socioeconomic status are more at risk of experiencing traumatic events. We postulate such findings to the increased level of poverty due to the siege, and to the repeated wars in the area for the last decade [20].

Adolescents mean score of psychosomatic symptoms was 48.19 of with estimated weight 20.42%. Similarly, in a study of adolescents living in a devastating area struck by earthquake in the Wenchuan County in the Northwest Sichuan Province of China compared to a similar number from non-affected area showed that the psychosomatic factor scores of the experimental group were significantly higher than those of the control group [14]. Other studies indicated that extreme natural disasters contributed to psychosomatic symptoms among children and adolescents [21].

According to the results of the first nationwide epidemiological survey of neurosis or psychosomatic disorders among Japanese children, 5.8% of all children who visited the outpatient pediatric clinics on a given day were considered to have psychosomatic disorders [22].

There were no significant gender differences in psychosomatic symptoms, except for skin symptoms which were reported more by boys. Most studies do not find any gender difference in the prevalence of specific somatization disorders before puberty; in contrast, adolescent girls tend to report more symptomatology than boys [23,24]. In a study of 2,558 school children and adolescents aged 8–16 showed that 37.6% reported at least one somatic symptom, headache being the most prevalent. In terms of age distribution, 26.8% of children and 52.1% of adolescents reported somatic symptoms. Girls reported more somatic symptoms than did boys [25]. Also in previous research, headache and stomach-ache were more frequently reportedby girls than by boys [26].

This study showed positive significant correlation between traumatic events, including witnessing, hearing, and personal experiences, and psychosomatic symptoms. Our findings were congruent with previous studies which showed that exposure to traumatic events was predicating a range of child and adolescent psychopathology [27,28].

6. STUDY LIMITATIONS

There were few limitation in this study in which the scale for psychosomatic was long one and adolescents took time to finish it. Also, another limitation was we did not study other mental health problems such as PTSD and anxiety.

Table 6. Linear regression analysis of traumatic events and psychosomatic symptoms

Psychosomatic	Traumatic events	Unstandardized coefficients	Standardized coefficients			p
		B	Std. error	Beta		
Total Psychosomatic symptoms	Being detained at home during incursion	8.93	3.52	0.16	2.54	0.01
	Destroying of your personal belongings during incursion	8.08	3.73	0.14	2.17	0.03
Digestive system symptoms	Being detained at home during incursion	3.91	1.39	0.16	2.82	0.01
	Hearing killing of a friend	2.82	1.40	0.12	2.01	0.05
	Shooting by bullets, rocket, or bombs	-6.10	1.90	0.22	3.21	0.001
	Threaten of family member of being killed	4.94	1.76	0.19	2.80	0.01
Cardiovascular symptoms	Being detained at home during incursion	3.91	1.39	0.16	2.82	0.01
	Hearing killing of a friend	2.82	1.40	0.12	2.01	0.05
	Shooting by bullets, rocket, or bombs	-6.10	1.90	0.22	3.21	0.00
	Threaten of family member of being killed	4.94	1.76	0.19	2.80	0.01
Respiratory system symptoms	Threaten of being killed	1.36	0.37	0.19	3.71	0.00
Urogenital system symptoms	Deprivation from water or electricity during detention at home	0.98	0.34	0.16	2.92	0.00
	Hearing killing of a friend	0.64	0.32	0.11	2.00	0.05
Skeletal musculature symptoms	Threaten of being killed	1.02	0.41	0.14	2.53	0.01
	Deprivation from water or electricity during detention at home	1.04	0.44	0.13	2.34	0.02
Skin symptoms	Deprivation from water or electricity during detention at home	2.85	0.79	0.19	3.60	0.00
	Witnessing firing by tanks and heavy artillery at neighbors homes	2.01	0.74	0.15	2.73	0.01

7. FURTHER RESEARCHES

According to the results of this study further studies in the area are needed to narrow the knowledge gap including effect of trauma on mental health among families of traumatized adolescents, peritraumatic symptoms and acute traumatic stress among victims of last war in Gaza Strip on 2014, associations between trauma and psychosis: an exploration of cognitive and dissociative factors.

8. CLINICAL IMPLICATIONS

Our study showed that Palestinian adolescents experienced traumatic events due to war on Gaza Strip, which were associated with psychosomatic symptoms. There may be a risk of such trauma exposure in developing such mental health problems, although this could not be ascertained by the current cross-sectional research design. Nevertheless, such findings highlight the urgent need for establishing community mental health and school-based programs to help adolescents with such symptoms, initially by increasing awareness about their nature. Also, there is need for conducting training courses for teachers and school counsellors to increase their knowledge and recognition of mental health problems within schools, and ways of managing the simplest presentations, thus avoiding referral to sparse

specialist services. Furthermore, more training courses to educate paediatricians and primary care physicians will also be important in recognising these symptoms and not necessarily dismissing or attributing to physical causes, i.e. they need to liaise with mental health services. Overall, intervening in communities and schools will enhance opportunities for adolescents, their families, friends, teachers and professionals to promote their resilience and well-being. Establishing educational programs such as in problem-solving skills will assist young people in confronting various traumatic events in the face of ongoing adversity.

9. CONCLUSION

The importance of our study was in findings the impact of trauma due to war on psychosomatic disorders and not only PTSD in adolescents. Such finding highlights the need for more research in the field of somatization in the adolescents and in application of new intervention programs which increase coping and resilience of Palestinian adolescents to overcome in the negative impact of trauma on adolescents. Also, the need for community sessions for children and adolescents to increase their awareness about psychosomatic and somatization disorders and ways of dealing with such problems.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Prevalence of Psychosomatic Symptoms among Traumatized Palestinian Adolescents in the Gaza Strip

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Authors' contributions

This work was carried out in collaboration between all authors. Authors TA and NAS designed the study, wrote the protocol and NA did data collection while author TA supervised the work. Authors TA and DKK performed the statistical analysis. Author TA managed the analyses of the study. Author NAS wrote the first draft of the manuscript. Authors TA, NAS and DKK managed the literature searches and edited the manuscript. Author PV managed the final editing and discussion. All authors read and approved the final manuscript.

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ABSTRACT

Aims: To estimate the prevalence of psychosomatic symptomsamong traumatized Palestinian adolescents in Gaza Strip.
Methods: The study sample consisted of 380 adolescents randomly selected from secondary schools in Gaza Strip, of whom 171 were boys and 209 were girls between 15-18 years. Data was collected using a socio-demographic checklist, the Gaza Traumatic Events Checklist, and the Psychosomatic Symptoms Scale. For statistical analysis, questionnaire data was normally distributed, for this reason independent t-test was used to investigate differences between two groups. Associations between continuous variables were measured by the Pearson's correlation coefficient test. One-way ANOVA post hoc Tukey was used to investigate differences between more than two groups.
Results: The most common reported traumatic events due to the war on Gaza were: watching mutilated bodies and wounded people in TV (92.3%), and hearing shelling of the area by artillery (89.4%). The mean number of traumatic events experienced by Palestinian adolescents was 14. Boys reported significantly more traumatic events than girls. Adolescents from family with monthly income less than 150 US $ experienced more traumatic events than the other groups.
Mean psychosomatic symptoms was 48.19, digestive system symptoms was 19.97, cardiovascular symptoms was 10.23, respiratory system symptoms was 3.82, urogenital system symptoms was 2.98, skeletal musculature symptoms was 5.29, and skin symptoms was 7.34. Boys scored more in total psychosomatic and skin symptoms. There was a significant relationship between traumatic experiences and psychosomatic symptoms.
Conclusion: Palestinian adolescents experienced significant traumatic events due to the war on Gaza Strip which were significantly associated with developing psychosomatic symptoms. Such findings highlight the urgent need for establishing community mental health school based programs to help adolescents with such symptoms and increase awareness about their nature and management. Also there is need for conducting training courses for teachers and school counsellors to increase their knowledge about general mental health problems in schools and ways of dealing with such problems. Also, training courses for primary care and hospital physicians, who might attribute to physical causes, and liaison between physical and mental health services.

Keywords: Adolescents; Gaza; psychosomatic symptoms; trauma; war.

1. INTRODUCTION

Each year millions of children are exposed to variable types of extreme traumatic stressors. These include natural disasters (e.g., tornadoes, floods, and hurricanes), motor vehicle accidents, life-threatening illnesses and associated painful medical procedures (e.g., severe burns, cancer, and limb amputations), physical abuse, sexual assault, witnessing domestic or community violence, kidnapping, and sudden death of a parent [1].

Children of Gaza have been subject to a wide range of traumatic and violent events over the last few decades, which, when considered alongside other risk factors such as gender, socio-economic status and previous mental health history, these have led to significant psychosocial problems [2]. On Saturday 27th December 2008, there was a new political escalation and violence against the Palestinians in the Gaza Strip. Within the first 20 minutes the Israeli air force bombarded the security positions in the Gaza Strip, leaving hundreds of killed people and more than a thousand of injured. This war on Gaza continued for 23 days. The total toll of this war was 1,330 killed persons and 5,500 injured [3].

A number of studies showed the negative psychological consequences of traumatic experiences on child development and well-being. During the war in Bosnia-Hercegovina, a community sample of 2,976 children aged between 9 and 14 years was selected. Children reported a high prevalence of posttraumatic stress symptoms and grief reactions. Girls reported more distress than boys, but there were few meaningful age effects within the age band studied [4].

In a study in the Nangarhar province in Afghanistan, a sample of 1011 Afghani aged 15 years or older was selected. During the previous ten years, 43.7% of them had experienced

between 8 and 10 traumatic events, and 14.1% had experienced 11 or more traumatic events. The study showed that 38.5% of participants reported symptoms that fulfilled clinical criteria for depression, 51.8% reported anxiety, and 20.4% reported posttraumatic stress disorder [5].

In a study of Palestinian adolescents exposed to both political and domestic violence, whereas there was no significant gender difference in the level of exposure to political violence, female adolescents exhibited higher levels of psychological symptoms compared to their male counterparts. Girls also reported higher levels of exposure to domestic violence and lower levels of family functioning than boys [6]. In another study of 358 Palestinian adolescents, the mean number of traumatic events reported by adolescents was 13.3. The most frequently reported traumatic experiences were watching mutilated bodies on TV (90.8%) and hearing shelling of the area by heavy artillery (88.5%). Almost one third of the young people (29.8%) reported symptoms meeting criteria for a full post traumatic stress disorder (PTSD) [7].

Overall, previous research has primarily focused on the impact of trauma on a range of emotional disorders. Surprisingly, there has been limited evidence on the prevalence of psychosomatic symptoms and disorders, or on their relationship with trauma exposure, despite the well documented link of such presentations with emotional psychopathology. Psychosomatic disorders are typically defined as those in which psychological factors are thought to contribute significantly to the development, exacerbation, or maintenance of the illness [8]. Psychosomatic symptoms and somatization are distinct from malingering in that the patient is truthfully reporting his or her bodily sensations and not consciously using these symptoms to manipulate or control others or the situation [9]. Recently, the definition of psychosomatic disorder has been changing according to the Diagnostic and Statistical Manual of Mental Disorders (DSM). The term psychosomatic disorder refers to physical symptomatology appeared to be caused, influenced or worsened by psychological factors rather than by an underlying physical illness [10].

Depending on the sample and measures, the prevalence rate of psychosomatic complaints in children and adolescents has been found to be between 10 and 25% [11,12].

Such symptoms were particularly high among Palestinian University students who had suffered sexual abuse, together with depressed mood, withdrawal, suicidal or self-injurious behaviors, illegal acts, running away, and substance abuse [13].

Another study of 1,828 children aged 6 to 16 years, of whom 842 had been affected by a devastating earthquake in Wenchuan County in the Northwest Sichuan Province of China and 986 lived in a non-affected area, total psychosomatic symptoms were significantly higher among those exposed [14]. As there has been limited knowledge on the presentation of psychosomatic symptoms following war conflict, this was the rationale of this study with traumatized Palestinian adolescents in the Gaza Strip.

2. METHODS

2.1 Participants and Procedure

The sample consisted of 380 adolescents. The age ranged from 15 to 18 years, with a mean of 16.6 years (SD=0.08). The sample was randomly selected from ten schools in the Gaza Strip (two schools from each of the five governorates of the Gaza Strip - one all-boys and one all-girls school). From each school, three classes were selected randomly (10^{th}, 11^{th} and 12^{th} class), following which we selected randomly the sample from each class registration book. At the end of the selection process, the sample consisted of 171 boys (45%) and 209 girls (55%).

2.2 Research Procedure

We trained three mental health professionals (two male and one female) on data collection for three hours, during which the aim of the study was explained, the sampling, questionnaires and interview techniques. The study was approved by the Palestinian Ministry of Health Ethics Committee. Also, an official letter was obtained from the General Director of the Ministry of Education in order to conduct the study in governmental secondary schools and to facilitate the process of data collection. Each young person received an explanatory letter explaining the aim of the study and that the information gathered would be kept confidential for the purpose of the research only. A similar letter to the parents was send with the participants, and if agreed, they obtained a written permission for

their adolescent's participation. Data collection took place in the classroom during April 2010.

3. MEASURES

3.1 Socio-demographic Checklist

Information was collected from the adolescents on gender, age, place of residence, number of siblings, parents' education and employment status, and family income.

3.1.1 War on Gaza traumatic events checklist [15]

This had been used in the same area [15] and during this period of conflict, It was modified to include 30 items covering different types of traumatic events that adolescents may have been exposed to in the particular circumstances of the 2008-2009 war on Gaza Strip. This checklist covers three domains of trauma. The first domain cover hearing experiences such as hearing to the killing or injury of friends or relatives (item number 1-5). The second domain describes witness acts of violence such as the killing of relatives, home demolition, bombardment, and injury of others (item number 6-17). The third domain covers personal experiences of traumatic events such as being shot or beaten (item number 18-30). The checklist can be completed by children aged 6-16 ('yes' or 'no'). In this study the reliability of the scale using Cronbach's alpha was 0.92 and the split half was 0.86.

3.1.2 Psychosomatic symptoms scale [16]

The scale consists of 59 items that describe different types of psychosomatic symptoms. This scale covers six psychosomatic domains such as digestive system symptoms (23 items), cardiovascular symptoms (7 items), respiratory system (6 items), skin (12 items), urogenital system (5 items), and muscular-skeletal system symptoms (6 items). The items of the scale are rated on a 5-point scale: 1=not at all (0 point), 2= a little bit (1 point), 3= moderately (2 points), 4=quite a bit (3 points) and 5=extremely (4 points). This scale was validated in the Arabic culture (Egypt) [16]. The internal consistency of the Arabic version was satisfactory (Cronbach's alpha = 0.98) and its split half was 0.98. This scale had been previously used in the Gaza Strip, with similar psychometric properties Cronbach's alpha = 0.98) and split half= 0.98 [17]. In this study, the reliability of the scale using Cronbach's alpha was 0.97 and its split half was 0.84.

3.2 Statistical Analysis

Data was entered and analyzed using the Statistical Package for Social Sciences (SPSS) software version 18. The questionnaire data was normally distributed, for which reason an independent t-test was used to investigate between-group differences. Associations between continuous variables were measured by the Pearson's correlation coefficient test. One-way ANOVA post hoc Tukey was used to investigate differences between more than two groups.

4. RESULTS

4.1 Socio-demographic Characteristics (Table 1)

The sample consisted of 380 adolescents, 171 of whom were male (45%) and 209 were female (55%) between the ages of 15-18 years (mean=16.6, SD=0.08). Regarding the place of residence, 26.1% lived in North Gaza, 18.9% in Gaza city, 23.2% in the middle area, 14.2% in Khan Younis area, and 17.6% lived in the Rafah area (13.4%).

Table 1. Demographic characteristics of the study sample (N=380)

	No	%
Sex		
Male	171	45
Female	209	55
Age in years, MEAN age was 16.64 years		
15 y	30	7.9
16y	131	34.5
17y	165	43.4
18y	54	14.2
Place of residence		
North Gaza	99	26.1
Gaza	72	18.9
Middle area	88	23.2
Khan Younis	54	14.2
Rafah area	67	17.6
Family monthly income		
Less than 150 US $	129	33.9
151- 300 US $	86	22.6
301 – 650 US $	102	26.8
More than 651 US $	63	16.6

4.2 Frequency of Traumatic Events Due to War on Gaza

The most commonly reported traumatic events due to the war on Gaza were: 92.3% watched mutilated bodies and wounded people on TV, 89.2% heard shelling of the area by artillery, and 89.2% heard the sonic booms from jetfighters.(Table 2).

4.3 Traumatic Events and Socio-demographic Variables

Traumatic experiences were recoded into three categories (hearing: items 1-5; witnessing: items 5-16; and direct: items 17-30). The mean number of total traumatic experiences were 14.21, mean hearing experiences was 3.61, mean witnessing experiences 5.76, and mean direct experiences 4.84. Boys reported significantly more traumatic events than girls (t-test = 2.19, p <0.04); also, boys reported more hearing traumatic experiences than girls (t-test = 2.81, p <0.01). However, there were no gender differences on reporting witnessing and personal experiences.

Adolescents with family monthly income less than 150 US$ had experienced more traumatic events than the other groups with higher family income (F=3.23, p=0.02).

4.4 Psychosomatic Symptoms

As shown in Table 3, the mean number of psychosomatic symptoms was 48.19 (SD= 27.94) with estimated weight 20.42% (mean/No of items 59*4(0-4 scale)*100), digestive system symptoms was 19.97 (SD= 11.85),

Table 2. Frequency of traumatic events due to war on Gaza

No	Traumatic events	Yes	%
1	Watching mutilated bodies in TV	350	92.3
2	Hearing shelling of the area by artillery	339	89.4
3	Hearing the sonic sounds of the jetfighters	338	89.2
4	Witnessing the signs of shelling on the ground	336	88.7
5	Witnessing firing by tanks and heavy artillery at neighbors homes	265	69.9
6	Witnessing assassination of people by rockets	261	68.9
7	Hearing of arrest of someone or a friend	242	63.9
8	Forced to leave your home during the war	235	62
9	Hearing killing of a friend	235	62
10	Witnessing of a friend home demolition	235	62
11	Deprivation from water or electricity during detention at home	234	61.7
12	Hearing killing of a close relative	216	57
13	Threaten by shooting	198	52.5
14	Being detained at home during incursion	159	42
15	Witnessing killing of a friend	136	35.9
16	Witnessing firing by tanks and heavy artillery at own home	128	33.8
17	Witnessing of own home demolition	128	33.8
18	Destroying of your personal belongings during incursion	127	33.5
19	Threaten of family member of being killed	121	31.9
20	Witnessing shooting of a friend	120	31.7
21	Witnessing shooting of a close relative	115	30.3
22	Witnessing killing of a close relative	115	30.3
23	Deprivation from going to toilet and leave the room at home where you was detained	114	30.1
24	Exposure to burn by bombs and phosphorous bombs	100	26.4
25	Beating and humiliation by the army	100	26.4
26	Threatened to death by being used as human shield to arrest your neighbors by the army	97	25.6
27	Shooting by bullets, rocket, or bombs	89	23.5
28	Threaten of being killed	89	23.5
29	Being arrested during the last incursion	83	21.9
30	Physical injury due to bombardment of your home	83	21.9

Table 3. Independent t- test for mean traumatic experiences and sex of adolescents

	Sex	N	Mean	SD	t	p
Total trauma	Male	171	15.01	6.23	2.03	0.04
	Female	209	13.56	7.40		
Hearing trauma	Male	171	3.60	1.11	-0.23	0.82
	Female	209	3.62	1.08		
Witnessing trauma	Male	171	6.21	2.66	2.81	0.01
	Female	209	5.40	2.92		
Personal trauma	Male	171	5.20	4.04	1.52	0.13
	Female	209	4.54	4.32		

cardiovascular symptoms was 10.23 (SD = 11.85), respiratory system symptoms was 3.82 (SD = 3.51), urogenital system symptoms was 2.98 (SD = 2.91), skeletal musculature symptoms was 5.29 (SD =3.76), and skin symptoms was 7.34 (SD = 6.7) (Table 4).

4.5 Psychosomatic Symptoms and Socio-demographic Variables

There were significant gender differences in skin symptoms (boys > girls: 8.32 vs. 6.54; t = 2.64, p = 0.01). No statistically significant gender differences were detected in other psychosomatic symptoms.

4.6 Relationship between Trauma and Psychosomatic Symptoms

Table 5 shows that total psychosomatic symptoms was significantly correlated positively with total traumatic events (r = 0.17, p = 0.01), hearing trauma (r = 0.12, p = 0.01), witnessing trauma (r = 0.10, p = 0.01), and personal trauma (r = 0.18, p = 0.01).

Table 4. Means, standard deviations of psychosomatic symptoms (N=380)

	Mean	Std. deviation
Total psychosomatic symptoms	48.19	27.94
Digestive system symptoms	19.97	11.85
Cardiovascular symptoms	10.23	6.37
Respiratory system symptoms	3.82	3.51
Urogenital system symptoms	2.98	2.91
Skeletal musculature symptoms	5.29	3.76
Skin symptoms	7.34	6.74

Table 5. Pearson correlation coefficient test between trauma and psychosomatic symptoms

		Total trauma	Hearing trauma	Witnessing trauma	Direct trauma
Total psychosomatic symptoms	r	0.17	0.12	0.10	0.18
	P	0.01	0.05	0.10	0.00
	No.	380	380	380	380
Digestive system symptoms	r	0.15	0.10	0.12	0.15
	P	0.01	0.07	0.04	0.01
	No.	380	380	380	380
Cardiovascular symptoms	r	0.19	0.15	0.08	0.19
	P	0.00	0.00	0.13	0.00
	No.	380	380	380	380
Respiratory system symptoms	r	0.13	0.10	0.05	0.13
	P	0.02	0.05	0.36	0.01
	No.	380	380	380	380
Urogenital system symptoms	r	0.16	0.13	0.05	0.16
	P	0.00	0.01	0.30	0.00
	No.	380	380	380	380
Skeletal musculature symptoms	r	0.16	0.15	0.07	0.15
	P	0.00	0.01	0.19	0.01
	No.	380	380	380	380
Skin symptoms	r	0.21	0.16	0.10	0.21
	P	0.00	0.00	0.08	0.00
	No.	380	380	380	380

4.7 Prediction of Psychosomatic Symptoms by Types of Traumatic Events

In a univariate linear regression analysis, each traumatic event was entered as an independent variable, with total psychosomatic symptoms and subscales scores as the dependent variable. Two traumatic events were significantly associated with total psychosomatic symptoms: being detained at home during incursion (B=0.16, p=0.01); and destroying of child personal belongings during incursion (B=0.14, p=0.03) (Table 6).

5. DISCUSSION

The results of our study showed that Palestinian adolescents had experienced a variety of traumatic events as a result of the War on the Gaza Strip in 2008-2009, as on average they reported a mean 14 traumatic events. The most commonly reported traumatic events were watching mutilated bodies on TV (92.3%). These findings were consistent with research on previous conflicts in the are [7,15]. An earlier study of 600 adolescents aged 12-16 years from South Lebanon and the Gaza Strip found that 29.8% of adolescents had experienced at least one high-magnitude traumatic event in their lifetime due to war; 19.8% involved a family member being killed, 12.5% a family member being injured, and 13.6% had had their house demolished [18]. Our result showed that boys experienced more traumatic events than girls was also consistent with other research [7,15,19]. This may be explained by the socialization of girls in the contemporary Palestinian society. Girls remain at home under stricter surveillance and protection, whereas boys participate in activities and events outside their home, which make them more vulnerable to exposure to trauma. In particular, according to the Arabic culture, girls are expending their time at home helping their mothers in homework.

There were also significant differences in experiencing traumatic events according to monthly family income, which indicates that adolescents of lower socioeconomic status are more at risk of experiencing traumatic events. We postulate such findings to the increased level of poverty due to the siege, and to the repeated wars in the area for the last decade [20].

Adolescents mean score of psychosomatic symptoms was 48.19 of with estimated weight 20.42%. Similarly, in a study of adolescents living in a devastating area struck by earthquake in the Wenchuan County in the Northwest Sichuan Province of China compared to a similar number from non-affected area showed that the psychosomatic factor scores of the experimental group were significantly higher than those of the control group [14]. Other studies indicated that extreme natural disasters contributed to psychosomatic symptoms among children and adolescents [21].

According to the results of the first nationwide epidemiological survey of neurosis or psychosomatic disorders among Japanese children, 5.8% of all children who visited the outpatient pediatric clinics on a given day were considered to have psychosomatic disorders [22].

There were no significant gender differences in psychosomatic symptoms, except for skin symptoms which were reported more by boys. Most studies do not find any gender difference in the prevalence of specific somatization disorders before puberty; in contrast, adolescent girls tend to report more symptomatology than boys [23,24]. In a study of 2,558 school children and adolescents aged 8–16 showed that 37.6% reported at least one somatic symptom, headache being the most prevalent. In terms of age distribution, 26.8% of children and 52.1% of adolescents reported somatic symptoms. Girls reported more somatic symptoms than did boys [25]. Also in previous research, headache and stomach-ache were more frequently reportedby girls than by boys [26].

This study showed positive significant correlation between traumatic events, including witnessing, hearing, and personal experiences, and psychosomatic symptoms. Our findings were congruent with previous studies which showed that exposure to traumatic events was predicating a range of child and adolescent psychopathology [27,28].

6. STUDY LIMITATIONS

There were few limitation in this study in which the scale for psychosomatic was long one and adolescents took time to finish it. Also, another limitation was we did not study other mental health problems such as PTSD and anxiety.

Table 6. Linear regression analysis of traumatic events and psychosomatic symptoms

Psychosomatic	Traumatic events	Unstandardized coefficients	Standardized coefficients			p
		B	Std. error	Beta		
Total Psychosomatic symptoms	Being detained at home during incursion	8.93	3.52	0.16	2.54	0.01
	Destroying of your personal belongings during incursion	8.08	3.73	0.14	2.17	0.03
Digestive system symptoms	Being detained at home during incursion	3.91	1.39	0.16	2.82	0.01
	Hearing killing of a friend	2.82	1.40	0.12	2.01	0.05
	Shooting by bullets, rocket, or bombs	-6.10	1.90	0.22	3.21	0.001
	Threaten of family member of being killed	4.94	1.76	0.19	2.80	0.01
Cardiovascular symptoms	Being detained at home during incursion	3.91	1.39	0.16	2.82	0.01
	Hearing killing of a friend	2.82	1.40	0.12	2.01	0.05
	Shooting by bullets, rocket, or bombs	-6.10	1.90	0.22	3.21	0.00
	Threaten of family member of being killed	4.94	1.76	0.19	2.80	0.01
Respiratory system symptoms	Threaten of being killed	1.36	0.37	0.19	3.71	0.00
Urogenital system symptoms	Deprivation from water or electricity during detention at home	0.98	0.34	0.16	2.92	0.00
	Hearing killing of a friend	0.64	0.32	0.11	2.00	0.05
Skeletal musculature symptoms	Threaten of being killed	1.02	0.41	0.14	2.53	0.01
	Deprivation from water or electricity during detention at home	1.04	0.44	0.13	2.34	0.02
Skin symptoms	Deprivation from water or electricity during detention at home	2.85	0.79	0.19	3.60	0.00
	Witnessing firing by tanks and heavy artillery at neighbors homes	2.01	0.74	0.15	2.73	0.01

7. FURTHER RESEARCHES

According to the results of this study further studies in the area are needed to narrow the knowledge gap including effect of trauma on mental health among families of traumatized adolescents, peritraumatic symptoms and acute traumatic stress among victims of last war in Gaza Strip on 2014, associations between trauma and psychosis: an exploration of cognitive and dissociative factors.

8. CLINICAL IMPLICATIONS

Our study showed that Palestinian adolescents experienced traumatic events due to war on Gaza Strip, which were associated with psychosomatic symptoms. There may be a risk of such trauma exposure in developing such mental health problems, although this could not be ascertained by the current cross-sectional research design. Nevertheless, such findings highlight the urgent need for establishing community mental health and school-based programs to help adolescents with such symptoms, initially by increasing awareness about their nature. Also, there is need for conducting training courses for teachers and school counsellors to increase their knowledge and recognition of mental health problems within schools, and ways of managing the simplest presentations, thus avoiding referral to sparse

specialist services. Furthermore, more training courses to educate paediatricians and primary care physicians will also be important in recognising these symptoms and not necessarily dismissing or attributing to physical causes, i.e. they need to liaise with mental health services. Overall, intervening in communities and schools will enhance opportunities for adolescents, their families, friends, teachers and professionals to promote their resilience and well-being. Establishing educational programs such as in problem-solving skills will assist young people in confronting various traumatic events in the face of ongoing adversity.

9. CONCLUSION

The importance of our study was in findings the impact of trauma due to war on psychosomatic disorders and not only PTSD in adolescents. Such finding highlights the need for more research in the field of somatization in the adolescents and in application of new intervention programs which increase coping and resilience of Palestinian adolescents to overcome in the negative impact of trauma on adolescents. Also, the need for community sessions for children and adolescents to increase their awareness about psychosomatic and somatization disorders and ways of dealing with such problems.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Research Article Open Access

Prevalence and Mental Health Function of Resilience in Condition of Military Siege and Violence in a Palestinian Community Sample

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Abstract

Aims: The study had two aims: First, we assess the prevalence of resilience based on the person-based classification depicting a balance between the severity of trauma and occurrence of PTSD. Second, we examine the role of resilience characteristics of commitment, control and challenge in protecting children's mental health from negative trauma impacts.

Methods: The participants were 386 Palestinian children and adolescents from Gaza (age 13.41+2.96, 52.07% boys and 47.93% girls). The results revealed a 25% prevalence of resilient children, and resilience was more common in well-educated families and children from geographical areas exposed to heavily Israeli shelling and destruction. Children were interviewed by sociodemographic scale, Gaza Traumatic Events Checklist, Child Depression and Anxiety Scale, UCLA PTSD Index for DSM-IV-Adolescent Version, and Resilience Attitude Scale.

Results: There were generally no gender differences in the exposure to traumatic events, as all. Neither were there gender differences in the mean number of traumatic events related to Israeli military violence or Palestinian factional fighting. According to the DSM-IV criterion, 12.4% of the children and adolescents reported probable PTSD, and 22.37% filled the two criteria partial PTSD, and 26.7% the one criteria partial PTSD (re-experiencing or avoidance or hyper arousal). More than a third (38.4% of the children did not have PTSD. There were no significant differences between boys and girls in PTSD. For depression and anxiety, boys and girls did not differ in the levels of PTSD, depressive and anxiety symptoms. Also only one marginal gender difference was found concerning resilience characteristics: girls reported more feelings of control than boys. The results revealed that 25.0% of the participants was classified as resilient indicating presence of high exposure to traumatic events and absence of PTSD and 22.2% as traumatized, i.e., presence of both high exposure to trauma and occurrence of PTSD. Of the children 12.7% were classified as vulnerable, and 40.1% were spared of both high trauma and PTSD. As hypothesized, resilience characteristics protected children's mental health from trauma, e.g., military trauma was less associated with PTSD and anxiety among children showing high commitment. Discussion focuses on specific functions of resilience in the context of different kind of traumatic events of war, political and military violence.

Keywords: Military violence; Palestinians; Resiliency; Trauma; War

Introduction

In conditions of war and military violence, children need remarkable resources, strengths and invincibility to guarantee their basic adjustment and healthy development. Resilience is conceptualized as a capacity to return into normal functioning or even blossom after severe trauma. Resilience also refers to the absence of psychiatric or psychosocial problems and presence of developmental competences [1-3].

There is a discussion whether resilience or traumatisation are the norm in life-endangering conditions of war and terrorism [4]. Empirically neither resilience nor excessive psychiatric disorders is the most prevalent among trauma surviving children. Instead, they show various ways of recovery, and attempts to cope and protect their well-being and psychological integrity. A majority of children shows excessive fears and posttraumatic symptoms (PTSD) and cling to parents in acute life danger, but most of them gradually recover if psychological and social resources are available [5,6]. It is thus important to know about child- and environment-related factors that contribute to the resilience. The present study analyses resilience prevalence and function among Palestinian children who lived in conditions of military violence and siege in Gaza.

Children's resilience has been conceptualized and assessed in three different ways. First, the classic definition of resilience suggests a person-based classification or typology depicting the balance between the severity of trauma and emergence of psychiatric disorder [3]. In addition to identifying resilient individuals, i.e., those with high exposure to trauma and high competence, the classification provides also prevalence of children who are traumatized (both severe trauma and severe disorders), vulnerable (high level of disorders without trauma exposure) and spared (saved from both trauma and disorders). We could find two studies reporting the prevalence of children's resilience based on the person-related classification. A follow-up study in American families with chronic stress and adversities documented the prevalence of 22% of resilient children, and 7% vulnerable, 13% traumatized and 58% spared children [7]. Interestingly, similar

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prevalence of resilience (21%) was found among Palestinian children in conditions of military occupation, whereas 23% were classified as both traumatized and vulnerable, and a third was spared from both military trauma and psychological disorders [8].

Second, a variable-based approach to resilience seeks for children's positive experiences, resources and competence. The beneficial issues can be available in family, school and society, characterize children themselves [9,10]. There is augmenting evidence that supportive parent-child relations [11,12]. Encouraging school atmosphere and high academic achievements, and supportive societies and respect for children's rights contribute to resilience [13,14].

High self-esteem, creativity, commitment and strong believes in one's ability to cope with hardships are commonly found among resilient children [13,15]. Research further suggest that resilient children are curious, prosocial and able and willing to create novel, flexible solutions for problems [7,11]. Commitment and thrust in oneself and others make it possible to plan for future and share aspirations with others. Moreover, resilient children are able adequately to process stressful and traumatic experiences and seek for realistic causal explanations, without being overwhelmed by guilt and fear [16]. The feeling of control, whether real or illusory can be decisive for the recovery among children struggling to overcome traumatic experiences [17]. Ability to control and regulate traumatic memories forms a protective shield against PTSD and other trauma-related psychiatric distress [18,19]. Finally, there are some hypotheses that children's temperament such as novelty seeking, high stimulus threshold and easy attenuating of arousal would be one of the secrets of resilience [20,21]. This means that some children experience traumatic events and even adversities as a challenge, which in turn indicates that resilience can depend on the goodness of fit between individual needs and environmental demands.

Finally, a part of research conceptualizes resilience as a lack of (expected) PTSD or other psychiatric symptoms. After the 9/11 terrorist attack, it was reported, e.g., that 63% of adult survivors were resilient, indicating that they did not develop PTSD [22]. Similarly, Israeli adolescents who did not show PTSD after being personally exposed to terrorist attacks were called resilient [23]. In these studies the reasons for resilience are conceptualized as a list of post-hoc characteristics such as variety of beneficial appraisals, personality and national history, supporting networks, competence and individual and societal hardiness.

Aims of the Study

This study applies both person- and variable-based concepts of resilience among children living in life-endangering conditions and being personally exposed to military violence. First, we assess the prevalence of resilience based on the person-based classification depicting a balance between the severity of trauma and occurrence of PTSD. Second, we examine the role of resilience characteristics of commitment, control and challenge in protecting children's mental health from negative trauma impacts. We hypothesize that traumatic events of military violence and fighting do not associate with PTSD, depressive and anxiety symptoms among children who show high levels of these three resilience characteristics.

Method

Participants and procedure

This was descriptive analytic study. The participants were 386 Palestinian boys (52.07%) and girls (47.93%) living in Gaza Strip. They were 8-18 years old (M=13.41 ± 2.96), and there were no gender differences according to age F(1,384)=0.42, p=ns.). The original sample consisted of 400 children, and the drop out was thus 3.50% consisting of 14 children who did not complete the questionnaires during the interviews in their homes in Gaza Strip- Palestine. The sample selection was done using EPI 6 program for sampling process.

The sample was randomly selected from the population census representing the five areas of the Gaza Strip and including two-parent families. In selecting the children each area was divided into blocks and from each block one street was chosen, and from each street every 15th home was approached for the data collection. The field work was conducted by professionals who had experiences in working with children and families. They were 5 social workers, 4 psychologist, 2 nurses, and 3 physicians working in Gaza Community Mental Health Program (GCMHP). They were trained for research and data collection, and they visited the families according to prepared lists of number of children selected to the study. Ethical approval was obtained from the responsible body in the Ministry of Health in Gaza Strip. The field workers presented an information letter to the parents, and if agreed, they obtained a written permission for their children's participation. Children were interviewed individually in their homes and each interview lasted approximately 30 minutes. The interviewers informed children that there was no right or wrong answers, provided guidance in filling-up the scales. Children and parents were also informed that that they were free to withdraw from the study at any time. Sociodemgraphic data was collected from mothers, while exposure to trauma, PTSD, anxiety, resilience was collected through face to face interview with children. The exclusion criteria include children with disability, mental retardation, and diagnosed psychiatric disorders. The data collection was done between March and April 2008.

Instruments

Sociodemographic information was collected from parents and information about traumatic events, mental health and resilience from children themselves. Sociodemographic characteristics include sex, age, and place of residence, and education of the family head.

Traumatic events were assessed by two check lists that reflected the nature of violence, trauma and losses during the two-year of Israeli siege of the Gaza strip. First, Israeli military violence was assessed by the Gaza Traumatic Events Checklist for Israeli Violence [24] consisting of 28 items covering three domains of events typical for the Israeli siege: (1) witnessing personally acts of violence (e.g., killing of relatives, home demolition, bombardment, and injuries), (2) having experiences of loss, injury and destruction in family and other close persons, and (3) being personally the target of violence (e.g., being shot, injured, or beaten by the soldiers). Second, Palestinian factional fighting was assessed by the Gaza Traumatic Events Checklist for Factional Fighting consisting of 20 items covering similar domains of traumatic events due to the regional conflict between Fatah and Hamas faction fighting in the Gaza Strip in June 2007. The content of traumatic events related to Israeli military violence and Palestinian factional fighting are shown in Table 1. In both checklists children were asked whether they had been exposed to each of these events: '0' no, '1' yes during the last 12 months. Gaza Traumatic Events Checklist for Israeli Violence Cronbach's alpha was 0.88 and 0.91 for Gaza Traumatic Events Checklist for Factional Fighting.

Separate sum variables were constructed by accounting the occurrences of the traumatic events for Israeli military violence (ranging between 0-28), Palestinian factional fighting (0-20), and total traumatic events (3-48). To construct the 2 x 2 resilience classification,

the total traumatic events –variable was dichotomized to low (2-5 events) and high (6-18 events) levels. It would have been ideal to construct a dichotomized variable indicating zero-trauma vs. yes-trauma, but there were only 2 children who had not reported exposure to traumatic events. The cut-off points were decided according to empirical statistics and earlier knowledge about cumulative trauma exposure in war conditions [25].

PTSD-symptoms were measured by the UCLA PTSD Index for DSM-IV-Adolescent Version [26]. The scale comprises 22 self-report items based on DSM–IV PTSD symptom criteria: re-experiencing symptoms (e.g., "I act or feel like it is happening all over again"), avoidance symptoms (e.g., "I have trouble remembering important parts of what happened"), and hyperarousal symptoms (e.g., "I watch out for danger or things I'm afraid of"). Children were asked to indicate the frequency of symptoms experienced on a 5-point Likert scale ranging from 0 (never) to 4 (most of the time). A PTSD symptom severity scale was computed as the sum of the responses to the 20 (of 22) items and categorical prevalence score. The UCLA PTSD Index has been widely used among children and adolescents in the Middle East and elsewhere [27-30]. The original English version of the PTSD scale had Cronbach's β of .90, and good to excellent test-retest reliability [31]. The reliability of our Arabic version of the PTSD scale Cronbach's in this study α=0.89; split half=0.82.

Child Depression and Anxiety Scale The scale consists of 25 items of depressive and anxious symptoms. Depression items were drawn from the self-report scale of the Children's Depression Inventory, and anxiety items form the Revised-Children's Manifest Anxiety Scale [32,33]. Children were instructed to estimate whether they had had the symptom during the last month. No (0) or Yes (1). Sum variables were constructed to indicate children's depressive symptoms including somatic dimensions (13 items, e.g, "I feel sadness when waking up in the morning"; I do not have appetite for food), anxiety and fears (12 items, e.g., "I am worried about many things"; "I am afraid of unknown"). The internal consistency were good for the Arabic version of the total scale (Cronbach's alpha=0.77; split half=0.74) and depressive symptoms symptoms (Cronbach's α=72), but not for anxiety symptoms (Cronbach's α=0.65).

Resilient attitudes were measured by The Resilience Attitude Scale by (Mekhaemer, 2002) [34]. The scale contains 47 items covering the resilience characteristics of commitment (items: 1,4,7,10,16,19,22,25 28,31,34,37,40,43,46), control (items: 2,5, 8,11,14,17,20,23,26,29,32,35,3 8,41,44), and willingness to take challenges (items: 3,6,9,12,15,18,21,24, 7,30,33,36,39,42,45,47).

Children were instructed to evaluate on a three-point scale how well the feelings and thoughts describe theirs: not at all (0), to some extent (1), and very well (2). The total score ranges from 0-141, with higher score reflecting greater resilience. Three subscales were constructed: Commitment (16 items, e.g., "I care much for problems and things that happen around me"; "I care for all possible initiative that may help my family and community", Control (14 items, e.g., "I think luck and accidents play major role in my life"; "I think people's life is influenced by external forces that they cannot control") and Challenge (17 items, e.g., "I am curious to know the unknown"; "When I have solved one problem, I enjoy moving into to solving another one". The Resilience attitudes -scale has been validated in Arabic culture in Egypt [34] and in Gaza Strip, and has been found reliable among Palestinian children in Gaza Strip (Cronbach's alpha = 0.84 and split half=0.84) [35,36]. In this study the internal consistencies were good for Commitment (Cronbach's α=0.80). However, they were not satisfactory for Control (Cronbach's α=0.64) and Willingness to take challenges (Cronbach's α=0.60) scales.

Resiliency classification was constructed as a balance between the severity of trauma exposure and PTSD. The cross tabulation of the 10 dichotomized total sum of traumatic events and PTSD classification (0=no PTSD;1=partial and full-blown) resulted in four groups: Resilient children (high level of traumatic events and absence of PTSD), Vulnerable children (low level of traumatic events and presence of PTSD), Traumatized children (high level of traumatic events and presence of PTSD), and Spared children (low level of traumatic events and absence of PTSD). Resiliency classification was constructed as a balance between the severity of trauma exposure and PTSD. The cross tabulation of the dichotomized total sum of traumatic events and PTSD classification (0=no PTSD;=partial and full-blown) resulted in four groups: Resilient children (high level of traumatic events and absence of PTSD), Vulnerable children (low level of traumatic events and presence of PTSD), Traumatized children (high level of traumatic events and presence of PTSD), and Spared children (low level of traumatic events and absence of PTSD).

Statistics analyses

Cross table s with Pearson χ^2-statistics were applied to analyse the associations between demographic factors and psychiatric symptoms, and gender differences in exposure to traumatic events. The independent variable for this study was the traumatic events and dependent variables were PTSD, Depression, Anxiety, and resilience. T-tests were applied to analyse gender differences in psychiatric symptoms. To analyse the protective role of resilience characteristics of commitment, control and challenge, we used hhierarchical multiple regression analyses with main and interaction effects. The estimated main effects indicate direct associations between resilience characteristics and psychiatric symptoms, and trauma X resilience characteristics-interaction effects the protective power of commitment, control and challenge in attenuating the links between trauma and symptoms. The dependent variables were PTSD, depressive and anxiety symptoms. In the Step I, demographic factors were entered, in the Step II, the two variables of traumatic events (Israeli military violence and Palestinian factional fighting) were entered, followed by resilience characteristics at Step III. In the Step IV, the interaction terms between Israeli military violence and resilience characteristics, and in the Step V, the corresponding interactions between the Palestinian factional fighting and resilience characteristics were entered. All variables used in the construction of the interaction terms were first centered (the score-mean-value) in order to avoid multicollinearity between predictor variables [37].

Results

Descriptive statistics

The participating children and adolescents presented the relative share of residents in the five areas in the Gaza Strip. More than a third (36.79%) was from Gaza City, a fifth (20.73%) from the other large city, Khan Younis, and 16.58% from the North and 13.99% from the Middle area of Gaza. Southern area, Rafah was presented by 11.92%. About a half (57.25%) of the participants lived in cities, 32.64% in refugee camps and 10.10% in villages. Three quarters (73.58%) of them were offspring of 1948 refugees from the historical Palestine and 26.42% were Gaza citizens. These distributions correspond with general population census in the Gaza Strip [37].

Table 1 presents the percentages of the traumatic events of Israeli military violence and Palestinian factional fighting. Of the military violence, the most common traumas were the sonic boom sounds caused by jetfighters (90%), hearing of shelling by artillery (87%) and witnessing assassination of close people by targeted rockets (85%). Of the factional fighting, the most common traumas were hearing of shooting and gunfire in the streets (87%) and deprivation of water or electricity (55%). There were generally no gender differences in the exposure to traumatic events, as all β^2-values were non-significant. Neither were there gender differences in the mean number of traumatic events related to Israeli military violence [boys M=9.96, SD=6.19; girls M=10.43, SD=6.65; t (384)=-0.72, p=.47] or Palestinian factional fighting [boys M=7.17, SD=4.7; girls M=7.70, SD=4.95; t (384)=-1.06, p=.29].

According to the DSM-IV criterion, 12.4% (n=48) of the children and adolescents reported probable PTSD, and 22.37% (n=86) filled the two criteria partial PTSD, and 26.7% (n=103) the one criteria partial PTSD (re-experiencing or avoidance or hyperarousal). More than a third (38.4%, n=149) of the children did not have PTSD. There were no significant differences between boys and girls in PTSD (χ^2=4.70, p=ns, N=386) or in PTSD symptoms. Table 2 shows that boys and girls did not differ in the levels of PTSD, depressive and anxiety symptoms. Also only one marginal gender difference was found concerning resilience characteristics: girls reported more feelings of control than boys.

	Israeli military violence		Palestinian factional fighting		
	%	N	%	N	P value
1. Sonic booms of jetfighters	328	90.4			
2. Having a friend killed	163	44.9	78	21.5	0.001
3. Having a close relative killed	153	42.1	144	39.7	0.02
4. Shooting and bombardment	212	58.4	69	19	0.001
5. Arrest and kidnapping of close relative	241	66.4	48	13.2	0.03
6. Witnessing killing of a friend	68	18.7	78	21.5	Ns
7. Witnessing killing of a relative	68	18.7	64	17.6	Ns
8. Witnessing heavy artillery to neighbours' house	122	33.6			
9. Witnessing assassination by rocket	307	84.6			
10. Tank firing & heavy artillery to own home	94	25.9			
11. Firing at your home			132	36.4	
12. Being seized at home	96	26.4	210	57.9	0.001
13. Deprivation of water & electricity	119	32.8	200	55.1	0.001
14. Beating and humiliation	120	33.1	87	24	0.001
15. Destroying personal belongings during incursion	92	25.3	74	20.4	0.04
16. Threatened to be killed	59	16.3	50	13.8	ns
17. Family member threatened to be killed	62	17.1	73	20.1	ns
18. Threaten to be used as a human shield	59	16.3			
19. Threatened to be shot at	62	17.1	50	13.8	ns
20. Being arrested & kidnapped			48	13.2	
21. Own home demolished	67	18.5			
22. Physical injury due to bombardment	56	15.4			

Table 1: Percentages and frequencies of traumatic events related to Israeli military violence and Palestinian factional fighting Chi square test.

The prevalence and demographic characteristics of resilient children

The results revealed that 25.0% of the participants was classified as resilient indicating presence of high exposure to traumatic events and absence of PTSD and 22.2% as traumatized, i.e., presence of both high exposure to trauma and occurrence of PTSD. Of the children 12.7% were classified as vulnerable, and 40.1% were spared of both high trauma and PTSD.

Table 3 illustrates how the resilience -classification varies according to the demographic factors. Family's high education was associated with high prevalence of resilient children. There were over twice as much resilient children (62.5%) in families where father had a university education than in families with lower educational level (26-28%). Prevalence of resilience differed also between Gaza areas, being highest in the North Gaza (33%) and Khan Yuonis (32.5%), and lowest in the Middle area (15%). The distribution of the resilience prevalence according to the place of residence is in Figure1, illustrating that the share of resilient children was lower in refugee camps than in towns and villages, Yet, in villages there were less traumatized children than in camps and towns.

Resiliency characteristics and mental health

Regression analyses about the protective mental health function of resilience characteristics are presented in Table 4. The models were significant for PTSD, depressive and anxiety symptoms, explaining, however, only 10-16% of the variation. As hypothesized, the resilience characteristics of commitment, control and challenge could protect children from psychiatric symptoms when exposed to Israeli military violence. The protective function was not valid when exposed to Palestinian factional fighting. The model of Israeli military violence X resilience characteristics significantly contributed to PTSD (F-change in R^2 (3,374)=3.55, p<0.01), depressiveness (F-change in R^2 (3,374)=3.02, p<0.03), and anxiety (F-change in R^2 (3,369) = 2.91, p<0.035). Significant β-values indicate that exposure to Israeli military violence was less associated with PTSD (β-13, t=2.34, p<0.05) and anxiety (β=0.-16, t=-2.55, p<0.01) among children reporting high levels of commitment. Further, exposure to Israeli military violence was relatively less associated PTSD symptoms (β=-0.12, t=2.28, p<0.05) when showing high level of control, and with depressive symptoms (β=-0.15, t=2.43, p<0.02) when children show high challenge. As an example, Figure2 illustrates the protective factor of commitment on PTSD

	Girls		Boys		
	M	SD	M	TSD	t-tests
Psychiatric symptoms					
PTSD	25.91	14.99	26.10	15.41	-0.65
Depressive	5.69	3.11	5.44	3.39	-0.45
Anxiety	3.34	2.26	3.33	2.69	-0.99
Resilience characteristics					
Commitment	22.63	6.88	22.70	6.14	0.10
Control	17.21	4.91	16.24	5.48	-1.82 +
Challenge	17.30	4.53	16.91	5.40	-0.76

Table 2: Means and standard deviations of psychiatric symptoms and resilience characteristic among girls and boys. Independent t test + p<0.10.

	Spared children		Resilient children		Vulnerable children		Traumatized children		β²-values
Predictors	%	N	%	N	%	N	%	N	
Gender									
Girls	37.8	70	25.4	47	13.5	25	23.2	43	0.69
Boys	40.8	82	26.4	53	12.4	25	20.4	41	
Father education									26.77**
Preparatory school	35.9	145	17.9	7	10.3	4	35.9	14	
Primary school	38.2	29	26.3	20	7.9	6	27.6	21	
Secondary school	40.6	54	27.8	37	12.8	17	18.8	25	
Polytechnic[a]	40.2	49	21.3	26	18.9	23	19.7	24	
University	37.5	6	62.5	10	0	0	0	0	
Area in the Gaza strip[a]									27.05**
North Gaza	32.8	21	32.8	21	12.5	8	21.9	14	
Gaza City	40.8	58	24.6	35	12.7	18	21.8	31	
Middle area	48.1	26	14.8	8	24.1	13	13.0	7	
Khan Yunis	26.3	21	32.5	26	11.3	9	30.0	24	
Rafah	56.5	26	21.7	10	4.3	2	17.4	8	
Place of residency									5.37*
Town	38.9	86	28.1	62	11.8	26	21.3	47	
Refugee camp	42.9	54	20.6	26	15.9	20	20.6	26	
Village	30.8	12	30.8	12	10.3	4	13.1	11	

Note: Sample sizes differ due to missing value, *p< 0.05, **p <0.01; N=386

Table 3: Resilience-classification according to demographic variables (%) Chi square test[a]

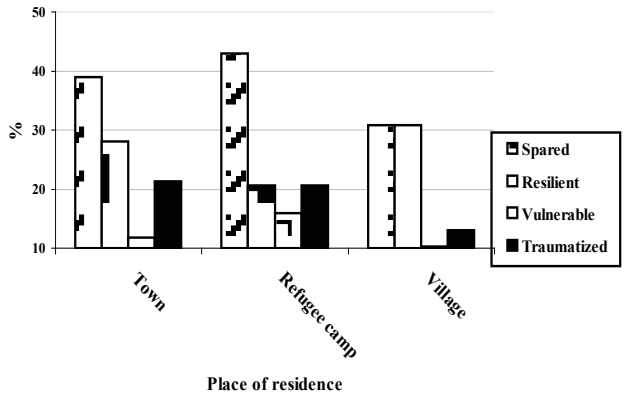

Figure 1: Distribution of resilience classification according to place of residency.

symptoms. The interaction effects between resilience characteristics and factional fighting on mental health were all non-significant, thus indicating that the moderating effects of commitment, control and challenge were trauma-specific.

Main effect results revealed that only Israeli military violence was significantly associated with increased levels of PTSD, depressive and anxiety symptoms, whereas exposure to the Palestinian factional fighting was not. Interestingly, there were no significant main effect of resilience characteristics on psychiatric symptoms, although the model was significant for anxiety (F-change in R^2 (3,372)=3.12, p<.03). However, the βfor commitment, control and challenge did not reach significance. Main effects further specified that PTSD symptoms were most likely among young children from low education families, exposed to severe Israeli military violence. Low family education and military violence were associated with high level of depressive symptoms, and young age with anxiety symptoms.

Discussion

This study applies both person- and variable-based concepts of resilience among children living in life-endangering conditions and being personally exposed to military violence. First, we assess the prevalence of resilience based on the person-based classification depicting a balance between the severity of trauma and occurrence of PTSD. Second, we examine the role of resilience characteristics of commitment, control and challenge in protecting children's mental health from negative trauma impacts.

This study showed that the most common traumas were the sonic boom sounds caused by jetfighters (90%), hearing of shelling by artillery (87%) and witnessing assassination of close people by targeted rockets (85%). Of the factional fighting, the most common traumas were hearing of shooting and gunfire in the streets (87%) and deprivation of water or electricity (55%). There were generally no gender differences in the exposure to traumatic events. Neither were there gender differences in the mean number of traumatic events related to Israeli military or Palestinian factional fighting. Such results were inconsistent with previous studies in the area in which boys reported more traumatic events than girls [24].

According to the DSM-IV criterion, 12.4% of the children and adolescents reported probable PTSD, and 22.37% filled the two criteria partial PTSD, and 26.7% the one criteria partial PTSD (reexperiencing or avoidance or hyper arousal). More than a third (38.4%) of the children did not have PTSD. There were no significant differences between boys and girls in PTSD or in PTSD symptoms.

The results revealed that 25.0% of the participants was classified as resilient indicating presence of high exposure to traumatic events and absence of PTSD and 22.2% as traumatized, i.e., presence of both high exposure to trauma and occurrence of PTSD. Of the children

	PTSD-symptoms		Depressive symptoms		Anxiety symptoms	
	Change R^2	β[a]	Change R^2	β	Change R^2	β
Step 1 Background	0.04***		0.05****		0.03**	
Age		-0.14**		-0.03		-0.13**
Gender		-0.01		0.04		-0.01
Father education		-0.15***		-.20****		-0.08
Step 2 Traumatic events	0.05***		0.07****		.03**	
Israeli military violence		.20****		26****		0.15**
Palestinian factional fighting		0.02		0.04	.	0.06
Step 3 Resilience	0.00		0.00		0.02*	
Commitment		0.03		0.00		-0.08
Control		0.01		-0.07		-0.05
Challenge		-0.02		.01		-0.06
Step 4 Interactions I	0.02*		0.02*		.02*	
War trauma X Commitment		-0.13*		-0.05		-.16**
War trauma X Control		-0.12*		-0.09		-0.01
War trauma X Challenge		-0.11		-0.15*		-0.04
Step 5 Interactions II	0.01		0.01		.001	
Factional trauma X Commitment		0.05		0.08		-0.02
Factional trauma X Control		0.03		-0.01		-0.01
Factional trauma X Challenge		0.01		0.03		-0.02
	F (14,365)=3.44, p<0.0001; R^2=12%	F (14,371)=4.87, p<0.0001; R^2=16%	F (14,371)=2.94, p<0.0001; R^2=10%			

Table 4: Hierarchical linear regression models for main effects of trauma and resilience characteristics and their interaction effects on psychiatric symptoms, Linear regression analysis, Note: *p <0.05, **p <0.01, ***p <0.001, ****p < .0001,[a] β -values are from the last step

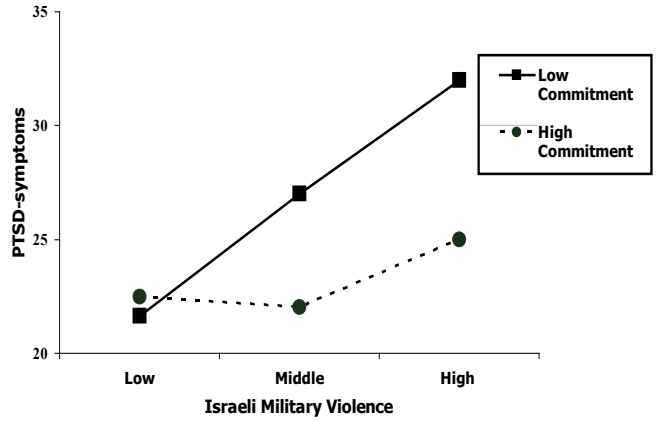

Figure 2: Military Trauma X Resilience:Commitment-interaction effect on PTSD symptoms.

12.7% were classified as vulnerable, and 40.1% were spared of both high trauma and PTSD.

Family's high education was associated with high prevalence of resilient children. There were over twice as much resilient children (62.5%) in families where father had a university education than in families with lower educational level (26-28%). Prevalence of resilience differed also between Gaza areas, being highest in the North Gaza (33%) and Khan Yuonis (32.5%), and lowest in the Middle area (15%).

The models were significant for PTSD, depressive and anxiety symptoms, explaining, however, only 10-16% of the variation. The resilience characteristics of commitment control and challenge could protect children from psychiatric symptoms when exposed to Israeli military violence. The protective function was not valid when exposed to Palestinian factional fighting. The model of Israeli military violence X resilience characteristics significantly contributed to PTSD), depressiveness, and anxiety. Significant, that exposure to Israeli military violence was less associated with PTSD and anxiety among children reporting high levels of commitment. Further, exposure to Israeli military violence was relatively less associated PTSD symptoms when showing high level of control, and with depressive symptoms when children show high challenge. Main effect results revealed that only Israeli military violence was significantly associated with increased levels of PTSD, depressive and anxiety symptoms, whereas exposure to the Palestinian factional fighting was not. Interestingly, there was no significant main effect of resilience characteristics on psychiatric symptoms, although the model was significant for anxiety. However, values for commitment control and challenge did not reach significance. Main effects further specified that PTSD symptoms were most likely among young children from low education families, exposed to severe Israeli military violence. Low family education and military violence were associated with high level of depressive symptoms, and young age with anxiety symptoms.

Most parents agree that children should be protected from war and military violence, and yet, the very habit of us adults is to solve political problems by military means. The fight between the militarily strong and technically superior Israeli army and Palestinian resistance in Gaza and West-Bank provides an example of the modern wars, characterized by excessive civilian exposure and children suffering. In this study we observed children's trauma experiences from an optimistic and more positive angle by evaluating the prevalence and function of resilience.

Most reviews on child mental health in conditions of war, terrorist attacks and disasters note that children show 'amazing' level of resilience [38,39]. Yet, the conclusion is predominantly based on research results showing a lack of expected psychiatric symptoms or absence

of correlations between severity of trauma and PTSD. Our results revealed that about a quarter of Palestinian children were resilient when assessed through a balance between the exposure to severe trauma and occurrence of PTSD. Interestingly enough, the prevalence is very similar to that assessed in a random sample of Palestinian children after the First Intifada [8]. Also the share of traumatized children was similar, around 20%, in the earlier and current study. In the First Intifada sample, a third of children were spared from both severe trauma and psychiatric symptoms, which is slightly less than in the current study (40%). It corresponds with historical change of Israeli occupation forces leaving Gaza gradually after The First Intifada. Although shelling, targeted killing and siege continued, families were not daily exposed to occupation soldiers.

The long-lasting Israeli-Palestinian conflict about land and self-determination includes also two occasions of Palestinian 'civil war' of factional fighting. After the 1982 Lebanon war and Sabra and Shatilla massacres, fighting broke between the PLO and dissident Palestinian forces in the Tripoli refugee camps in Northern Lebanon. The context of our study was the aftermath of the second Palestinian factional fighting that took place between the Islamist Hamas and Fatah forces in the Gaza strip in June 2007. Our study is unique as it allows analysing how similar traumatic events due to either enemy army or own national groups associate with children's mental health.

There is an intuitive belief that it is psychologically easier to suffer from 'enemy fire' than to be victimized by one's own people. The meaning making process is vital in war conditions, and traumatization in the context of fighting against the oppressors can be considered heroic and worth of social support. Our results showed, however, the opposite. The experiences related to the Israeli military actions in Gaza were associated with increased PTSD and depressive and anxiety symptoms, whereas traumatic events due to the Palestinian factional fighting were not. To some extent, children reported similar trauma due to both fights, e.g., loss of close persons and witnessing killing of friends. Yet, the duration of factional fighting was few months as compared to accumulated Israeli shelling, bombardment and destruction of residential areas. However, the time window for reporting the personal exposure to violence was the same, one year. We would need more information about children's making sense of different actions of military violence. The study setting could have provided opportunity to assess perceptions of the same traumatic event in two politically different contexts, that of civil war and enemy fighting. We deserve criticism for missing this opportunity and for the absence of analyses about appraisals and meanings of different trauma.

The phenomenon of resilience involves positive and resourceful capacities, and should not be limited only to lack of symptoms. Accordingly, we conceptualized resilience also as commitment, ability to control and manage and enjoy challenges, and hypothesized that these positive resilience resources would protect children's mental health from negative trauma impacts. The hypothesis was substantiated considering PTSD, depressive and anxiety symptoms. The context of trauma was decisive for the effectiveness of resilience characteristics of commitment, control and challenge in protecting children from trauma. Their protective functioning was present only when children were exposed to Israeli military trauma. The reason may lie in the very nature of studied resilience characteristics. Research suggests that ideological commitment, especially in adolescence can protect from mental health problems in war [40]. Commitment and control are resilience characteristics that connate ideological aspects of endurance and sacrifice in the context of national struggle. One may argue that when traumatic events were caused by own Palestinian people, although in the atmosphere of execrated hatred and life threat, children and adolescents did not respond to them by stronger ideological commitment. Instead, there is some evidence that this intensified national commitment is true when personally suffering from enemy violence. Palestinian adolescents who were severely traumatized by witnessed the enemy killing friends or siblings more readily liked to join suicide bombing missions [41].

Methodological Issues

Our assessment of trauma cover events of physical violence targeted to the child (e.g., bullet wounds), witnessing violence towards a close person (e.g., witnessing killing and wounding of family member or friend), and material losses (e.g., damage to property). The score does not differentiate their relative severity, which serves criticism. We admit that witnessing a killing of a friend by enemy soldiers may signify specific age-salient pain and cannot be equated by the memory of witnessing artillery. However, majority of the assessed events of Israeli military violence and Palestinian factional fighting is highly severe and can negative impact child development [42].

Further criticism of the study relates to the conceptualizing resilience in individual terms and concentrating on child resilience characteristics. There are well-argued demands to comprise feature of family and society that enhance resilience [43] and extend the child characteristics into underlying cognitive, emotional, social and psychophysiological processes that explain the occurrence of resilience in life endangering conditions [44].

The person-based conceptualization of resilience as a typology between the trauma-disorder-balance is not without problems in a sample where we cannot find children with zero-exposure to trauma. Luckily there were enough cases to use non-PTSD group as a cutting point. The choice of the trauma cut-off points is open to criticism as we used empirical results of the accumulation of trauma as a criterion. Also for the reason of parsimony we combined traumatic events related to the Israeli military violence and Palestinian factional fighting. The choice can be criticized because our results argue for distinctive nature of trauma by revealing that the source of military violence was decisive for the protective function of resilience.

Clinical Implication

This study highlight the impact of political violence due to Israeli military violence and Palestinian factional fighting on Palestinian children mental health and resilience. Children reported PTSD, depression, and anxiety symptoms and they tried to use many ways to over such impact. Family's high education was associated with high prevalence of resilient children. Resilient was more in children where father had a university education, resilient children was lower in refugee camps than in towns and villages. Such findings increase the needs for enhancing community centres activities to deal children mental health problems by introducing new programs of using art, psychotherapy, Cognitive behaviour therapy for traumatized people. Also, increase programs which targeting parents and children and increasing their resilience in face of stress and trauma. Also, training courses for professionals working in different organization on early detection of children with mental health problems and management of such problems.

Our study may have some contribution to the field of research in findings other factors which may increase resilience in children such as

social support and family support and may open new field of research in finding other risk factors for children and ways of overcome such factors.

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PTSD, Depression, and Anxiety among Palestinian Women Victims of Domestic Violence in the Gaza Strip

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Authors' contributions

This work was carried out in collaboration between all authors. Authors A. A. Thabet and AAT designed the study, wrote the protocol. Authors A. A. Thabet, AAT, TV and PV wrote the first draft of the manuscript. Authors A. A. Thabet, AAT, TV and PV managed the literature searches. Authors A. A. Thabet, TV and PV analyses of the study performed the spectroscopy analysis and wrote the final draft. All authors read and approved the final manuscript.

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ABSTRACT

Background: Domestic violence is a universal phenomenon which affects all family members and specially children and women. Common reactions to domestic violence are post-traumatic stress disorder, depression, and anxiety.

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Aims: The aim of this study is to find type and severity of domestic violence against Palestinian women in the Gaza Strip, and to investigate whether it is associated with mental health problems such as post-traumatic stress disorder, depression, and anxiety.
Methods: The study sample included 622 Palestinian women randomly selected from the five areas of the Gaza Strip aged from 18 to 50 years (mean age = 31.5 years). They were interviewed using questionnaires including Sociodemogrophic variables, Conflicts Tactics Scale, post-traumatic stress disorder scale, Beck Depression Inventory, Taylor manifestation Anxiety Scale.
Results: The study showed that psychological assault was 56.91%, physical assault 37.3%, physical injury 12.06%, and sexual assault was 7.14%.
The study showed that domestic violence was significantly higher in women living in villages than in cities or camps. Also, women living in villages experienced more psychological abuse than women living in cities or camps.
The study showed that 71 women (11.4%) had been diagnosed as post-traumatic stress disorder, 15% had moderate to severe depression, and 29.9% had very severe anxiety.
The study showed that psychological assault toward women was positively correlated to depression, anxiety, and posttraumatic stress disorder. Also, there were significant positive relationships between physical assault and depression, anxiety, and posttraumatic stress symptoms. Physical injury and sexual assault were significantly positively related to post traumatic stress disorder, depression, and anxiety.
Conclusion: The study showed that one third Palestinian women exposed to physical violence and half of them exposed to psychological violence which lead to post-traumatic stress disorder depression, and anxiety. So, a great need for more programs for women victims of domestic violence in Palestinian society are needed with well trained professionals in the field of psychological support and therapy. More specific programs should be established in Gaza to enable women of using new coping strategies with difficulties. Also, training programs including primary health care professional such physicians, nurses, social service experts, and midwives should be provide to enable them of early detection of victims of violence and provide social support to these women.

Keywords: Anxiety; depression; domestic violence; Palestinian women; PTSD.

1. INTRODUCTION

Gaza Strip is a narrow piece of land lying on the coast of the Mediterranean sea. Its position on the crossroads from Africa to Asia made it a target for occupiers and conquerors over the centuries. Gaza Strip is very crowded place with area 365 sq. Km and constitute 6.1% of total area of Palestinian territory land. The Gaza Strip is home to a population of more than 1.76 million people, including 1.26 million Palestine refugees. For the last decade, the socioeconomic situation in Gaza has been in steady decline. Years of conflict and closure have left 80 per cent of the population dependent on international assistance. The tightened blockade, imposed following the Hamas takeover of Gaza in June 2007, has decimated lives and livelihoods, resulting in the impoverishment and de-development of a highly skilled and well-educated society. Despite adjustments made to the blockade by the Government of Israel in June 2010, restrictions on imports and exports continue to severely hamper recovery and reconstruction. Over half a million Palestine refugees in Gaza live in the eight recognized Palestine refugee camps, which have one of the highest population densities in the world. That camps contain two thirds of the population of Gaza Strip who had been uprooted from their lands in 1948. Gaza Strip is composed of five provinces: North Gaza, Gaza city, Middle area, Khan Younis and Rafah [1].

The World Health Organization (WHO) defines violence as “the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation” [2].

Others, refers domestic violence to a pattern of physical, sexual, and/or psychological behaviors perpetrated by a current or former intimate partner [3].

The WHO study called “Women's Health and Domestic Violence against Women” surveyed 10 countries and 24,000 women and showed prevalence of domestic violence. Physical

violence from their partners was reported in 23–49% of those women, and sexual violence was reported in 10–50% of them [4].

Other studies of domestic violence in non-Western contexts suggest that traditional norms may still exert an influence on the status of women. For example, a study of Sri Lankan medical students [5] and Jordanian men [6] revealed that strong patriarchal beliefs were used to justify violence against women. A previous study involving Palestinian women found that 13-69% strongly agreed that wife beating was justified under certain circumstances, for example, when a wife was sexually unfaithful [7].

Sociodemographic variables such as younger age and limited decision-making power are significant predictors of both physical and psychological abuse of single, never-married Palestinian women; religion was found to be significant for psychological abuse alone [8].

A number of previous studies have examined the incidence of domestic violence and attitudes towards male to female spousal abuse in Arabic countries and Islamic cultures. In a reported the results of two national surveys of married Palestinian woman living in the West Bank and Gaza strip. Living in rural areas and camps, poverty, unemployment, being a Muslim, husbands has a low level of education and women having a higher educational level than their husbands were factors predicted domestic violence in women [6]. In Syria, 26% of married women reported at least three instances of abuse during the year, while weekly battering occurred among 3.3% of married women [9]. Similarly, Bedouin Arab women in Israel have a 48% lifetime exposure rate to violence in their families [10]. Another, family public health survey from Iraq documented that 83.1% of women reporting at least one form of marital control. Overall, younger married women were the most likely to report restrictions; 74.5% of those aged 15 to 24 years reported having to ask permission to seek health care, compared to 60.3% of those aged 40 to 49 years. As for emotional or psychological violence, 33.4% of women reported at least one form of violence and 21.2% of women experienced physical violence [11].

In 2006, the Palestinian Central Bureau of Statistics (PCBS) conducted a Domestic Violence Survey examining instances of abuse among ever-married women; single, never-married women over 18 years; children; and the elderly [12]. For ever-married women, it was found that 23.3% suffered physical abuse from their husbands, 61.7% psychological abuse, and 10.9% sexual abuse at least once during the year 2005. There were higher rates of all forms of abuse in the West Bank compared to the Gaza Strip. For single, never-married women the rates were found to be 25% for physical abuse and 52.7% for psychological abuse experienced at least once during the year 2005. Similar to their ever-married counterparts, the West Bank had higher rates of abuse than the Gaza Strip.

In Saudi Arabia, it was revealed that 30% of male respondents had been violent toward a female family member, with female misbehavior cited as the main reason for the abuse, in addition to disapproval over dress and conduct for unmarried women. The most likely targets of such violence were, in order of likelihood, sisters, mothers, sisters-in-law, aunts, and wives [13]. In a study of Qatari female students, 80% of whom were single never-married women, it was found that 39% were abused by their brothers, 38% by their fathers, and 22% reported abuse from their mothers [14].

National research on violence against women in Turkey revealed 39% of women were physically and 15% sexually abused by their partner, whereas 18% were physically and 3% were sexually abused by a non-partner. The same research noted that the most common perpetrators in non-partner abuse were fathers (42%), mothers (32%), and brothers (16%) [15]. The data from the Spanish Women's Institute report that 10% of women above the age of 18 have been exposed to intimate-partner violence [16].

In study were conducted with 96 women recruited from community health clinics serving low-income women in an urban U.S. city showed that all women had experienced some type of physical violence in the past year based on the eligibility criteria, most women experienced severe physical or sexual IPV in the past year (88.5%). In the past 6 months, 22% of women experienced no IPV or psychological IPV only, while 16% experienced minor physical or sexual intimate-partner violence and 62.5% experienced severe physical or sexual IPV. Fifty two percent of women were experiencing intimate-partner violence from their current partner, while 48% were experiencing IPV from a former partner [17].

In another study of community sample of 4,114 in Bangladesh women of age 15 to 49 years having

at least one child, more than half of the women (53.9%) were found to be exposed to IPV [18].

There is overwhelming evidence that intimate partner violence (IPV) is a major contributor to the ill-health of its women survivors. For example, an extensive review of the literature found that IPV posed a significant risk to women's physical health, including increased mortality, injury, disability, chronic pain. In a Taiwanese study of 109 abused women found that the medium- and high-risk groups for life-threatening situations accounted for 82.6% of all subjects, and 93.6% of all subjects were in a high score Yahia group of post-traumatic responses Among the 10 symptom dimensions of psycho-physiological symptoms, anxiety had the highest standardized mean score, followed by obsession, depression, and somatization. The life-threatening situations had significant positive correlation with the overall post-traumatic responses, the responses of intrusion, and the general severity index (GSI). Overall post-traumatic responses, intrusion, and avoidance were all positively associated with GSI [19].

Experience of domestic violence is associated with numerous deleterious effects on mental, social and emotional wellbeing. For example, it is associated with posttraumatic stress disorder (PTSD) [20,21], anxiety, gynaecological and digestive disorders [22], and depression [23], low self-esteem [24]. The experience of domestic violence is associated with a number of demographic factors such as poverty [25].

Studies have demonstrated that living with a violent intimate male partner is harmful to the psychological conditions of the victimized women. Mental health consequences of exposure to domestic violence against women commonly include depression, posttraumatic stress disorder (PTSD), anxiety, suicidal behavior, abuse of alcohol and/or other substances, and personality disorders [26-34].

The aim of this study is to find type and severity of domestic violence against Palestinian women in the Gaza Strip, and to investigate whether it is associated with mental health problems such as post-traumatic stress disorder, depression, and anxiety.

2. METHODS

2.1 Participants

The study sample included 622 Palestinian women randomly selected from the five areas of the Gaza Strip aged from 18 to 50 years. We selected the sample according to the population density of the Gaza Strip. We gave the data collectors the total number of women from each area (Gaza Strip is divided in to 5 areas). Each Data collector had the exact number of women to be interviewed. From Each area one street was chosen and every other home was entered and the women were informed about the purpose of the study and signed a consent form and were told that the information will kept confidential with the researcher co do the interview. Data collection was done by a will trained group of 10 community health workers. Data was collected in July to September 2009.

These workers were based in the (Women Empowerment Project'-WEP). Women Empowerment Project had three centers one in Gaza City, Middle area, and South of Gaza- It is a part of (Gaza Community Mental Health-CMHP).

2.2 Measures

2.2.1 Socio demographic scale

Sociodemographic data were collected on the women's socio-demographic characteristics, including age, number of children, place of residence, education, marital status, occupational status, and, if married, and husband's occupation.

2.2.2 Revised conflict tactics scale [34]

Conflict Tactics Scale included subscales measuring physical, sexual, and psychological, and injury due to domestic violence. A previous version of the CTS was used for a study on domestic violence in the Palestinian territories [6]. This self-report instrument measures the frequency of physical abuse, verbal violence, sexual violence, reasoning tactics, and injury within an intimate relationship. Participants were asked to report the frequency with which they performed the various behavioral conflict resolution tactics in the previous year. Specifically, 12 items from the Physical Assault subscale, 8 items from the Psychological Aggression subscale, 3 items from the Sexual Coercion subscale, and 6 items from the Injury subscale were used to measure intimate partner physical assault, psychological abuse, and sexual coercion. Participants were asked to report on the frequency of each of the abusive acts occurring in a partner conflict situation over

the past year using a 7-point scale, with the following response options: 0 = never, 1 = once, 2 = twice, 3 = 3 to 5 times, 4 = 6 to 10 times, 5 = 11 to 20 times, and 6 = more than 20 times. The total scores for each subscale were calculated by adding up the midpoints of the response categories for each item (e.g., the midpoint for the 6 to 10 times response was 8). In this study, the Cronbach's alpha coefficient was .92 for the Physical Assault subscale, .88 for the Psychological Aggression subscale, .89 for the Sexual Coercion subscale, and .88 for the Injury subscale.

2.2.3 Posttraumatic stress disorder checklist [35]

This checklist contains 17 items adapted from the DSM-IV PTSD symptom criteria. The 17 PTSD symptoms are rated by the participant for the previous month on a scale indicating the degree to which the respondent was bothered by a particular symptom from 1 (not at all) to 5 (extremely). Items can be categorized as follows: items 1-4, 17 are for criteria B (intrusive re-experiencing); items 5-11 are for criteria C) avoidance and numbness); and items 12-16 are for criteria D (hyperarousal). Respondents are asked to rate on a 5-point Likert scale (1 = not at all to 5 = extremely) the extent to which symptoms troubled them in the previous month. Using the recommended Posttraumatic Stress Disorder Checklist cutoff score of 50, Blanchard found cut of point of 44 [35]. Previous research has suggested using as a minimum sum either a score of 3 or 4 on a symptom for it to count as positive towards the diagnosis. This scale was used in previous studies and showed high reliability and validity [36]. In this study, the Cronbach's alpha coefficient was high and acceptable .91.

2.2.4 The taylor manifestation anxiety scale (TMAS) [37]

Taylor developed one of the first measures of chronic, manifest anxiety, Taylor's Manifest Anxiety Scale (MAS). Taylor's scale consisted of items selected from the Minnesota Multiphase Personality Inventory. We used the Arabic version with 50 items and answer is "Yes= 1" or "No= 0. The score ranged from (0- 16 no anxiety), (17- 20 Mild anxiety), (21- 26 moderate anxiety), and (27- 29 severe anxiety), and (30-50 very severe anxiety). 30 In this study, the Cronbach's alpha coefficient was high and acceptable .79.

2.2.5 Beck depression inventory [38]

The long form of the BDI is composed of 21 questions or items, each with four possible responses. Each response is assigned a score ranging from zero to three (0, 1, 2, 3), indicating the severity of the symptom. Individual questions of the BDI -2 assess mood, pessimism, sense of failure, self-dissatisfaction, guilt, punishment, self-dislike, self-accusation, suicidal ideas, crying, irritability, social withdrawal, body image, work difficulties, insomnia, fatigue, appetite, weight loss, bodily preoccupation, and loss of libido. Items 1 to 13 assess symptoms that are psychological in nature, while items 14 to 21 assess more physical symptoms. The scores of the BDI-2 were, where a score ‹ 20 = no depression, 21-31= mild depression, 32-41 = moderate depression, and 42 and above = severe depression. The Arabic version of the scale was used in the current study [39]. We calculated the reliability of the Beck Depression Inventory by using alpha Chronbach = 0.77.

2.3 Statistical Analysis

Data analyses were performed using SPSS Version 18 (SPSS, Inc. Chicago, United States). The frequencies of categorical data are presented. Established cut-off scores were used to provide rates of likely PTSD, depression, and anxiety. The relationship between domestic violence, demographic variables, PTSD, depression, and anxiety was investigated using the Spearman correlation test, as the continuous scores were not normally distributed. Differences in mean scores for violence exposure, mental health problems and sociodemographic variables were tested using one way ANOVA.

Multivariate linear regression analyses were performed to determine predictors of total anxiety, PTSD, and depression scores by types of violence experienced.

3. RESULTS

3.1 Sociodemographic Characteristics

The selected sample included 622 Palestinian women. Mean age was 30.61 years (SD = 8.9). Most of women were married (64.1%). 22% were single, 8.8% were divorced and 5% were widowed. Almost 40% of women had finished secondary education, 10.8% had completed a diploma, and 20.7% had university degrees. The

majority (60.6%) lived in cities, 24.4% lived in refugee camps, and 15% lived in villages. For those women who were married, 68% of their husbands had finished secondary education. 11.8% had completed a high diploma, and 19.4% had university degrees. Eighty-eight percent of women were housewives, 2.4% were simple workers, and 9.3% were employees. Nearly 45% of women had 8 or more children, 33. 9% had 5-7 children, and 21.1% had 4 and less children. Almost two-thirds of the women were living on an average monthly family income of less than 270 US, 22.8% on less than $450 US and 11.6% were earning $451 or more (see Table 1).

Table 1. Sociodemographic characteristics of the study sample (N = 662)

Mean age of women in years	**Mean age =30.61, SD = 8.9**	
Marital status	**No**	**%**
Single	137	22.0
Married	399	64.1
Divorced	55	8.8
Widowed	31	5.0
Type of residence		
City	377	60.6
Camp	152	24.4
Village	93	15.0
Women education		
Illiterate	15	2.4
Elementary	51	8.2
Primary	123	19.8
Secondary	233	37.5
Diploma	67	10.8
University	129	20.7
High diploma	3	.5
High education	1	.2
Place of residence		
North Gaza	134	21.5
Gaza	199	32.0
Middle area	95	15.3
Khan Younis	118	19.0
Rafah	76	12.2
Women job		
House wife	549	88.3
Simple worker	15	2.4
Employee	58	9.3
No of children		
4 children and less	131	21.1
5-7 children	211	33.9
8 and more children	280	45.0
Family monthly income		
Less than US$ 270	408	65.6
US$ 271- 450	142	22.8
US$ 451-700	53	8.5
More than US$ 701	19	3.1

3.2 Means, Standard Deviation, and Percentage of Domestic Violence

The study showed that psychological assault was 56.91%, physical assault 37.3%, physical injury was 12.06%, and sexual assault was 7.14% (see Table 2).

3.2.1 Sociodemographic variables and domestic violence

In order to investigate the differences in violence and socioeconomic variables such as age, type of residence, education, place of residence, marital status, number of children, and monthly family income, a One way ANOVA test was performed in which each of the demographic variable was entered as independent variables and means of violence including subscales as dependent variable.

Age was recorded in three categories (18-29 years, 30-39 years, and 40-50 years). There were no statistically significant differences in exposure to all subscales of domestic violence between these age groups, or according to monthly family income, educational level of participants and occupational status. According to place of residence (village, city, and camp), post hoc tests revealed that total domestic violence was significantly higher in women living in villages than in cities or camps that women living in villages experienced more psychological abuse than women living in cities or camps ($F= 4.56$, $p = 0.01$)

Table 2. Means, standard deviation, and percentage of domestic violence

Items	**Mean**	**SD**	**%**
Psychological assault	16.34	14.90	56.91
Physical assault	15.18	19.74	37.3
Physical injury	5.91	9.60	12.06
Sexual assault	1.5	4.31	7.14

3.3 Post Traumatic Stress Symptoms in Women

Our results showed mean score for the post-traumatic stress disorder was 34.33 (SD= 12.62), with subscale mean scores of 9.96 (SD = 4.4) for intrusion, 14.10 (SD = 5.52 for avoidance, and 10.26 (SD = 4.41) for hyperarousal. Using the established cutoff point of 50 on the PCL, 71 women (11.4%) met the criteria for a diagnosis of post-traumatic stress disorder.

In order to investigate differences in post-traumatic stress disorder scores according to socioeconomic variables such as age, type of residence, education, place of residence, marital status, number of children, and monthly family income, a One way ANOVA test was performed. Each of the demographic variables was entered as the independent variable and the PCL mean scores were entered as dependent variables. Women who were single, divorced, or widowed had higher post-traumatic stress disorder scores than women who were married (F=6.9, p = 0.001). Women living in cities had higher PTSD scores than those living in camps or villages (F= 5.66, p= 0.004). There were no significant differences in levels of post-traumatic stress disorder between groups according to monthly family income or educational level of women.

Linear regression analyses were performed to determine predictors of total post-traumatic stress disorder scores by types of violence experienced. The following subscale items were found to predict post-traumatic stress disorder: He insulted me (B = 0.15, p = 0.002), I passed out from being hit on the head by him (B = 0.15, p = 0.002), I stomped out of the room or yard (B = 0.15, p = 0.001), he pushed or shoved me (B = 0.14, p = 0.001), he did something to spite me (B = 0.14, p = 0.001), he burned or scalded me(B = 0.11, p = 0.01), I needed to go to the doctor because of the fight, but he did not (B = 0.11, p = 0.01).

3.4 Anxiety in Women

The mean score for anxiety was 25.11 (SD = 9.57). Using the established anxiety cut off scores: 15.6% had no anxiety, 11.3 had mild anxiety, 25.9% had moderate anxiety, 17.4% had severe anxiety, and 29.9% had very severe anxiety.

A One way ANOVA test was performed in which each of the demographic variables were entered as independent variables with the mean scores for anxiety as dependent variables. Women who were single were more anxious than women who were married (F= 5.4, p = 0.001). No differences in reported anxiety were established between type of residence, educational level and monthly income.

Linear regression analyses were performed to determine predictors of total anxiety scores by types of violence experienced. The following subscale items were found to predict anxiety, I felt physical pain that still hurt the next day because of the fight we had (B = 0.19, p = 0.001), he did something to spite me (B = 0.15, p = 0.004), he accused me of being a lousy lover (B = 0.12, p = 0.01), I stomped out of the room or yard (B = .09, p = 0.04).

3.5 Depression in Women

Depressive symptoms reported ranged from 0, which equated to no symptoms, to 57 symptoms, with a mean depression score of 18.50 (SD = 11.57).

Using the established cutoff score on the BDI-II (Gareeb, 2000) where a score ‹ 20 = no depression, 21-31= mild depression, 32-41 = moderate depression, and 42 and

Table 3. Linear regression analysis of total post-traumatic stress disorder and each of the violence items

	Unstandardized coefficients		Standardized coefficients	t	p	95.0% confidence interval for B	
	B	Std. error	Beta			Lower bound	Upper bound
He insulted me	.69	.22	.15	3.21	.001	.27	1.12
I passed out from being hit on the head by him	1.01	.30	.15	3.41	.001	.43	1.59
I stomped out of the room or yard.	.73	.20	.15	3.57	.001	.33	1.13
He pushed or shoved me.	.73	.22	.14	3.26	.001	.29	1.17
He did something to spite me.	.64	.21	.14	3.07	.001	.23	1.05
He burned or scalded me.	-.85	.31	.11	-2.72	.01	-1.47	-.24
I needed to go to the doctor because of the fight, but he did not	.74	.28	.11	2.61	.01	.18	1.30

R^2 = 0.31, Std. error of the estimate = 10.49

above = severe depression, 57.5% of participants reported no depression, 27.5% had mild, 12.9% had moderate, and 2.1% reported severe depression.

One way ANOVA was performed in which depression total scores were entered as the dependent variable and sociodemographic variables were entered as independent variables. Women who were single reported more depression than those who were divorced, widowed, or married (F=8.5, p = 0.001). No other significant differences were found in depression scores and other sociodemographic variables.

In order to investigate which types of violence may predict depression scores, a linear regression analysis was performed. Total depression (BDI-II) scores were entered as the dependent variable and each of the violence items entered as independent variables. The following subscale violence items predicted depressive symptoms in women: Minor psychological aggression: 'he insulted or swore at me' (B= 0.15, p = 0.001), 'he did something to spite me' (B= 0.19, p = 0.001), I felt physical pain that still hurt the next day because of the fight we had' (B= 0.16, p = 0.001), someone threatened to have sexual activity against my will (B= 0.11, p = 0.01) and he accused me of being a lousy lover (B= 0.12, p = 0.01).

3.6 Relationships of Domestic Violence, Women's Symptoms of Posttraumatic Stress, Anxiety, and Depression

Our results showed the direct relationships of domestic violence, women's symptoms of posttraumatic stress, anxiety, and depression.

Table 4. Linear regression analysis of total anxiety and each of the violence items

	Unstandardized coefficients		Standardized coefficients	t	*p*	95.0% confidence interval for B	
	B	Std. error	Beta			Lower bound	Upper bound
(Constant)	21.41	0.48		44.40	0.001	20.47	22.36
I felt physical pain that still hurt the next day because of the fight we had	0.68	0.15	0.19	4.41	0.001	0.38	0.98
He did something to spite me.	0.47	0.14	0.15	3.26	0.001	0.18	0.75
He accused me of being a lousy lover.	0.45	0.17	0.12	2.70	0.01	0.12	0.78
I stomped out of the room or yard.	0.31	0.15	0.09	2.10	0.04	0.02	0.60

R2 = 0.19, Std. error of the estimate= 7.81

Table 5. Linear regression analysis of total depression and each of the violence items

	Unstandardized coefficients		Standardized coefficients	t	*p*	95.0% confidence interval for B	
	B	Std. error	Beta			Lower bound	Upper bound
(Constant)	13.15	0.62		21.35	0.001	11.94	14.36
He insulted me	0.61	0.21	0.15	2.94	0.001	0.20	1.02
He did something to spite me.	0.81	0.20	0.19	4.10	0.001	0.42	1.20
I felt physical pain that still hurt the next day because of the fight we had	0.77	0.21	0.16	3.61	0.001	0.35	1.18
Did someone threatened to have sexual activity without your will	0.74	0.28	0.11	-2.70	0.01	1.28	0.20
He accused me of being a lousy lover.	0.60	0.23	0.12	2.66	0.01	0.16	1.05

R2 = 0.15, Std. error of the estimate= 4.81

The study showed that psychological assault toward women was positively correlated to and depression (r= .42, p <.01) anxiety (r= .39, p <.01) and posttraumatic stress (r = .52, p <.01) symptoms. Also, there were significant positive relationships between physical assault and depression (r= .30, p <.01), anxiety (r= .31, p <.01), and posttraumatic stress (r = .41, p <.01) symptoms. Also, there were significant positive relationships between physical injury and depression (r= .28, p <.01), anxiety (r= .33, p <.01) and posttraumatic stress (r = .39, p <.01) symptoms. Sexual assault was positively related to anxiety (r= .20, p <.01) and posttraumatic stress (r = .21, p <.01) symptoms.

4. DISCUSSION

The present study aimed to assess prevalence of domestic violence and relationship to mental health problems of women including PTSD, anxiety, and depression. As shown in our results Palestinian women in the Gaza Strip exposed to domestic violence which include psychological, physical assault, physical injury, and sexual assault. The study showed that 56.91% reported psychological and 37.3% reported physical assault, 12.06% reported physical injury, and 7.14% reported sexual assault. Our results consistent with previous study which found that 23.3% suffered physical abuse from their husbands, 61.7% psychological abuse, and 10.9% sexual abuse at least once during the year 2005 [12]. Similarly in study of Qatari female students, found that 39% were abused by their brothers, 38% by their fathers, and 22% reported abuse from their mothers [14]. Our findings were consistent with another study of Bangladesh women which more than half of the women (53.9%) were exposed to IPV [18]. This study rate of domestic violence is more than found in study of WHO study which showed that 23–49% of women reported physical violence 10–50% reported sexual violence [4]. So, the effect of IPV on society is now viewed not only as a human right issue but also as a public health issue.

Similarly, in study of Palestinian women living in refugee camps in Jordon showed that 78% experienced one form or more of intimate-partner violence. Nearly half of the women were victims to either two (24.3%) or three (22.7%) different types of intimate- partner violence. The most-reported type of intimate- partner violence to which the participants were victims was control by the partner (73.7%), followed by economic intimate- partner violence, reported by 53.3%, and emotional intimate-partner violence, reported by 50.3% of the women [40].

This study showed that 11.4% met the criteria for a diagnosis of post-traumatic stress disorder, 47.1% had severe to very severe anxiety, and 15% of women reported moderate to severe depression. The study showed significant and positive relationships between of psychological, physical assault, injury, and sexual abuse and all women's mental health problems including post-traumatic stress disorder, depression, and anxiety. Similarly, others found moderate to severe depression to be a problem among battered women that was predicted by physical abuse coupled with daily stress [22]. Moreover, other study found that prevalence of major depressive disorder (MDD) among women who had endured intimate partner violence was 68 percent for lifetime MDD and 18 percent for current major depressive disorder [41].

Table 6. Means, standard deviations and intercorrelations of study variables

	M	SD	1	2	3	4	5	6	7	8	9	10
1. Psychological assault	16.34	14.90	1									
2. Physical assault	15.18	19.75	.69	1.00								
3. Physical injury	5.91	9.60	.58	.76	1.00							
4. Sexual assault	1.50	4.31	.37	.52	.59	1.00						
5. Depression	18.50	11.57	.42	.30	.28	.08	1.00					
6. Anxiety	25.14	8.65	.39	.31	.33	.20	.56	1.00				
7. PTSD	34.32	12.62	.52	.41	.39	.21	.69	.60	1.00			
8. Intrusion subscale	9.96	4.44	.50	.41	.39	.23	.55	.50	.86	1.00		
9. Avoidance subscale	14.10	5.52	.43	.32	.31	.15	.64	.52	.90	.65	1.00	
10. Arousal subscale	10.26	4.41	.45	.35	.33	.17	.61	.56	.87	.64	.68	1.00

Similarly the relationship between the domestic violence and mental health status of women previously reported in the literature, domestic violence has a significant impact on women's mental health [26,27,28,31,32,42]. Also, in another study researcher found that among a cohort of primarily African American women, those who were both HIV-positive and experienced any IPV over their lifetime were 7.0 times more likely to report problems with depression, 4.9 times more likely to report problems with anxiety, and 12.55 times more likely to have attempted to commit suicide compared to women who did not experience IPV or were HIV-negative [43]. Some investigators found that women who had experienced IPV were over three times more likely than women without a trauma history to experience depression [44]. Furthermore, in their comparison study showed that the severity of symptoms was higher in the IPV depressive and the IPV-depressive/PTSD groups than in both the non-abused and the IPV -no-symptoms groups. Also, results showed that the prevalence of emotional disorders, anxiety, and somatoform disorders was 22.8%, 24.8%, and 16.9%, respectively [45]. Recently, other showed that the majority of women exhibited depressive symptoms (73%), findings have also shown, more severe physical and sexual IPV was found to be associated with depression in this sample of low-income abused women, which is consistent with prior research examining women experiencing IPV [17]. Moreover, in study of 50 women survivors of IPV showed that over half of women were experiencing either PTSD, clinical depression, or both at the time they were interviewed. Thirty six percent had active PTSD, 48% had depression, and 30% had both [46]. This study results were consistent with study of 308 Chinese women survivors of IPV recruited at community setting and at domestic violence shelters showed that psychological abuse was associated with mental health problems (depressive and PTSD symptoms) and also physical health problems (chronic pain) [47].

5. CONCLUSION

Our study highlights implications for mental health service management of women victims of domestic violence in the Palestinian society. To reduce the risk of adverse family and community violence, care plans should be in place to manage risk and specify action if a crisis does occur. Our findings suggest that a unifying approach overcoming the health issues of domestic violence survivors. This systems approach should take their needs into account, offer high-quality, timely, and sensitive physical and mental health care, and provide effective referrals to other formal support systems. Until these needs are incorporated into the health care system itself, survivors will continue to suffer the health consequences of violence, despite their universal access to care.

Other programs should be designed to include components aimed at reducing women's use of avoidance coping. In addition we should focus on interventions that promote problem-focused coping and social support coping enhance self-efficacy and lead to more positive adjustment. Also, interventions should be designed as well to promote use of these more active approaches to coping with relationship conflict.

Findings suggest that future research should examine women's experience other types of violence such as political and community and their resilience and coping with such problem. It would be useful to examine subtypes of using violence and being victimized (i.e., physical, sexual, and psychological) because investigations at this more discrete level may reveal differential patterns of relationships among variables depending on the type of violence.

CONSENT

All authors hereby declare that study had been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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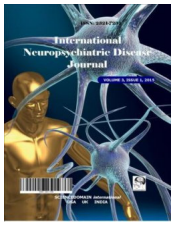

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Quality of Life of Palestine Children Exposed to Wars in Gaza

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This work was carried out in collaboration between both authors. Authors GS designed the study and wrote the protocol. Author GS preformed the statistical analysis, managed the literature search and wrote the first draft of the manuscript with assistance from author SS. Both authors read and approved the final manuscript.

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ABSTRACT

Aim: This study aimed to investigate the impact of trauma due to wars on quality of life of Palestine children living in Gaza with special reference to 2009 war.
It is analytic study; the study sample consisted of 195 children and adolescents who were selected purposely from three areas in the Gaza Strip. Those children exposed to variety of traumatic events besides losing their homes during ground incursion of the border and shelling and bombardment of the area. They were 101 boys (51.8%) and 94 girls (48.2%). The age ranged from 7 to 18 years with mean age of 12.84 (SD = 2.9). Children were assessed by sociodemographic questionnaire, Gaza Traumatic Events Checklist, and Health Related Quality of Life. Results: the highest frequencies of reported traumatic events by Palestinians children were 97.9% hear shelling of the area by artillery, 93.3% hear the sonic sounds of the jetfighters, 90.8% watched mutilated bodies in TV, and 85.6% were forced to move from home to a safer place during the war. The study showed that mean total quality of life was 62.80, physical functioning was 69.87, emotional functioning was 51.96, mean of social functioning was 77.62, and school functioning mean was 47.53. Total

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traumatic events reported by children were negatively strongly correlated with total Health Related Quality of Lief (HRQoL), physical, emotional, and social functioning. However, traumatic experiences by children were not correlated with school function.

Conclusion: In summary, this study not only supports the findings of the body of research as it relates to traumatic experiences in children and adolescents and impact of their health quality of life, but also has important implications for establishing and implementation of different psychosocial intervention programs for the school-aged population in Gaza Strip. There are need to be considered in the planning of educational and mental health support services by different governmental United Nations organizations, and non-governmental organization in Gaza. Also, successful treatment of the mental health symptoms associated with traumatic events first requires an acknowledgment of the trauma and then a process which allows for comprehensive assessment and accurate diagnosis.

Keywords: Children; Gaza; quality of life, trauma; war.

1. INTRODUCTION

The Gaza Strip is a narrow elongated piece of land, bordering the Mediterranean Sea between Israel and Egypt, and covers 360 km^2. It has high population density. About 17% of the population lives in the north of the Gaza Strip, 51% in the middle, and 32% in the south area. There is high unemployment, socioeconomic deprivation, family overcrowding, and short life expectancy. Nearly two-thirds of the populations are refugees, with approximately 55% living in eight crowded refugee camps. The remainder lives in villages and towns [1].

On 27 December, Israeli forces launched a massive military operation in the Gaza Strip codenamed “Cast Lead". In the first three days of the operation, hundreds of air strikes took place against a range of targets, resulting in the death of well over 300 Palestinians, including 9 UNRWA students and 2 UNRWA staff, and the injuring of more than 800, among them a large number of civilians, women and children [2].

This military operation continued for 23 days. As a result, 1420 Palestinians, including 446 children and 110 women and 108 elderly, were killed and 5320 others, including 1855 children and 795 women, were injured. This doesn’t mean that the rest of the fatalities and injuries were engaged in hostilities, or that they are not innocent civilians. A large number of men and male youth were killed in their homes, in the presence of their families. Its phases resulted in a mass destruction of private properties. At least 4000 houses were totally destroyed and other 16, 000 houses were partially damaged [3].

There is probably no greater traumatic experience for children and adolescents than exposure to the consequences of war and associated violent acts. They often are the innocent victims of such events. Some of the earliest research on humans’ response to extreme trauma has occurred in this area. Others, distinguishes between two types of childhood trauma: single episode events versus longstanding or repeated trauma. She describes trauma in children as ‘‘the mental result of one sudden, external blow or a series of blows, rendering the young person temporarily helpless and breaking past ordinary coping and defensive operations’’ (p. 11). However, a single event that takes a parent’s life or leaves a child handicapped or leaves him or her in prolonged pain may exhibit personality changes and numbing, more typically seen in repeated trauma. Still, these children may remember events clearly, while those subjected to years of abuse or trauma may become amnesiacs, sometimes blanking out several years of their lives [4].

Most current attempts to define quality of life (QoL) have been guided by the definition of health by the World Health Organization [5] (World Health Organization, 1948) that described health as “a state of complete physical, mental and social well-being”. Despite this definition, in today’s literature QoL is not yet defined in a uniform way and lacks clarity, and large discrepancies exist between operational definitions of QoL and in the identification of different areas of QoL [6,7].

All current definitions have in common that QoL is described as a multidimensional construct that primarily concerns the patient’s personal evaluation of his/ her life with regard to functional impairment, handicaps, and living conditions. An important distinction can be made between

health-related QoL and overall QoL. Health-related QoL comprises disease and treatment related aspects of functioning of the individual, such as pain, limitations in motor ability, or nausea, whereas overall QoL encompasses also non-medical aspects of a person's life, like social, educational, and occupational functioning [8].

Quality of life (QoL) and links to health have been examined in many scenarios and for survivors of conditions like cancer, the assessment of survivors—individuals and societies—of chronic exposure to violence is lacking. Quality of Life (QoL) is a complex, abstract, and multidimensional concept which is difficult to define and has relevance to virtually all areas of human function [9]. HRQoL is a main part of QoL and is considered to be an important construct in describing one's overall condition within the health context [10, 11]. Generally, it is conceptualized as a multidimensional construct built up by several domains [12, 13]. There is some consensus considering physical, emotional and social aspects of health to be core domains of Health Related Quality of Lief (HRQoL) [14, 15]. Others follow the WHO definition of health as a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity [16].

Nevertheless, the overall quantity of domains differs in the literature. For example, "behavioural, cultural, and psychological dimensions" as well as "a global perception of health and well-being" are regarded as important domains of HRQoL [17].

Based on a commonly accepted definition by the WHO Quality of Life group [18], the following operational definition as stated by von Rüden defined HRQoL is a multidimensional construct covering physical, emotional, mental, social, and behavioural components of well-being and functioning as subjective perceived by a person depending on the cultural context and value system one is living in [10]. Others Mendlowicz and Stein (2000) have noted, "functioning" is a rather broad construct that is labeled in many different ways (e.g., functioning, disability, illness intrusiveness, well-being, interference, activities of daily living, QoL). Although distinctions do exist, these terms are often used interchangeably to describe the ability to complete tasks or fulfill roles successfully (e.g., work functioning), health status, or levels of satisfaction with particular aspects of one's life (e.g., social relationships and home life). Functioning measures range from crude, face-valid single items to more comprehensive, psychometrically supported instruments [19].

In recent years there has been growing interest in how post traumatic stress disorder (PTSD) affects functioning and quality of life (QoL), fueled in part by concerns about the consequences for survivors of current wars and recent human-caused and natural disasters. Today, information about the well-being of persons living in this conflict zone is largely restricted to mortality and morbidity rates and access to health care services [20].

This study aimed to investigate the impact of trauma due to wars on quality of life of Palestine children living in Gaza with special reference to 2009 war.

2. METHOD

2.1 Participants

The study sample consisted of 195 children who were selected from three areas in the Gaza Strip which had more exposure to war included home demolitrion. Those children exposed to variety of traumatic events beside losing their homes during ground incursion of the border and shelling and bombardment of the area. They were 101 boys (51.8%) and 94 girls (48.2%). The age ranged from 7 to 18 years with mean age of 12.84 (SD = 2.9).

2.2 Study Procedure

The data was collected on August 2009 after nine months of end of war on Gaza, by 4 trained psychologists worked with children' mother before. They approached mothers in the 3 areas of the Gaza Strip and asked them to choose one child from each family for the study and they were informed about the purpose of the study and procedure. Children were interviewed in their homes after getting written consent from parents to participate in the study. Sociodemographic information was collected from parents and information about traumatic events, health quality of life from children themselves.

2.3 Measures

2.3.1 Socio-demographic questionnaire

The researcher prepared a questionnaire which included; name, gender, date of birth, place of

residence, number of siblings, and other demographic information.

2.3.2 Gaza traumatic events checklist

The checklist was developed to reflect the particular circumstances of the regional conflict which could not be captured by other war trauma measures and had been reported previously [21, 22, 23]. This checklist consisted of 23 items covering three domains of events typical of the war on Gaza: (1) hearing traumatic events (items number 1-4 include hearing about killing of relatives or friends) (2) witnessing trauma (items number 5-13, experiencing witnessing of home demolition, killing of others); and (3) personal experiences (items number 14-23, being personally the target of violence, being shot, injured, or beaten up by soldiers). The respondents rated their answer whether they had been exposed to each of these events as (0) 'no' or (1) 'yes'. A total score was estimated. In this study the reliability of the scale using Cronbach's alpha was 0.92 and split half was 0.86.

2.3.3 Pediatrics quality of life scale (PedsQL 4.0)

Children related quality of life was measured using PedsQL 4.0 which is a self-administered paper-and-pencil questionnaire that includes parallel child self-reports (age range 5–18 years) and parent/carer proxy reports (age range 2–18 years) [24]. It includes 23 items and four subscales: physical functioning (PF, 8 items), emotional functioning (EF, 5 items), social functioning (SCF, 5 items) and school performance (SHF, 5 items), from which total, physical, and psychosocial summary scores are derived. A 5-point response scale is utilized as follows: 0 = never a problem; 1 = almost never a problem; 2 = sometimes a problem; 3 = often a problem; 4 = almost always a problem. Items are reverse scored and linearly transformed to a 0–100 scale (0 = 100, 1 = 75, 2 = 50, 4 = 0), so that higher scores indicated better HRQoL. Scale scores are computed as the sum of the items divided by the number of items answered. In a previous study, Cronbach's alpha was 0.90 [24]. This scale was validated in our culture and showed high reliability [25]. The scale had acceptable reliability, with Cronbach's alpha coefficient of 0.86 (95% Confidence Intervals 0.83-0.88). The split half was 0.70.

2.4 Statistical Analysis

All the statistical analyses were performed using the SPSS software version 20. Frequency distribution was used in statistical analysis. Means and standard deviations of QOL and subscales, and traumatic events scores were recorded.

T- Independent tests were applied to analyse gender differences in trauma and quality of life. Linear regression investigated the association between independent (traumatic events) and dependent variables (QOL subscales).

3. RESULTS

3.1 Demographic Characteristics of the Study Sample

The demographic results of the study described the study sample according to sex, place of residence, type of residence, number of sibling, mother & father educational level, mother & father job, and monthly income. The sample consisted of 195 children, 101 were males (51.8%) and 94 were females 48.2%. The age ranged from 7 to 18 years with mean age 12.84 (SD = 2.9). According to place of residence, 37.5% were from Gaza city, 35.9% were from north Gaza, and 26.7% were from Middle area. According to family monthly income, 90.3% had less than $ 300 monthly, 6.2% had $301-650 monthly, and 3.6% had $651 and above.

3.2 Exposure to Traumatic Events

As shown in Table two, the highest frequencies of reported traumatic events by Palestinians children were 97.9% hear shelling of the area by artillery, 93.3% hear the sonic sounds of the jetfighters, 90.8% watched mutilated bodies in TV, and 85.6% were forced to move from home to a safer place during the war. While the least common traumatic events were: physical injury due to bombardment of your home (11.8%) and exposure to burn by bombs and phosphorous bomb (7.7%).

3.2.1 Differences in mean of traumatic events

Children reported from no events to 23 traumatic events, mean traumatic events was 10.6 (SD = 4.1). The results showed that mean traumatic events reported by males was 10.90 (SD =4.37) compared to mean in female =10.43 (SD = 3.94).

No significant differences were found between males and females in reporting total traumatic events (t=0.80, p = 0.24).

Table 1. Sociodemographic characteristics of study population (N = 195)

	N	%
1. Sex		
Male	101	51.8
Female	94	48.2
2. Age: Mean = 12.84 (SD = 2.91)		
3. Place of residence		
Gaza	37	37.4
North Gaza	70	35.9
Middle area	52	26.7
4. No of siblings		
Less than 4	49	25.1
5-7 siblings	73	37.4
8 and more	73	37.4
5.Family monthly income		
Less than$ 300	176	90.3
$301-650	12	6.2
$651 and more	7	3.6

In order to find differences in age group of children, the age was recorded in to (7-11 y), (12-15y), and (16-18years). One Way ANOVA test was performed in which total traumatic events was the dependent variable and age of children as independent variable. Post hoc test showed that adolescents (16-18 years) reported more traumatic events than the other two groups (F =5.16, p = 0.006). Also, no differences in traumatic events according to family monthly income (F= 0.98, p = 0.41).

3.3 Quality of Life in Children

For physical functioning 39% of children said they had difficulty running, emotional 50% of children said the feel sad or blue, social functioning 22.3% of children said they had difficulty keeping up with other, school functioning 44 % said they were paying attention in class, and cognitive functioning 49% said they had difficulty remembering what he was just thinking .

3.3.1 Means and SD of children health quality of life scale

The study showed that mean total quality of life was 62.80 (SD =15), mean of physical functioning was 69.87 (SD= 21.54), mean of emotional functioning was 51.96 (SD= 24.62), mean of social functioning was 77.62 (SD= 19.53), and school functioning mean was 47.53 (SD =18.14).

3.3.2 Differences in children health quality of life

T independent test was conducted, showed that there no statistically significant differences between boys and girls in total of quality of life and physical, emotional, social, and school functioning subscales.

One Way ANOVA test was performed in which each quality of life subscales was entered as the dependent variable and age of children as independent variable. Post hoc test showed that adolescents (16-18 years) reported more physical dysfunctioning than the children at age of (7-11 y) (F = 4.90, p = 0.008), school dysfunctioning was also more in adolescent age (16-18 years) than the younger age children (7-11y) (F = 5.97, p = 0.003). However, no difference in emotional, and social functioning according to age of children and no significant differences in any of the quality of life subscales and family monthly income.

3.3.3 Relationships between traumatic events, total HQoL, and subscales

Pearson correlation test was done to find the relationship between. Correlations are reported with the degrees of freedom (which is N-2), total traumatic events reported by children were negatively strongly correlated with total HRQOL (r (195)= - 0.32, p=0.001), physical functioning (r (195)= - 0.21, p=0.001), emotional functioning (r (195)= - 0.41, p=0.001), and social functioning. However, traumatic experiences by children were not correlated with school function (r (195)= 0.001, p=ns).

3.3.4 Prediction of quality of life by traumatic events exposure

In a multiple univariate linear regression analysis, each of the HQoL subscales was entered as dependent variable and each traumatic event as independent variable.

Physical functioning was predicted by destruction of personal belongings during the war(β=0.20, *p*=0.01), and forced to move from home to a safer place during the war(β=0.17, *p*=0.01), emotional functioning was predicted by witnessed the shelling and destruction of neighbour home (β=0.24, *p*=0.001) and

deprivation from water, food, or electricity during the war(β=0.18, p=0.01), social functioning was predicted by witnessed firing by tanks and heavy artillery at owns home(B=0.19, p=0.001) and forced to move from home to a safer place during the war(β=0.16, *p*=0.01), school functioning was predicted by witnessed killing of a relative (β=0.16, *p*=0.02), cognitive functioning was predicted by deprivation from water, food, or electricity during the war(B=0.20, *p*=0.007) and threatened by shooting(β=0.18, *p*=0.01).

Table 2. Percentage of traumatic events

Traumatic events	Yes	No
1. Heard shelling of the area by heavy artillery	97.9	2.1
2. Heard the sonic sounds of the jetfighters	93.3	6.2
3. Watching pictures of mutilated bodies in TV	90.8	9.7
4. Forced to move from home to a safer place during the war	85.6	14.4
5. Deprivation from water, food, or electricity during the war	79	21
6. Were detained at home during incursion	68.7	31.3
7. Destruction of personal belongings during the war	60.5	39.5
8. Witnessed firing by tanks and heavy artillery at owns home	53.8	46.2
9. Threatened by shooting	52.3	47.7
10. Witnessed the shelling and destruction of neighbor home	51.3	48.7
11. Heard killing of non relative	39.5	60.5
12. Witnessed the shelling and destruction of owns home	36.9	63.1
13. Witnessed firing by tanks and heavy artillery at neighbor home	34.9	65.1
14. Threaten of being killed	27.7	72.3
15. Heard killing of a relative	24.1	75.9
16. Witnessed killing non relative	22.6	77.4
17. Witnessed shooting of a friend	22.1	77.9
18. Witnessed shooting of a relative	19	81
19. Witnessed killing of a relative	17.9	82.1
20. Beaten and humiliated by the army during the war	16.4	83.6
21.Threatened to death by being used as human shield to arrest your neighbors by the army	14.4	85.6
22. Physical injury due to bombardment of your home	11.8	88.7
23. Exposure to burn by bombs and phosphorous bomb	7.7	92.3

4. DISCUSSION

This study aimed to investigate the impact of trauma due to wars on quality of life of Palestine children living in Gaza with special reference to 2009 war. Palestinian children had reported variety of traumatic events due to war. Children reported from no events to 23 traumatic events, mean traumatic events was 10.6. Children commonly exposed to hearing shelling of the area by heavy artillery, hearing the sonic sounds of the jetfighters watching pictures of mutilated bodies in TV, and forced to leave their homes to more safe area due to land incursion. Children forced internal displacement is one of the most traumatic experiences because those children had previous experiences of other types of traumatic experiences, but at last war one Gaza, they were forced to move from their homes under bombardment and uncertainty where to go and how long they will stay away from home. Such traumatic experiences increase children' disruption daily life activities including going to school and helping their families in home. Our results showed that there were no significant differences were between males and females in reporting total traumatic events. Adolescents (16-18 years) reported more traumatic events than youner age children (less than 15 years). Such findings were consistent with previous studies in Gaza Strip which due to setting of the area and collective exposure to the same types of traumatic events [23, 26, 27, 28]. Others found that males are more likely to be victimized by or to witness community violence than are females, regardless of their developmental ages and ethnicity while females are significantly more likely to have a higher level of distress symptoms than their male counterparts [29].

Table 3. Descriptive distribution of overall and domain of Quality of life in children(Please mention Table 1 inside the text)

		No/ rarely	Sometime	Most of the time/ always
	Physical functioning			
1	Difficulty walking more than one block	48.71	22.56	29
2	Difficulty running	50.77	21.54	39
3	Difficulty participating in sports/exercises	57.95	25.13	23
4	Difficulty lifting something heavy	37.43	17.44	38
5	Difficulty taking shower/bath by self	83.08	8.21	8.2
6	Difficulty doing chores around house	75.9	13.33	10
7	Having hurts or aches	71.14	15.46	15
8	Low energy level	62.9	22.7	18
	Emotional functioning			
9	Feeling afraid or scared	30.73	26.67	48
10	Feeling sad or blue	35.37	25.64	50
11	Feeling angry	37.48	29.74	45
12	Trouble sleeping	39.52	31.28	37
13	Worrying about what will happen	35.06	27.32	40
	Social functioning			
14	Trouble getting along with peers	77.9	14.87	12
15	Other kids not wanting to be friends	77.4	14.87	5.1
16	Getting teased	75.9	13.85	11
17	Difficulty doing things peers do	71.32	19.49	12
18	Difficulty keeping up with others	66.46	18.56	22
	School functioning			
19	Paying attention in class	14.59	23.44	44
20	Forgetting things.	36.94	34.87	30
21	Keeping up with schoolwork	19.53	16.41	36
22	Missing school, not feeling well	49.69	29.74	22
23	Missing school, going to doctor/hospital	57.47	26.67	16

Table 4.Means and SD of quality of life scale (Please mention Table 1 inside the text)

Quality of life and subscales	Mean	SD
Total HRQOL	62.80	15.00
Physical functioning	69.87	21.54
Emotional functioning	51.96	24.62
Social functioning	77.62	19.53
School functioning	47.53	18.14

The study showed that mean total quality of life was 62.80, physical functioning was 69.87, emotional functioning was 51.96, social functioning was 77.62, and school functioning mean was 47.53. Boys and girls quality of life and physical, emotional, social, and school functioning were not different. Similarly in study of Health Related Quality o Life (HRQoL) in Swedish children and adolescents with various disabilities in Vasterbotten County, Sweden showed no significant sex differences in HRQoL, but girls with intellectual disabilities reported increased pain/discomfort compared with boys [29].

Table 5. Pearson rank correlation coefficient: traumatic events, total HQoL, and subscales of children (Please mention Table 1 inside the text)

	Traumatic events
Physical **functioning**	-.21 **
Emotional **functioning**	-.41 **
Social **functioning**	-.39 **
School **functioning**	.001
Total **HRQOL**	-.34 **

Table 6. Regression results from selected determinants of QoL domain scores and traumatic events

QoL	Traumatic events	Unstandardized coefficients		Standardized coefficients	t	p	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower bound	Upper bound
Physical functioning	Destruction of personal belongings during the war	2.78	0.98	0.20	2.84	0.01	0.85	4.70
	Forced to move from home to a safer place during the war	3.31	1.34	0.17	2.47	0.01	0.67	5.96
Emotional functioning	Witnessed the shelling and destruction of neighbor home	2.38	0.64	0.24	3.74	0.00	1.13	3.64
	Deprivation from water, food, or electricity during the war	2.17	0.79	0.18	2.75	0.01	0.62	3.72
Social functioning	Witnessed firing by tanks and heavy artillery at owns home	1.51	0.58	0.19	2.60	0.01	0.37	2.65
	Forced to move from home to a safer place during the war	1.81	0.72	0.16	2.51	0.01	0.39	3.24
School functioning	Witnessed killing of a relative	-1.543	.671	.16	-2.29	.023	-2.867	-.219

This study showed that exposure to traumatic events by children had strong negative impact on children HRQoL, physical, emotional, and social functioning and not with school function. Such findings were consistent with other studies which showed that frequent exposure to trauma in older childhood and adolescence has been shown to be associated with worse HRQoL [30, 31, 32, 33, 34], psychosomatic complaints [35, 36, 37], poor physical functioning [38, 39]. Similarly Coker and colleagues found that children with more trauma exposure had greater odds of impaired HRQOL compared with children without any trauma exposure [24]. Further, increased HRQOL has been linked to mental health stressors including depression, lowered self-esteem, post-traumatic stress, and perceived stress in children after road traffic accidents [40]. Similarly, in community-based, cross-sectional survey of 170 children and their parents in an urban city in the Northeastern United States, found a significant negative association between experiencing different types of traumatic events and impaired HRQoL and psychosocial health in young children [41].

5. CONCLUSION AND RECOMMENDATIONS

This study showed that Palestinian children exposed to variety of traumatic events during the last war on Gaza. Such traumatic event had negative impact of children quality of life in all fields including physical, psychological, social and school functioning. Such findings highlight for need of improving the existence psychosocial services in schools and community mental health center to target children with high exposure to traumatic experiences. Also, programs targeting caregivers such as parents, teachers, and counselors should include training courses in impact of trauma on children health quality of life. Furthermore, more research in the field of trauma, quality of life, social support, and family support as protective factors for improving children quality of life in time of war and conflict should be conducted. Also, research in parental quality of life and effect on their children health and mental health are needed. There are need to be considered in the planning of educational and mental health support services by different governmental United Nations organizations, and non-governmental organization in Gaza to include non curriculum activities to improve children quality of life.

6. STUDY LIMITATIONS

There are several limitations to the present study that needs to be addressed. The study was done in area of high exposure to traumatic events and presence of control group from other areas in the Gaza Strip or West Bank would me more informative about the differences in types of traumatic events and impact in quality of life in different settings.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Relationship between Stressors Due to Siege of Gaza Strip on Anxiety, Depression and Coping Strategies among University Students

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العلاقة ما بين الضغوط النفسية الناتجة عن الحصار على غزة والقلق، والإكتئاب، وطرق التأقلم لدى طلاب الجامعات في قطاع غزة

عبير جمعة، عبد العزيز ثابت

Abstract

Aim: The present study assessed siege related stressors and their impact on the depression, anxiety and coping strategies among university students in the Gaza Strip. **Method:** It is descriptive analytic study comprised of 399 randomly selected university students from the four main universities in Gaza Strip (Al-Aqsa, Al-Azhar, Al-Quds Open and Islamic University). Five questionnaires were used: sociodemographic questionnaire, the Gaza Stressful Situations Checklist, the Hamilton Anxiety Rating Scale, the Beck Depression Inventory and the Carver Brief Coping Scale. **Results:** The most frequently reported stressors were: sharply increased prices due to closure (92% of students), studies being affected so much due to cut-off of electricity (83.5%), and shortage of gas. Results showed that mean stressors in men were 12.38 and 10.33 in women. The study showed 9.5% of men and 12% of women had severe depression although no gender differences were found. In addition, 10.3% of men and 13.8% of women had anxiety. There was a statistically significant positive relationship between total stress due to siege and depression symptoms and anxiety. The most frequent coping strategies were finding comfort in religious beliefs (78.2%), thinking about what steps to take (71.4%), and learning to live with the situation (67.7%). A significant negative relationship was found between total score of stress due to siege and total coping strategies. **Conclusion:** The Gaza siege has had lasting negative effects on Palestinians, which has led to increased mental health problems among and to them using fewer positive coping strategies. Humanitarian organizations should play a more positive role to protect the Palestinian community from the negative consequences of siege. Further research is recommended to evaluate the impact of siege on Palestinian people in all aspects of life and to provide therapeutic interventions for university students with moderate and severe depression.

Key words: Anxiety, depression, coping strategies, Gaza Strip, siege, stress, university students

Declaration of interest: None

Introduction

Since June 2007 when Hamas governed the Gaza Strip, Israel has imposed a tight blockade on the area as constitutes collective punishment for 1.66 million people. The Gaza Strip has two main crossings that connect it to the rest of the world, Rafah in the south and Erez in the north. The population of Gaza is 1.66 million, with over 50% under 18 years of age; 38% of Gazans live in poverty and 26% of the Gazan workforce, including 38% of youths, is unemployed. The average wage declined by over 20% in the past six years; 54% of Gazans are food insecure and over 75% are aid recipients; 35% of Gaza's farmland and 85% of its fishing waters are totally or partially inaccessible due to Israeli military measures. An estimated 50-80 million liters of partially treated sewage are dumped in the sea each day with over 90% of the water from the Gaza aquifer being undrinkable; 85% of schools in Gaza run on double shifts, representing huge overcrowding, about one-third of the items in the essential drug list are out of stock.[1] Fuel for the power plant remains limited at 68% of its maximum capacity. Cooking gas imports have been at around 53% of average needs. Almost no diesel and petrol are allowed for the commercial sector. Due to

the power plant fuel restrictions, exacerbated by intra-Palestinian disagreements, there is a chronic lack of electricity and regular blackouts affecting provision of essential services, including water supply, sewage treatment, and health services.[2]

In the past seven years, few studies have investigated the impact of siege on Palestinians living in the Gaza Strip. One study of Palestinian families found that the most commonly reported stressors were the sharp price increases, a feeling of living in a big prison, and the experience of being unable to find essential items in the market.[3] Similarly, a study of 502 families in the Gaza Strip identified the common stressful situations due to blockade were a general feeling of living in a big prison, the inability to finish construction and repair work in people's homes due to a chronic shortage in cement and building materials, and the sharp increase in prices in commodities in recent years.[4]

University students, as part of the Palestinian community, have been exposed to variety of stressors beside the academic ones. Such stressors can lead to mental health problems, including depression and anxiety. A study examining the impact of the siege on the mental health of university students in the Gaza Strip showed that 15.8% had severe anxiety and 40.3% had moderate to severe depression.[5] Another study describing the psychological effects of exposure of Palestinian adolescents living in the Gaza Strip showed that 40% reported moderate or severe levels of depression; 94.9% were classified as having severe anxiety levels; and, 69.9% demonstrated undesirable coping responses.[6] In Africa, researchers examined the prevalence of depression among students at the University of Ghana to discover that life stressors accounted for 43% of the signs of depression in them. Women reported more symptoms of depression.[7]

People tend to face stressful situations by using coping strategies, which are defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person."[8] Stress reactions differ from one person to another. Some experience difficulty in coping with stress and may develop psychological problems. A study of university students in Karachi, that assessed the levels of stress in the face of terrorism and the adopted coping strategies, showed how they commonly used faith in God and religious activities as coping strategies.[9] Another study that identified types of coping strategies and psychological adjustment level among students from medium community colleges in Gaza showed that coping strategies of life stress in the study were: turning to religion as the highest ranked by 82% of respondents followed by planning by 76.6%. Humor style was ranked lowest by 58.3% followed by behavioral withdrawal relative weight (60.1%).[10] Another study that examined the stress levels and coping strategies of professional students belonging to the physical education and engineering professions showed that stress due to all the stimuli was significantly higher among women when compared with men in their profession. Coping strategies were higher in men than women in their respective profession, but women studying physical education had higher coping strategies than men and women who studied engineering.[11] In a study of students at the Adnan Menderes University, students' depression scores and self-confident, optimistic approaches and social support had a negative relationship with depression scores and positive relationship of helpless and submissive with depression.[12] A recent study of Iranian students showed a significantly negative correlation between problem-focused coping strategies and mental health while a significant positive correlation was found between emotion-focused coping strategies for dealing with mental health difficulties among students.[13]

The present study assessed the relationship between stressors due to siege of the Gaza Strip on anxiety, depression, and coping strategies among university students.

Method

Sample

The present study consisted of a stratified random sample of students (N=410) from four universities in the Gaza Strip (Al-Aqsa University, Al-Azhar University, Al-Quds Open University and Islamic University). The total number of respondents was 399 with a response rate of 97.3%. Two hundred thirty two participants (58.1%) were women and 167(41.9%) were men. One hundred thirty five (33.8%) of the participants were from Islamic University, 92 (23.1%) were from Al-Aqsa University, 91(22.8%) were from Al-Quds Open University, and 81 (20.3%) were from Al-Azhar University.

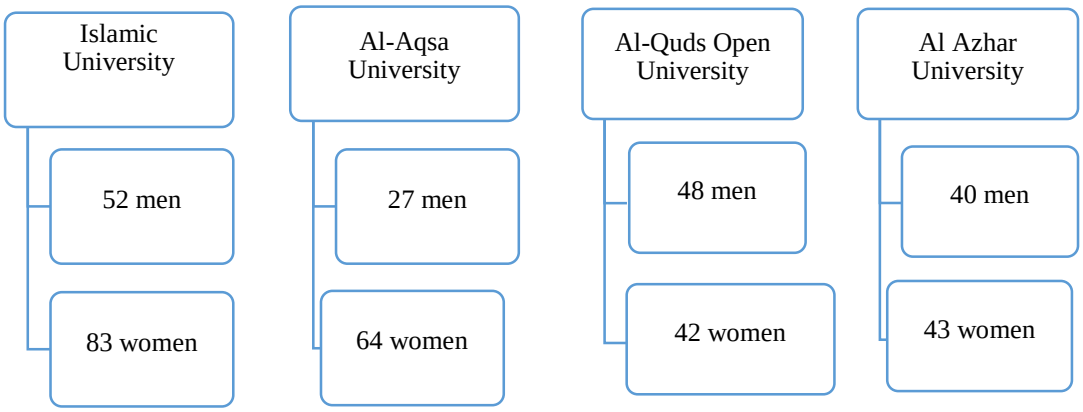

Figure 1. Distribution of the sample

Study procedure

The data were collected from four universities in the Gaza Strip (Al-Aqsa University, Al-Azhar University, Al-Quds Open University and Islamic University) after receiving official approval from each, which needed to be obtained for the universities to be included in the study. Helsinki committee (Ministry of Health) gave approval to carry out the study. Informed consent was obtained from each student. The purpose of the study, confidentiality information and some instructions were provided together with a statement about student right to participate or refuse. Data were collected by four assistant professionals trained for four hours in data collection of the present sample and criteria for selecting students in the second semester of the academic year 2013 to 2014. Each student completed five questionnaires, which took approximately 25 minutes. The data collectors were available to address questions when necessary.

Measures

Sociodemographic questionnaire

The researcher prepared a sociodemographic questionnaire, which included name, gender, date of birth, marital status, university, studies level, specialty and governorate.

Gaza Stressful Situations Due to Siege Checklist[14]

Personal experience of stressful situations was evaluated by using the Stressful Situation Due to Siege Checklist. The checklist was developed in 2009. It was subsequently modified for university students describing the most commonly reported stressful experienced during the last seven years of closure and siege of the Gaza Strip. It is comprised of 22 items requiring either yes or no response with yes = 1 and no = 0. An overall score is achieved by summing all the answers. In the present study, the split half reliability of the scale was high (r = .70). The internal consistency of the scale was calculated using Chronbach's alpha, and was high (α= .78).

Beck Depression Inventory Short form 13 item (BDI; Beck et al., 1988)[15]

The BDI is one of the most widely used instruments to assess depression. Its main aim is to measure depression symptoms and severity in persons age 13 and older. The inventory was validated in the Palestinian culture by Thabet.[16] The BDI has gone through multiple revisions, include BDI-I (1), BDI-IA (2), BDI-II (3), and BDI for

Primary Care (BDI-PC), now known as BDI Fast Screen for Medical Patients (BDI-FS). A 13-item short form is more recent was used in this study. The severity of depression is classified on the basis of the total score; in a normal community sample, a BDI score <4 suggests no or minimal depression, 5 to 7 represents mild to moderate depression, 8 to 15 is moderate to severe, and <= 16 indicates a severe level of depression. It is a universal scale; its validity and reliability are already tested. The BDI demonstrates high internal consistency, with alpha coefficients of .86 and .80 for psychiatric and non-psychiatric populations respectively (Beck et al., 1988).[16] For the present study, the Chronbach's alpha was .86 and split half was .80.

Hamilton Anxiety Rating Scale (HAMA-A)[17]

The HAM-A was one of the first rating scales developed to measure the severity of anxiety symptoms and is still widely used today in both clinical and research settings. The scale consists of 14 items, each defined by a series of symptoms. It measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety). Although the HAM-A remains widely used as an outcome measure in clinical trials, it has been criticized for its sometimes poor ability to discriminate between anxiolytic and antidepressant effects, and somatic anxiety versus somatic side effects. The HAM-A does not provide any standardized probe questions. The items are rated on a five-point scale and summed to provide a score ranging from 0 to 56. A score of 17 or less represents mild anxiety, a score between 18 to 24 mild to moderate anxiety, and a score of 25 and above moderate to severe anxiety. The cut-off scores have not been validated with older adults and there are no published norms for older adults.[18] For the present study Chronbach's alpha was .88 and split half was .82.

Carver Brief Coping Scale (Brief COPE)[19 20 21]

Carver and colleagues developed the Brief COPE as a flexible multidimensional coping inventory for a broad range of applications in applied psychology. In the Brief COPE, 28 items are presented in the form of a coping statement. Respondents are asked to rate whether they have or have not been using each way of coping on a fully anchored four-point scale ranging from 'I haven't been doing this at all' to 'I've been doing this a lot'. Factor analyses demonstrated that these four strategies characterized coping across the developmental lifespan: 1) active avoidance focused (4,6,9,11,13,16,19,21,26), 2) problem- focused coping (2, 5, 7, 10, 14, 23, 25), 3) positive coping (12,15,17,18, 24, 28), and 4) religious denial coping (3, 8, 22, 27)[22]. The internal consistency in this study was measured using Chronbach's alpha and was .80 and split half was .78. The long version has been used with the Palestinian society and showed high reliability.[21]

Data analysis

Data were analyzed using The Statistical Package for the Social Sciences, Version 20.0 (SPSS. V.20). Data coding and cleaning were done before analysis. Frequency tables that show sample characteristics and plot differences between various variables were also completed. Moreover, independent samples t-test, one way ANOVA and Pearson's correlation coefficient tests were also used. Frequency and percentage of siege items was presented in table form. Means of stressors, anxiety, depression and coping strategies were calculated. Differences between the mean of two groups as gender was calculated by independent t-test. One way ANOVA was conducted for means of more than two groups.

Results

Sociodemographic characteristics of the study sample

Results showed that the total sample selected for the current study was 399 students; 167 (41.9%) were men and 232 (53.3%) were women. Age range from 18-39 years with a mean age of 20.7 years (SD=2.36 years). Regarding the place of residence, the study showed that 18% live in north Gaza, 57.4% live in the Gaza area, and 19% live in the middle area, 4% live in Khan Younis, and 1.5% live in the Rafah area. Regarding university, 135 attended the Islamic University (33.8%), 83 (20.8%) attended Al-Azhar University, 91 (22.8%) attended Al-Aqsa University, and 90 (22.6%) attended Al-Quds Open University.

Table 1: Sociodemographic characteristics of the study sample (N= 399)

	No	%
Gender		
Male	167	41.9
Female	232	58.1
Age		
From 18 to 23	378	94.7
From 24 to 30	15	3.8
From 31 to 39	6	1.5
Place of residence		
North Gaza	72	18
Gaza	229	57.4
Middle area	76	19
Khan Younis	16	4
Rafah	6	1.5
University		
Islamic University	135	33.8
Al Azhar University	83	20.8
Al Aqsa University	91	22.8
Al Quds Open University	90	22.6

Stressful situations due to siege on Gaza Strip

According to Table 2, which reported types of stressors due to siege, 367 participants (92%) said they were affected by sharp price increases due to closure; 333 said their studies were affected so much due to cut-off of electricity and shortage of gas (83.5%); 285 said parents had been unable to help in getting fees for the university for participant and/or siblings due to lack of money (71.4%).

Table 2: Types and frequency stressful situations due to restriction of movements and siege (*n* = 399)

Items	Yes		No	
	No	%	No	%
1. Prices are sharply increased due to closure.	367	92	32	**8**
2. My study affected so much due to cut-off of electricity and shortage of gas.	333	83.5	66	**16.5**
3. My parents cannot help in getting fees for the university for me and my brothers due to shortage of money.	285	71.4	114	**28.6**
4. I feel I am in a big prison.	263	65.9	136	**34.1**
5. We had difficulties in buying what we need.	256	64.2	143	**35.8**
6. We cannot finish some construction and repair work in my house due to shortage of building materials.	252	63.2	147	**36.8**
7. I cannot find what we need in the market.	247	61.9	152	**38.1**
8. I found difficulties in studying outside Gaza because of the siege and closure.	239	59.9	160	**40.1**
9. I had difficulties in finding transport from home to my university due to shortage of gas.	213	53.4	186	**46.6**
10. I was not able to get specific medicine for me or for a family member.	213	53.4	186	**46.6**
11. My pocket money is not enough.	212	53.1	187	**46.9**
12. My parents cannot help in getting marriage for my brothers due to shortage of money.	208	52.1	191	**47.9**
13. I had thoughts of immigration and finding another place.	204	51.1	195	**48.9**
14. I need to travel outside the Gaza Strip to get treatment and I cannot.	184	46.1	215	**53.9**
15. Social visits are less than before.	183	45.9	216	**54.1**
16. I was unable to travel to visit my relatives in West Bank due to siege.	182	45.6	217	**54.4**
17. I had suffering of not able to receive proper medical care.	164	41.1	235	**58.9**
18. My father lost his working due to siege.	143	35.8	256	**64.2**
19. I start thinking of leaving my study to work to help my family.	96	24.1	303	**75.9**
20. I went to Zakat organizations and other organizations to get food.	83	20.8	316	**79.2**

21. One of my family members died due to prevention of traveling for treatment.	74	18.5	325	**81.5**
22. I was prevented from visiting one of my family members in Israelis jails.	58	14.5	341	**85.5**

Gaza stressful situation due to siege and other socioeconomic variables

In order to find differences in types and severity of stressful situations due to siege and other sociodemographic variables, such as gender and type of university, an independent t-test was conducted. In addition, a one-way ANOVA was done for groups more than two.

Results showed that the mean for stressful situations in men was 12.38 (SD= 4.89) and 10.33 for women (SD= 3.89). There were statistically significant differences in stress for men (F= 4.65, p =0.001).

Tukeys post-hoc test showed that there were statistically significant differences in stressful situations for participants from Al-Quds Open University when compared with student responses from the other three universities (F= 5.59, p = 0.001). This suggested students studying at Al-Quds Open University experienced more stress due to siege than those students attending the other three universities did.

Frequency of depression among the study sample

The study showed that the most common depression symptoms were feeling “discouraged about the future” (41.4 %) followed by “get more tired than usual” (36.6), and “not working as usual” (33.3%). The least commonly reported depression symptoms were having “suicidal thoughts” (6.5%) and feeling “disappointed at self” (10.3%).

Prevalence and level of depression in relation to gender

The results showed that 86 participants appeared to have severe depression (21.5%). Chi Square test was conducted showing no statistically significant differences in level of depression according to gender ($\chi2$ = 0.37, df = 3, p = 0.95). In addition, Tukeys post-hoc test showed no statistically significant differences in depression levels according to type of university (F=1.17, p = .31)

Table 3: Prevalence and level of depression in relation to gender

Level of depression		No depression	Mild depression	Moderate depression	Severe Depression
Male	No	18	32	79	38
	%	4.5	8.0	19.8	9.5
Female	No	25	49	110	48
	%	6.3	12.3	27.6	12.0

$\chi2$ = 0.37, df = 3, p = 0.95

Prevalence of anxiety symptoms according to Hamilton Anxiety Scale (HAMA-A)

According to the study, the most commonly reported anxiety symptoms were insomnia (21.8%), restlessness (20%), depressed mood (17.8%), and somatic complaints (16%). The least common were anxious mood (7.8%) and cardiovascular symptoms, such as palpitations (7.8%).

Prevalence of anxiety among the study sample

There were 303 (75.9%) participants reporting no anxiety "0-19 total scores", 96 (24.1%) had anxiety "20 and above scores". For men, 31.6% had no anxiety and 10.3% had anxiety, while 44.4% of women had no anxiety and 13.8% had anxiety. Chi Square test was conducted showed no statistically significant differences in level of anxiety according to gender ($\chi2$ = 0.03, df = 1, p= 0.90).

Table 4: Prevalence of anxiety among the study sample

		Male	Female	Total
No anxiety	No	126	177	303
	%	31.6	44.4	75.9
Anxiety	No	41	55	96
	%	10.3	13.8	24.1

$\chi 2 = 0.03$, df = 1, p = 0.90

Tukeys post-hoc test showed that there were statistically significant differences in anxiety for participants from Al-Quds Open University when compared with those attending the other three universities (F= 3.56, p= 0.01). This suggested that students studying at Al Quds Open University experienced more anxiety than students at the other three universities did.

Types of coping strategies

The most common coping skills used by students (Most of the time/Always) were: finding comfort in religious beliefs as reported by 78.2%, thinking about what steps to take by 71.4%, learning to live with the situation as reported by 67.7%, and asking advice/help from others by 65.7%. The least common coping strategies used were using sedatives/drugs to feel better as reported by 23.12%, using sedatives/drugs to get through by 26.8%, and making fun of situation left 28.8% feeling more positive.

Our results showed that mean coping was 66.85 in men compared to 66.37 in women. Active avoidance-focused coping was 23.41 in men and 23.44 in women whereas problem- focused coping was reported equally as 15.36 by men and women. Positive coping was 14.19 in men compared to 14.00 in women and the use of religious denial as a coping strategy was 9.57 in men compared to 9.09 in women. The only significant differences reported were those to do with religious denial coping strategies in men (t= 2.22, p= 0.03).

Table 5: Independent t-test of coping strategies according to gender

	Gender	N	Mean	Std. Deviation	T	P
Total Coping Scale	Male	167	66.85	10.58	.45	.65
	Female	232	66.37	10.31		
Active avoidance-focused	Male	167	23.41	4.32	-.07-	.94
	Female	232	23.44	4.15		
Problem-focused coping	Male	167	15.36	3.32	.00	1.00
	Female	232	15.36	3.71		
Positive coping	Male	167	14.19	3.18	.60	.55
	Female	232	14.00	3.12		
Religious denial coping	Male	167	9.57	2.35	2.22	.03
	Female	232	9.09	1.99		

***p<0.05, ** p<0.01, *** p<0.001**

Coping strategies and other sociodemographic variables

One-way ANOVA was conducted in which coping strategies were entered as the dependent variable and other sociodemographic variables as the independent variables, e.g. type of university and place of residence. Tukeys post-hoc test showed there were statistically significant differences in active avoidance focused coping strategies according type of university relating to students from Islamic University (F= 2.85, p = .0.03).

Relationship between stress due to the siege and depression, anxiety, and coping strategies

Pearson's correlation coefficient test showed a statistically significant positive relationship between total stress due to the siege and closure and depression symptoms (r =0.32, p<0.01) and anxiety (r= 0.25, p<0.01). These findings suggested that there was a very strong risk factor for being exposed to stress due to siege and blockade with regard to the mental health (depression and anxiety) of Palestinian students in the Gaza Strip.

The correlation test showed that there was a statistically significant negative relationship between total score of stress due to the siege and closure and total coping strategies (r= -0.27, p<0.01), active avoidance focused strategy (r= -0.25, p<0.01), problem- focused coping strategy (r = -0.17, p<0.01), positive coping strategy (r= -0.17, p<0.01), and religious denial coping strategy (r= -0.19, p<0.01). The above-mentioned findings were interesting because they showed that long-standing stressors due to siege and blockade inflicted on the Gaza Strip decreased Palestinian students' coping strategies.

Table 6: Pearson correlation coefficient test between stress, depression and anxiety

	1	2	3	4	5	6	7
1.Total siege							
2. Depression	.32**						
3. Anxiety	.25**	.47**					
4. Total Coping Scale	-.27**	-.15**	-.18**				
5. Active avoidance focused	-.25**	-.27**	-.27**	.78**			
6. Problem- focused coping	-.17**	.04	.01	.74**	.31**		
7.Positive coping	-.17**	-.04	-.08	.77**	.44**	.55**	
8. Religious denial coping	-.19**	-.11**	-.12**	.60**	.37**	.34**	.30**

***p<0.05, ** p<0.01, *** p<0.001**

Discussion

The current study results showed the different types of stressors experienced by university students because of the Gaza siege. The most common types of siege-related stressors were the experience of sharp price increases due to closure as reported by 92% of students; 83.5% said their studies were affected so much due to cut-off of electricity and shortage of gas; 71.4% said their parents had been unable to help in getting fees for the university for themselves and/or siblings due to lack of money. Our results were consistent with previous studies on the impact of siege on Palestinians living in the Gaza Strip.[3,4,5,10] The current study highlights that stressors were more apparent in men than in women. The researcher attributed these differences in stress levels to the role Palestinian men play in relation to work, supporting a wife in future, and the importance of social visits, among other responsibilities, which results in more pressure on men to balance their social and student roles. Nevertheless, the results were contrary to those from a study in India that found stress to all stimuli higher in women. The researcher attributed these differences to the cultural variations within the studies whereby students in India had different social roles in a society where the pressure was greater on women than on men.[11]

The current study also found that 21% of students reported depression with men reporting higher levels of depression than women do. This finding was inconsistent with the results of another study examining the impact of the siege on the mental health, namely anxiety and depression, of university students in the Gaza Strip, which found depression higher in men.[5] The researcher attributed this difference to the chronic, long-term impact of siege along with its devastating effects on every aspect of life with no perceived hope of resolution. The current study results showed that there were no statistically significant differences in depression according to type of university. The researcher attributed these results to the same siege stressors being faced by most of the university students, which can lead to depression.

The current study showed that 24.1% of students reported anxiety-related symptoms. There were no differences in level of reported anxiety according to gender. The rate of anxiety was similar to that of a previous study, which reported the prevalence of severe anxiety among university students as 18.1%.[5] The researcher hypothesized that chronic stressors due to siege will have a lasting effect on people who held little hope that the siege would end. The study results showed statistically significant differences in anxiety levels in students from Al-Quds Open University when compared with students from the other three universities. Such findings could be explained by the fact that those students reported being involved in other activities in life, such as working and had more family responsibilities.

The current study results showed a statistically significant positive relationship between total stress due to the siege and depression symptoms and anxiety. The researcher attributed that to the different effects of siege on all aspects of life, economy, education, and health. Results also showed that the most common coping strategies used by students were finding comfort in religious beliefs, thinking about what steps to take, learning to live with the situation, and asking advice/help from others. The results highlighted statistically significant differences in active avoidance focused coping strategies according to type of university in students from the Islamic University. These results indicate that the university students used emotion focused coping and that this was considered a positive coping strategy, which likely reduced their anxiety, levels. In addition, these results support an earlier study that reported the most common coping strategies used were turning to religion and planning.[10]

Also the results showed a statistically significant negative relationship between total score of stress due to the siege and closure and total coping strategies, active avoidance focused strategy, problem-focused coping strategy, positive coping strategy, and religious denial coping strategy, which means that long-standing stressors due to siege and blockade inflicted on the Gaza Strip decreased Palestinian students coping strategies. Furthermore, the coping strategies used by students were not so effective despite being useful for reducing the accumulated effects of stress on health, which would suggest a need to be changed in order for students to experience a healthier life. An emphasis on the social support role appeared to be effective with coping strategies usually perceived as having a direct effect on families when facing their difficulties even if we observed adjustment problems.[16]

Clinical implications

The results of the current study highlight the need for an immediate end to the Gaza siege. It is clear from our findings that a long-term siege will have lasting, adverse effects on the mental health of the student population. Findings suggest it has already led to students reporting high levels of depression and a decrease in their use of positive coping strategies. Humanitarian organizations should play a more positive role to protect the Palestinian community from the negative consequences of siege. More studies are needed in order to evaluate the impact of the siege on the Palestinian people in all aspects of life. Further, therapeutic interventions are needed to support university students with moderate and severe depression levels. At the very least, awareness workshops for university students can be offered as a way to help them learn more about the psychological consequences arising from their experiences of the siege and the effect it is having on them. Likewise, awareness workshops would benefit community members. Positive coping strategies could also be taught in order to reduce potential psychological problems.

Study limitations

Limitations in the current study include the use of original scoring methods for psychometric scales used in different cultures, which may have resulted in an overestimate of mental health problems.

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الملخص

الهدف: هدفت هذه الدراسة إلى تقيم أنواع ومستويات الضغوط الناتجة عن الحصار على قطاع غزة وأثرها على كل من الاكتئاب والقلق واستراتيجيات التأقلم عند طلبة الجامعات في قطاع غزة. **الطريقة: العينة:** شملت عينة الدراسة 399 طالباً وطالبة ممن يدرسون في الفصل الدراسي الثاني من العام الجامعي 2013-2014 في أربعة جامعات رئيسية هم (جامعة الأقصى، والأزهر، والقدس المفتوحة والإسلامية). واستخدمت الباحثة خمسة مقاييس متلائمة مع أغراض الدراسة وهي (مقياس البيانات الديمغرافية، ومقياس بيك للاكتئاب، ومقياس هاملتون للقلق، ومقياس كارفر لاستراتيجيات التأقلم وأخيراً مقياس الضغوط الناتجة عن الحصار والإغلاق لطلبة الجامعين). **النتائج:** حددت هذه الدراسة أنواع ومستويات كل من الضغوط الناتجة عن الحصار واستراتيجيات التأقلم المستخدمة لدى طلبة الجامعات في قطاع غزة. وكانت الضغوط الأكثر تكراراً هي (92%) قالوا إن الأسعار ارتفعت بسبب الإغلاق، و(83.5%) قالوا بأن دراستهم تأثرت كثيراً بانقطاع التيار الكهربائي. أظهرت نتائج هذه الدراسة بأن هناك فروق ذات دلالة إحصائية هامة بين مجموع الضغوط الناتجة عن الحصار باتجاه الذكور حيث المتوسط 12.38 بينما المتوسط في مجموع الضغوط الناتجة عن الحصار لدى الإناث بلغت 10.33. وأكثر من ذالك فإن هناك فروق ذات دلالة إحصائية في الضغوط الناتجة عن الحصار لصالح الذكور. أظهرت النتائج أيضا بأن 9.5 % من الذكور , 12% من الإناث لديهم اكتئاب شديد، و10.3% من الذكور، 13.8 % من الإناث لديهم قلق شديد، بينما لم تظهر النتائج أي فروق في الاكتئاب والقلق حسب الجنس. أظهرت نتائج الدراسة أنه يوجد علاقة ايجابية إحصائية هامة بين مجموع الضغوط الناتجة عن الحصار والاكتئاب والقلق كانت استراتيجيات التأقلم الأكثر تكرارا عن طلبة الجامعات هي (78.2%) يجدون الراحة في المعتقدات الدينية، و(67.7%) يفكرون فيما الخطوات التي تأخذ، و (71.4%) يتعلمون التعايش مع الوضع. ولا يوجد فروق ذات دلالة إحصائية بين الذكور والإناث استراتيجيات التأقلم، ووجدت علاقة سلبية إحصائية هامة بين مجموع الضغوط الناتجة عن الحصار واستراتيجيات التأقلم. **الخلاصة والتوصيات:** خلصت هذه الدراسة إلى أن الحصار المفروض على غزة له آثار سلبية طويلة الأجل على الفلسطينيين وزاد من معدل المشاكل الصحية النفسية لدى طلاب الجامعات وأدى ذلك إلى استخدام استراتيجيات تأقلم لسلبية لمواجهة الضغوط الناتجة عن الحصار. ينبغي على المنظمات الإنسانية أن تلعب دورا أكثر إيجابية لحماية المجتمع الفلسطيني من الآثار السلبية للحصار. ويلزم المزيد من الدراسات حول تأثير الحصار على الشعب الفلسطيني في جميع مناحي الحياة. أيضا، يجب توفير برامج للتدخلات العلاجية النفسية لطلاب الجامعات الذين يعانون من الاكتئاب المعتدل والشديد.

كلمات مفتاحية: الحصار، الضغوط النفسية، القلق، الاكتئاب، استراتيجيات التأقلم، طلاب الجامعات، قطاع غزة.

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Exposure to war traumatic experiences, post-traumatic stress disorder and post-traumatic growth among nurses in Gaza

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Accessible summary

What is known on the subject?

- This study builds on existing research on war-related factors that may affect health-care staff by particularly focusing on trauma exposure in both professional and everyday life, as well as on correlates of later positive psychological changes.

What this paper adds to existing knowledge?

- It shows that one in five nursing staff working in Gaza experienced post-traumatic stress symptoms within the clinical range, 2 years after an incursion on Gaza and after being exposed to substantial trauma during this period.
- Participants appeared to develop a variety of post-traumatic growth responses following trauma exposure.
- Although nurses experienced traumatic events both as civilians and in their health-care capacity, personal exposure was strongly associated with PTSD symptoms.

What are the implications for practice?

- Support to nursing and other health-care professionals in war situations should entail different levels, remain available well after an acute conflict, and take into consideration both personal and practice-related traumatic events. Mental health nursing practitioners can play a pivotal role in this.

Abstract

Aim: To establish the association between war traumatic experiences, post-traumatic stress disorder (PTSD) symptoms and post-traumatic growth among nurses in the Gaza Strip, 2 years after an incursion on Gaza, and during a period of ongoing trauma exposure. This study builds on existing evidence by considering exposure to personal and work-related traumatic events, and on factors associated with later positive psychological adaptation. **Methods:** The sample consisted of 274 randomly selected nurses in Gaza who completed the Gaza Traumatic Events Checklist, PTSD Checklist, and Posttraumatic Growth Inventory. **Results:** Of the nurses, 19.7% reported full PTSD. There was a significant relationship between traumatic events and PTSD scores; as well as between community-related traumatic events and post-traumatic growth. Participants reported a range of traumatic events, but PTSD and post-traumatic growth scores were more strongly associated with community rather than work-related traumas. **Discussion:** Nursing professionals experienced high levels of distress 2 years following an acute period of conflict, both as civilians and in their health-care capacity. **Implications for Practice:** There is need for different levels of support for health-care staff in war-affected areas. Mental health nursing professionals have a central role in training, counselling and support to other health-care colleagues.

Introduction

The prevalence of post-traumatic stress disorder (PTSD) and its emotional correlates among frontline health and rescue workers have been widely investigated in recent years. Nursing professionals are at an increased risk for work-related stress, particularly in specialty areas such as intensive care, emergency and oncology units. Trauma exposure can be personal, professional, or a combination of the two. Therefore, it is not surprising that high PTSD rates have been reported among critical care nurses (Mealer *et al.* 2009). Czaja *et al.* (2011) reported that symptoms of PTSD are common in paediatric nurses due to repeated exposure to indirect traumatic experiences in the acute care setting, and also identified potential work factors that included feeling overextended, fear of causing an adverse event, and poor team interactions.

A survey of members of the US Emergency Nurses Association found that one out of ten emergency care nurses experienced physical violence over the consecutive 7-day period prior to completing the questionnaire. Of those that were assaulted, 17% experienced symptoms similar to PTSD within the 7-day period after the assault (Gates *et al.* 2011). In a systematic review of 28 studies of the worldwide current prevalence of PTSD in rescue workers, reporting on 40 samples with 20 424 rescuers, the worldwide pooled current prevalence was 10%. Studies of ambulance personnel found higher PTSD prevalence rates than studies with firefighters and police officers (Berger *et al.* 2012). The construct of PTSD in the nursing profession is often understood within the context of the Nurse as Wounded Healer theory. According to this theory and PTSD classification, essential symptoms consist of intrusion, avoidance, and hyperarousal (Conti-O'Hare 2012). Consequences include world view changes, retention issues, sleep disruption, and social network disturbances (Mealer & Jones 2013).

Resilience and post-traumatic growth (PG – denoting positive psychological changes following adversity to enable more adaptive functioning) theory and research are rooted in the philosophical stance that emphasizes the consideration of positive (salutogenic) rather than pathological or negative factors in trauma research (Tedeschi & Calhoun 2004). Although much research has focused on the negative consequences of trauma and on coping strategies to stressful life events such as loss or suffering, the possibilities for experiencing personal growth positive psychological changes following exposure to highly challenging life circumstances have received considerable attention since the 1990s. Pietrzak *et al.* (2010), in a study of 272 predominantly older reservist/national guard Operation Enquiring Freedom – Operation Iraqi Freedom (OEF-OIF) veterans, found that 72% of the sample endorsed a significant degree of post-traumatic growth in at least one of the areas assessed, the most common of which were changing priorities about what is important in life (52.2%), being able to better appreciate each day (51.1%), and being able to better handle difficulties (48.5%). Despite this interesting body of literature, there is still limited evidence on how working in areas of war and political conflict can impact on nursing and other health-care staff, i.e. the extent of personal and work-related trauma; and which types of personal growth they may develop in response. This was the rationale for this study.

Methods

Participants

The study was conducted after the 2009 war in Gaza (Ministry of Health 2009). After nearly 3 weeks of daily bombardment, air strikes and ground troop incursions, over 1340 Palestinians were killed and 5500 were injured in the Gaza Strip. Hundreds of homes were destroyed, and many more suffered damage. Internal displacement was high, with over 90 000 individuals affected. More than 40 000 Palestinians resided in United Nations for Relief and Work of Palestinian Refugees (UNRWA) shelters, while an estimated 50 000 resided with families and friends.

The nursing profession in Gaza has significantly increased in recent years, to almost 6000 practitioners (or ratio of 1 per 5000 population), of whom two-thirds are under the age of 37 years. There are comparatively more male, public sector and UN employed, but less non-government organisation-employed nurses in the Gaza Strip than in the West Bank, patterns which reflect the respective populations and services (Ministry of Health, 2009).

According to hospital type, 10% of nursing practitioners were selected from each hospital or other type of health setting in the Gaza Strip. In total, 274 nurses agreed to take part. These were selected from the Ministry of Health (216, 78.9%), Military Medical Services (14, 5.1%), the UNRWA (27, 9.8%), and from the private sector (17, 6.2%). More specifically, they worked at the European Hospital (27.5%), El Remal Center (5.9%), Shifa Hospital (33.0%), Awada Hosptal (6.2%), Baslam Hospital (5.1%), Jabalia Center (4.0%), Kamal Edwan Hospital (11.0%), and Ophthalmology Hospital (7.0%).

Mental health nurses were not included in the sample. The age of the participating sample ranged from 20 to 57 years, with a mean of 33.4 (SD = 8.93). There were 145 males (52.9%) and 129 females (47.1%). Regarding their qualifications, 79 (28.9%) were 'practical' nurses (2 years in Nursing college), 26 (9.5%) had a 3-year diploma in nursing, 160 (58.4%) had a bachelor's degree in nursing

(4 years in Nursing college), and 9 (3.2%) had a masters degree. The participants' monthly income ranged from less than US$420 (40, 14.6%), $421–700 (101, 36.9%), 701–1000 (115, 41.9%), to more than $1000 (18, 6.6%). All participants were present in Gaza during the same period of the war.

Ethics approval was obtained from the Palestinian Ministry of Health Ethics Committee. Participants received an explanatory letter on the aims of the study and that the information gathered would remain confidential for the purpose of the research only. Data collection took place in the workplace, 2 years after the end of the 2009 war, i.e. in April 2011.

Measures

Gaza Traumatic Events Checklist (GTEC – Thabet *et al*. 2009): This described the most common traumatic experiences the population could have faced during the Gaza War. The checklist was revised from an earlier version (Thabet *et al*. 2004). The GTEC consists of 28 summated items with 'Yes' and 'No' answers. The scale had high internal consistency ($\alpha = 0.90$).

Post-traumatic stress disorder checklist

Diagnostic and Statistical Manual-Fourth Edition (DSM-IV), Arabic version of Posttraumatic Stress Disorder Checklist (PTSDC – Thabet *et al*. 2008): The PTSDC includes 17 items of post-traumatic stress symptoms adapted from the DSM-IV criteria (American Psychiatric Association 1994). Respondents were asked to rate on a 5-point Likert scale (0 = not at all to 4 = extremely) the extent to which symptoms troubled them in the previous month. A total summated score was provided, as well as subscales scores for intrusion, arousal, and avoidance PTSD symptoms. We used the Arabic version of the scale, which has been widely used in the region during the last decade (Thabet *et al*. 2008). In this study, this measure was also found to have high internal consistency ($\alpha = 0.91$).

Posttraumatic Growth Inventory

Posttraumatic Growth Inventory (PTGI – Tedeschi & Calhoun 1996): This comprises 21 summated items of personal growth after exposure to trauma, with response choices during the previous month, ranging from 0 = I did not experience this change, to 4 = I experienced this change to a great degree. The PTGI measures five domains of growth: (1) relating to others better (seven items); (2) recognizing new possibilities (five items); (3) a greater sense of personal strength (four items); (4) spiritual change (two items); and (5) greater appreciation of life (three items). The items were summated, with higher scores indicating higher personal growth across the different domains. The measure was translated and back translated by a panel of experts in the mental health field. It was also found to have high internal consistency ($\alpha = 0.94$). This was not subjected to a factor analysis, but it was piloted with nursing 35 employees prior to the study, following which the phrasing of only one item was amended. These 35 pilot participants were excluded from the main study.

Statistical analysis

Data were entered and analysed using the Statistical Package for Social Sciences (SPSS) software version 20. Between-group comparison was explored by independent *t*-test, while the associations between different continuous variables were tested by Pearson correlation coefficient. Regression models were conducted, in which trauma scores were entered as the independent variable, and either PTSD or post-traumatic growth scores entered as the dependent variables. Values were considered statistically significant if P was lower than 0.05.

Results

Exposure to trauma

The highest frequencies of reported traumatic events were: 94.1% had watched severe injuries and dead bodies on TV, 78.4% witnessed severe injuries and death at work, and 63.5% witnessed demolishing of neighbours' homes by tanks. We then recoded traumatic events to personal trauma (due to war), indirect work trauma (in the community, due to their health profession), and direct work trauma (at the workplace, usually emergency rooms). The mean total traumatic events were 7.5 (SD = 3.7), mean personal trauma 3.6 (SD = 1.9), mean indirect work trauma 2.2 (SD = 1.8), and mean direct work trauma 1.7 (SD = 1.1).

Potential gender and/or income differences were tested, as these might have reflected professional or personal trends in exposure to trauma in the working environment or in the community. Independent *t*-test showed statistically significant gender differences, with male nurses having experienced significantly more traumatic events than females across all trauma categories: total trauma for males (M = 8.40, SD = 3.85) and for females (M = 6.43, SD = 3.40) (t (271) = 4.47, $P = 0.001$), personal trauma for males (M = 2.36, SD = 1.92) and for females (M = 1.94, SD = 1.68) (t (271) = 4.01, $P = 0.001$), indirect work trauma for males (M = 4.03, SD = 2.09) and for females (M = 3.09, SD = 1.72) (t (271) = 1.93, $P = 0.05$), and direct work trauma for males (M = 2.36, SD = 1.92) and for females (M = 1.94, SD = 1.68) (t (271) = 4.93, $P = 0.001$).

A one-way ANOVA showed that the nurses with highest monthly income (more than US $1000) had a significant less traumatic events, $F(2, 267) = 5.04$, $P = 0.002$). Post-hoc analysis using Tukey's Honesty Significant Difference (HSD) criterion indicated that mean scores of nurses with highest monthly income (more than US $1000) (M = 10.72, SD = 4.23) was significantly different from nurses with monthly income (US $650–999) (Mean = 7.34, SD = 3.46), from nurses with monthly income (US $400–649) (Mean = 7.16, SD = 3.96), and from nurses with monthly income (less than US $400) (Mean = 7.2, SD = 3.23).

Post-traumatic stress disorder symptoms

Using DSM-IV criteria for the diagnosis of PTSD (one re-experiencing, three avoidance, and two hyperarousal symptoms), 54 nurses (19.7%) were rated as suffering from PTSD. Females reported significantly more total PTSD than males (M = 20.67, SD = 12.72) and for females (M = 24.67, SD = 11.91), [t (232) = 234, P = 0.02] and intrusion symptoms, total intrusion symptoms for males (M = 7.34, SD – 4.32) and for females [M = 8.70, SD = 4.36; t (265) = 2.56, P = 0.01].

The Pearson correlation test showed that there was a positive association between total trauma exposure and total PTSD (r = 0.26, $P < 0.001$), intrusion (r = 0.32, $P < 0.001$), avoidance (r = 0.21, $P < 0.001$), and hyperarousal symptoms (r = 0.18, $P < 0.001$).

In a multivariate regression model, each traumatic event was entered as an independent variable, with total PTSD scores as the dependent variable. Five traumatic events were significantly associated with total PTSD symptoms: witnessing killing of a friend or relative while at work (B = 0.17, P = 0.004); witnessing a friend's home demolition (B = 0.15, P = 0.01); deprivation of going to the toilet or leaving the room while at home because of firing and shelling in the area (B = 0.12, P = 0.04); beating and humiliation by the army (B = 0.18, P = 0.004); and being threatened of death by being used as a human shield by the army (B = 0.13, P = 0.03) (Table 1).

The role of post-traumatic growth

There were no gender differences on any post-traumatic growth variables. Participants on the highest income reported significantly higher scores on relating to others than those on the lowest income (F = 4.36, P 0 = 04). A Pearson correlation test between trauma and post-traumatic growth, as well as its subscales was conducted (Table 2). There were positive associations between total traumatic events and total post-traumatic growth (r = 0.26, $P < 0.001$), spiritual change (r = 0.32, $P < 0.001$), relating to others (r = 0.21, P = 0.001), personal strength (r = 0.18, $P < 0.001$), appreciation of life (r = 0.18, $P < 0.001$).

In a multivariate regression model, each traumatic event was entered as an independent variable, with total PTG scores as the dependent variable. Two traumatic events were significantly associated with total post-traumatic growth: witnessing firing by tanks and heavy artillery at

Table 1
Multivariate regression model between traumatic events and total post-traumatic stress disorder scores

	Unstandardized Coefficients		95.0% Confidence Interval for B	
	B	Significance	Lower Bound	Upper Bound
Witnessing killing of a friend or relative while you are at work	4.77	0.001	1.54	7.99
Witnessing of a friend home demolition	3.81	0.01	0.76	6.85
Deprivation from water or electricity during detention at home	3.56	0.05	0.02	7.10
Beating and humiliation by the army	5.12	0.001	8.54	1.69
Threatened to death by being used as human shield to arrest your neighbours by the army	4.85	0.03	0.40	9.31

Table 2
Pearson correlation coefficient between exposure to total traumatic events and post traumatic growth (total and subscales) scores

	1	2	3	4	5	6
1. Total trauma	1					
2. Post traumatic growth	0.24**	1				
3. Spiritual change	0.20**	0.77**	1			
4. Relating to others	0.48**	0.73**	0.53**	1		
5. Personal strength	0.25**	0.94**	0.74**	0.64**	1	
6. Appreciation of life	0.25**	0.77**	0.50**	0.46**	0.62**	1
7. New possibilities	0.21**	0.91**	0.55**	0.55**	0.80**	0.68**

**Correlation is significant at the 0.01 level two tailed.

Table 3
Multivariate regression model between traumatic events and total post-traumatic growth scores

	Unstandardized coefficients		95.0% confidence interval for B	
	B	Significance	Lower bound	Upper bound
Witnessing firing by tanks and heavy artillery at neighbours' homes	7.44	.00	2.74	12.15
Witnessing killing of a friend	5.91	.03	0.71	11.10

Table 4
Pearson correlation coefficient between post-traumatic stress disorder symptoms and post-traumatic growth (total and subscales) scores

	Post-traumatic growth inventory	Spiritual change	Relating to others	Personal strength	Appreciation of life	New possibilities
PTSD	.18**	0.1	0.09	.13*	.34**	.18**
Intrusion	.25**	.21**	.16*	.20**	.33**	.19**
Avoidance	.15*	.05	.08	.11	.30**	.18**
Hyperarousal	.07	.04	.01	.02	.21**	.11

*Correlation is significant at the 0.05 level tow tailed. **Correlation is significant at the 0.01 level two tailed.

neighbours' homes (B = 0.21, $P = 0.002$); and witnessing killing of a friend (B = 0.15, $P = 0.02$), i.e. no work-related events predicted personal growth (Table 3).

A Pearson correlation coefficient test between total PTSD symptoms and post-traumatic growth scores (also total and subscales) was also conducted (Table 4). The results showed that there were positive associations between total PTSD and post-traumatic growth scores (r = 0.18, $P < 0.001$), personal strength (r = 0.13, $P < 0.001$), appreciation of life (r = 0.34, $P < 0.001$), and new possibilities (r = 0.18, $P < 0.001$).

Discussion

The aim of this study was to investigate the effect of trauma due to war on Gaza on both PTSD symptoms and post-traumatic growth among Palestinian nurses in the Gaza Strip, who had been exposed to a range of traumatic events in the community (both as civilians and in relation to their professional role) and their health (usually hospital) setting. Its main contribution was thus consideration of both personal and work-related trauma in understanding this association. Participants commonly reported watching pictures of dead and injured people on TV, witnessing dead and injured people at emergency hospital rooms, and witnessing demolition of neighbours' home by tanks. Such findings were consistent with most of studies conducted previously in the area with ambulance drivers (Abu Laila *et al*. 2009) and the general population (Thabet *et al*. 2008, 2009). Our study showed that males were more exposed to all types of traumatic events, in the community as well as the work place, which possibly reflects the sociocultural of protecting females, even in their professional capacity. The income differentiation may indicate higher trauma exposure for those living in more deprived areas, and/or lower grading and seniority among frontline staff.

The prevalence rate of 19.7% of PTSD among nursing staff was higher than other at risk groups such as 9–10% by assaulted psychiatric staff members (Chen *et al*. 2008). Gender differences were, in contrast, consistent with the PTSD literature in female nurses reporting significantly more PSTD and intrusion symptoms than males. Epidemiological studies have revealed gender-specific risk for PTSD development, such as that females are approximately twice as likely as males to develop PTSD following exposure to a traumatic event (Breslau *et al*. 1998, Chung & Breslau 2008). What is striking is that these high rates of one in five staff reporting significant levels of distress were detected 2 years after the termination of the particular period of conflict, although trauma exposure continued in other forms during this period.

The study showed that there was a significant relationship between traumatic events, PTSD and post-traumatic growth, which is also consistent with previous research (Pietrzak *et al*. 2010). Post-traumatic growth and positive changes often co-occur with PTSD (Lowe *et al*. 2013), and include improved interpersonal relationships, a greater sense of new possibilities, increased personal strength, heightened spirituality, and an enhanced appreciation of life. Recent studies suggest that upwards of 50% of survivors of natural disasters experience some degree of post-traumatic growth (Tang 2006, Yu *et al*. 2010, Xu & Liao 2011). What was particularly interesting in this study was that all traumatic events which were significantly associated with PTSD and/or post-traumatic growth were in the context of the participants' personal and civilian experience rather than through their work environment. The only work-related trauma also referred to witnessing the killing of a friend or relative.

Irrespective of the specific mechanisms involved, these findings highlight the need for prolonged availability of staff support in the face of ongoing conflict, even if the acute phase is over. Such support could be provided at different levels throughout the healing process, both as health-care professionals and community members. These levels could include training and psycho-education, stress management, and more specialist therapeutic approaches, as required; as well as their evaluation to develop an evidence-based setting up counselling centres in health setting hubs in highly exposed areas could be a cost-effective way of making help systematically available to a large number of staff. This should include international visiting health staff, as in the more recent crisis in Gaza, particularly as nursing and medical volunteers will face high levels of trauma exposure both in the community and health settings (Shamia *et al*. 2014). Mental health nursing professionals have a pivotal role in this model, notwithstanding an acknowledgment of their own needs, both in their civilian and therapeutic capacity.

Limitations

The current design did not enable the understanding of factors and underpinning mechanisms that may have influenced post-traumatic growth, other than most of its subscales being strongly associated with both trauma exposure and post-traumatic symptoms. Previous studies have indicated positive associations between PTG and religiosity, as measured by the importance of religion and/or religious participation (Shaw *et al*. 2005, Helgeson *et al*. 2006). This is plausible in the sociocultural context of the sample (Milam *et al*. 2004). Although spiritual change was not the only significant factor involved, there appeared to be similar patterns across other post-traumatic growth factors. As a meta-analysis by Prati & Pietrantoni (2009) showed, factors such as optimism, social support, and coping strategies (of which religiosity is one of several) can also contribute to post-traumatic growth. Another limitation was not being able to disentangle the effect of the particular period of conflict from the ongoing violence in the region.

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Trauma, PTSD, Anxiety, and Resilience in Palestinian Children in the Gaza Strip

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Authors' contributions

This work was carried out in collaboration between both authors. Authors AMT designed the study and wrote the protocol. Author SST preformed the data collection and statistical analysis, managed the literature search. Author AMT wrote the first draft of the manuscript with assistance from author. Both authors read and approved the final manuscript.

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ABSTRACT

Aims: The aim of the study was to investigate the effect of traumatic events due to eight days of military escalation on children PTSD, anxiety, resilience, relationship of between children mental health problems and resilience.
Methods: This was descriptive analytic study. The study sample consisted of 502 randomly selected children from 16 districts of the Gaza Strip. Age ranged from 9 to 16 years. Children were assessed by a socio demographic questionnaire, Gaza Traumatic Events Checklist, Post traumatic stress disorder scale, Children's Revised Manifest Anxiety Scale, and Resilience Scale for Adolescents.
Results: Children reported commonly traumatic events such as hearing the loud voice of Drones (98.8%), hearing shelling of the area by artillery (98.6%), hearing the sonic sounds of the jetfighters

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(98.4%), and watching mutilated bodies of Palestinians in TV (98.2%). Mean traumatic events reported by children was 7 events. Boys reported severe traumatic events than girls; traumatic events were reported in children living in a city than in village and camp.
This study showed that 35.9% of children showed full criteria of PTSD. Post traumatic stress disorder and re-experiencing symptoms were more in girls. Also, children coming from families with family income less than $300 and living in city.
The children anxiety symptoms, 30.9% of children had anxiety disorder. No differences in anxiety disorder between boys and girls. Anxiety was more in children living in camps and family monthly income less than $300.
Palestinians children used different ways of coping with the stress and trauma, and common resilience items were 94.6% said they were proud of their citizenship, 92.4% said they feel safe when they were with their caregivers, 91.4% said that their spiritual (religious) beliefs were a source of strength for them, and 91% said they were proud of their family background.
Total resilience in children, personal skills, peer component, and social skills, contextual components that facilitate a sense of belonging (Spiritual beliefs, culture, and educational items) were more in of girls. Total resilience and contextual components were more in children living in a camps and a village than in a city. However, there were statistically significant differences in individual factors (personal skills, peer component, and social skills) were more in children from family monthly income $301-750 than families with monthly income of 300$ and less. Also, traumatic events were correlated positively with anxiety and PSTD and negatively correlated with total resilience factor.
Conclusion: This study showed that the last war on Gaza had negative impact on children mental health and resilience. Children were a particularly vulnerable target group. Trauma due to war increased children psychological symptoms, including post-traumatic stress disorder and anxiety. Such psychological problems were associated with traumatic experiences, and trauma decrease children resilience.

Keywords: Anxiety; children; Gaza strip; PTSD; resilience; trauma.

1. INTRODUCTION

The Gaza Strip is a narrow elongated piece of land, bordering the Mediterranean Sea between Israel and Egypt, and covers 360 km^2. It has high population density. About 17% of the population lives in the north of the Gaza Strip, 51% in the middle, and 32% in the south area. There is high unemployment, socioeconomic deprivation, family overcrowding, and short life expectancy. Nearly two-thirds of the populations are refugees, with approximately 55% living in eight crowded refugee camps. The remainder lives in villages and towns. During the Palistinian-Isreali conflict the latest cumulative casualty figures reported by the Ministry of Health in Gaza were 175 killed persons (151 males; 24 females) of whom 43 (25%) were children; 16 children were less than 5 years old. The total includes 5 persons who had later died of their injuries, and 1399 persons injured, of whom 431 (34%) were children and 141 were less than 5 years old. (Earlier MoH data with gender disaggregation was based on uncorrected figures of 1404 injured (994 males; 410 females) [1].

In studies of Palestinian children in the Gaza Strip found that children experienced variety of traumatic events including witnessing killing of relatives, demolition of homes, bombardment, and arrest of relatives was associated with post traumatic disorder, anxiety, and depression. They severely deteriorate children's sleep and cause uncontrollable fears among babies and children, causing anxiety, panic attacks, and poor concentration [2,3,4]. In another study, others found that military trauma in middle childhood and stressful life-events in early adolescence formed a risk for post traumatic stress disorder and depressive and decreased satisfaction with the quality of life in adolescence [5].

Others, in a study on the experiences of Palestinian children (aged 1–15) residing in the West Bank, witnessing traumatic events such as murder, physical abuse, destruction of property, and threats was associated with PTSD symptoms [6]. Moreover, in another study of a sample of 600 Palestinian youths (8-14 years old) in West Bank and Gaza Strip found that children exposed to a variety of political conflict and violence (73%) witnessed actual political violence and (99%) witnessed political violence through media reports. A significant predictor of post traumatic stress symptoms was exposure to

political conflict and violence. Gender and age also did not interact with exposure to political violence when predicting PTS symptoms with other types of exposure [7]. In another area of war and conflict in Asia, researcher found a high number of somatic complaints and memory problems among children (aged 10–14) exposed to war in Sri Lanka [8]. While, in study of Kuwati children, showed that there was an association between exposure to war-related trauma and poor subjective ratings of health and sleep quality among children aged 9 to 12 living in Kuwait [9].

Resilience refers to positive patterns of functioning during or following an adverse event. According to this definition, an individual must be functioning at an adaptive level consistent with standards appropriate for one's age and developmental level following exposure to an adversity [10]. Others have defined resilience as the capacity of individuals to successfully maintain or regain their mental health in the face of significant adversity or risk. Resilience is an interactive dynamic construct that considers protective factors and positive adaptation in adversity, rather than focusing on risk factors and psychopathology [11]. Spirituality was commonly reported to be important to resilience and adaptive in illnesses. It was postulated that belief in God or having faith helped individuals make sense of the illness and acted as a source of strength. Participants high in spirituality were reported to have better mental health and adjustment [12,13,14]. However, it should be noted that within the trauma literature resilience is also frequently defined as a lack of psychopathology (i.e., posttraumatic stress disorder, anxiety, depression) [15].

Studies that have specifically focused on the resilience of children exposed to community violence have identified social support from a child's family (parent), school, and peer group to be important in resilience from repeated violence exposure [16,17]. Family cohesion and positive coping on the part of parents also appear to lessen the negative impact of community violence [18,19]. Studies of people living in war zones highlight the significance of interdependent coping, confirming that the level of emotional upset and anxiety displayed by parents, not the war itself, is the most important factor in predicting a child's response [20]. Others found that specific aspects of social support within the children's family (e.g., perceived parental helpfulness) and school (e.g., teacher helpfulness) provided some level of protection against the deleterious influence of community violence exposure [21]. According to others, community resilience emerges from community-level resources that enhance residents' abilities to adapt in positive ways to risk. Social capital resources, institutional resources, and economic resources are three types of resources that contribute to community resilience. The aim of the study was to investigate the effect of traumatic events due to eight days of military escalation on children PTSD, anxiety, resilience, relationship of between children mental health problems and resilience [22].

2. METHODS

2.1 Participants

The target population consisted of 502 children ages 9 to 16 years, who were exposed to the war on the Gaza Strip on November 2012, and who lived in five localities of the Gaza Strip (north Gaza, Gaza, Middle area, Khan Younis, and Rafah area). They were 250 boys (50 %) and 250 girls (50%). Mean age of 12.57 years (*SD* = 2.2).

2.2 Study Procedure

Data collection was conducted by 10 professionals who attended day training by the principal investigator about the aim of the study, sample, and questionnaires of the study. Data collection was done from 1st January one-day 26 January 2013 which include the 502 children in the five areas. For selecting the children from each district, one street was selected in each area, and every principal was selected. In larger buildings, one flat from each floor was selected randomly. Families were included if they consisted of both parents, with one boy or one girl, aged between 9-16 years, and had been in the area for the last year. Families were approached until 502 agreed to let their children participate. Covering letter was given to each participant explaining the aim of the study and about their right not to participate in study and ask them to sign the letter. With the family member lasted for 30 minutes.

2.3 Measures

2.3.1 Socio-demographic questionnaire

The researcher prepared a questionnaire which included; name, gender, date of birth, place of

residence, number of siblings, and other demographic information.

2.3.2 Gaza traumatic events checklist

The checklist was developed to reflect the particular circumstances of the regional conflict which could not be captured by other war trauma measures and had been reported previously [2,3,4]. This checklist consisted of 18 items covering three domains of events typical of the war on Gaza: (1) hearing traumatic events (items number 1-5 include hearing about killing of relatives or friends) (2) witnessing trauma (items number 6-12, experiencing witnessing of home demolition, killing of others); and (3) personal experiences (items number 13-18, being personally the target of violence, being shot, injured, or beaten up by soldiers). The respondents rated their answer whether they had been exposed to each of these events as (0) 'no' or (1) 'yes'. A total score was estimated. In this study, the split half reliability of the scale was high (r = .59). The internal consistency of the scale was calculated using Chronbach's alpha was high (α = .64).

2.3.3 UCLA PTSD index for DSM-IV: Adolescent version [23]

The items of the UCLA PTSD indices are keyed to DSM-IV criteria and can provide preliminary PTSD diagnostic information. Self-reports for children and adolescents exist, as well as a parent report of PTSD symptoms. The adolescent Version (for adolescent aged 13 years and older) contains a total of 22 questions, have also been administered in school classroom settings. A 5-point Likert scale from 0 (none of the time) to 4 (most all the time) is used to rate PTSD symptoms. Only 17 items were included in the total score because two items were not DSM-IV criteria and three items were repeated symptoms. The split-half reliability of this measure was 0.60 and the Cronbach alpha was (α = .71).

2.3.4 The revised children's manifest anxiety scale (RCMAS) [24,25]

The Revised Children's Manifest Anxiety Scale is designed to measure symptoms of generalized anxiety in children and youth. The 37 scale items are answered yes or no. Nine items comprise a Lie scale, thus symptom severity scores range from 0–28. The clinical cutoff score is ≥ 18. Reliability Kuder-Richardson- 20 (KR-20) has been found to be high =.85. [26]. A high correlation (r = .85) has been found between RC-MAS and other instruments measuring trait anxiety (Reynolds, 1980). In the present population, the KR-20 for the RCMAS was (α = .87).

2.3.5 Resilience scale for adolescents [11]

The scale is a 28-item self-report scale using positively phrased. Higher scores reflect higher degree of resilience. This scale was developed using confirmatory factor analysis and has shown adequate psychometric properties (total Chronbach alpha = 0.94) and initial promising validity [11]. Results suggest that the Resilience Scale for Adolescents has three subscales reflecting the major categories of resilience. Furthermore, each subscale has its own groupings of questions that serve as indicators of the construct's major categories. The first subscale reflects an individual factor that includes personal skills (5 items), peer support (2 items), and social skills (4 items). The second subscale deals with caregiving, as reflected in physical caregiving (2 items) as well as psychological caregiving (5 items). The third subscale comprises contextual components that facilitate a sense of belonging in youth, components related to spirituality (3 items), culture (5 items), and education (2 items). The split-half reliability of this measure was 0.70 and the Cronbach alpha was (α = .83).

2.4 Statistical Analysis

Data entry and analysis were carried out using a statistical software SPSS version 18.0 (SPSS Inc. Chicago Ill, US). Frequency and percent were used to express quantitative data of types of trauma, mental health disorder, PTSD, anxiety, and resilience. For continuous variables means and standard deviations were reported. For differences between means of two groups parametric tests were used such as an independent t-test was conducted to compare gender of children and mean of trauma, PTSD, anxiety, and resilience. While, One Way ANOVA test was used for measuring differences between more than two groups of continuous variables total traumatic events, PTSD, anxiety, resilience, and other sociodemographic variables. Spearman's correlation coefficient was used to test the association between numbers of traumatic experiences, PTSD, anxiety, and resilience. Logistic regression analysis was conducted in which PTSD/no PTSD was entered

as dependent variable and each traumatic events as independent variables. Another Multivariate regression analysis was conducted, in which each traumatic events were entered as the independent variables, and PTSD, Anxiety, Resilience entered as the dependent variable. We used an alpha level of .05 for all statistical tests.

3. RESULTS

3.1 Sociodemographic Characteristics of the Children and Adolescents

The sample consisted of 251 boys (50 %) and 251 girls (50%) (Table 1). According to the selection criteria, the age range was 9-16 years, with a mean age of 12.57 years (SD = 2.2). Regard place of residence, 94 of children were from north Gaza (18.9%), 174 live in Gaza area (34.7%), 84 live in Middle area (16.7%), 96 live in Khan Younis and East area (19.1%), and 54 live in Rafah area (10.8%). Regard place of residence, 262 of children personal competence, control, trust in one's instincts in urban areas (52.2%), 173 in camps (34.5%), and 67 in a rural area (13.3%). Families were of large size, as 22.1% of the participating families had 4 or less siblings, 49.8% had 5-7 siblings and 28.1% of had 8 or more siblings. Regard family monthly income, 67.1% of the families had a monthly income under $300, 25.7% between $301-751, 5.4% had a monthly income above $751-1000, and 1.8% had more than $1001.

3.2 Exposure to Traumatic Events

As shown in Table 2, the highest frequencies of reported traumatic events were hearing the loud voice of Drones' motors (98.8%), hearing shelling of the area by artillery (98.6%), hearing the sonic sounds of the jetfighters (98.4%), and watching mutilated bodies in TV (98.2%). Palestinian children reported 3-17 traumatic events with a mean= 7.5 traumatic events (*SD* = 2.28).

3.2.1 Severity of traumatic events due to war on Gaza

In order to find the severity of the traumatic experiences, total traumatic events were recorded in to mild trauma (0-5 events), moderate trauma (6-10 events) and severe trauma (above 11 events). The results showed that 6.6% reported mild traumatic events, 67.7% reported moderate traumatic events, and 25.7% reported severe traumatic events. Chi square test showed that 11.6% of boys reported severe, and 8.4% of girls reported severe traumatic events. Boys statistically significantly reported severe traumatic events than girls ($\chi 2$ = 15.23, df =1. p = 0.001).

Table 1. Sociodemographic information of the children (N =502)

Gender	No.	%
Male	251	50
Female	251	50
Age Mean = 12.57 (*SD* = 2.2)		
Place of residence		
North Gaza	94	18.7
Gaza	174	34.7
Middle area	84	16.7
Khan Younis	96	19.1
Rafah	54	10.8
Type of residence		
City	262	52.2
Village	67	13.3
Camp	173	34.5
No of siblings		
Four and less	111	22.1
Five to seven siblings	250	49.8
Eight and more siblings	141	28.1
Family monthly income		
Less than $300	337	67.1
$301-750	129	25.7
$751-1000	27	5.4
More than $1001	9	1.8

3.2.2 Differences in children reporting traumatic events according to other sociodemographic variables

In order to find differences in total traumatic event and other sociodemographic variables such as gender, age, place of residence, education, family monthly income an independent-samples t-test for less than two groups and One Way ANOVA for more than three groups were conducted.

Mean traumatic event reported by boys were 7.84 (*SD* =2.30) and 7.19 reported by girls (*SD* = 2.24). There was significantly reporting traumatic experiences more in boys than in girls (*t* (500)= 3.23, $p < 0.01$).

Age of children was recorded in to two groups (9-12, and 13-16 years). Independent-samples t-test was done, mean traumatic events experienced by children age 9-12 years was 7.57 (*SD* =2.45) and mean for children age 13-16 years as 7.46 (*SD* = 2.12). There was no significant differences in reporting traumatic experiences according children age group (*t* (500)=.53, $p < 0.01$).

Table 2. Percentage of traumatic experiences by children (N= 502)

Trauma	Yes		No	
	No.	%	No.	%
Hearing the loud voice of Drones' motors	496	98.8	6	1.2
Hearing shelling of the area by artillery	495	98.6	7	1.4
Hearing the sonic sounds of the jetfighters	494	98.4	8	1.6
Watching mutilated bodies of in TV	493	98.2	9	1.8
Witnessing the signs of shelling on the ground	398	79.3	104	20.7
Receiving threaten letters by the Israeli army through local Television or the Radio	279	55.6	223	44.4
Unable to leave you home with family members due to fears of shelling in the street	270	53.8	232	46.2
Hearing killing of a friend	175	34.9	327	65.1
Witnessing firing by tanks and heavy artillery at neighbors' homes	143	28.5	359	71.5
Receiving pamphlets from air planes to leave your home at the border and to move to the city centers	137	27.3	365	72.7
Threaten by telephoned to evacuate your home before bombardment	79	15.7	423	84.3
Witnessing assassination of people by rockets	75	14.9	427	85.1
Forced to leave you home with family members due to shelling	75	14.9	427	85.1
Witnessing shooting of a friend	65	12.9	437	87.1
Hearing killing of a close relative	50	10	452	90
Witnessing firing by tanks and heavy artillery at own home	18	3.6	484	96.4
Witnessing shooting of a close relative	18	3.6	484	96.4
Physical injury due to bombardment of your home	14	2.8	488	97.2

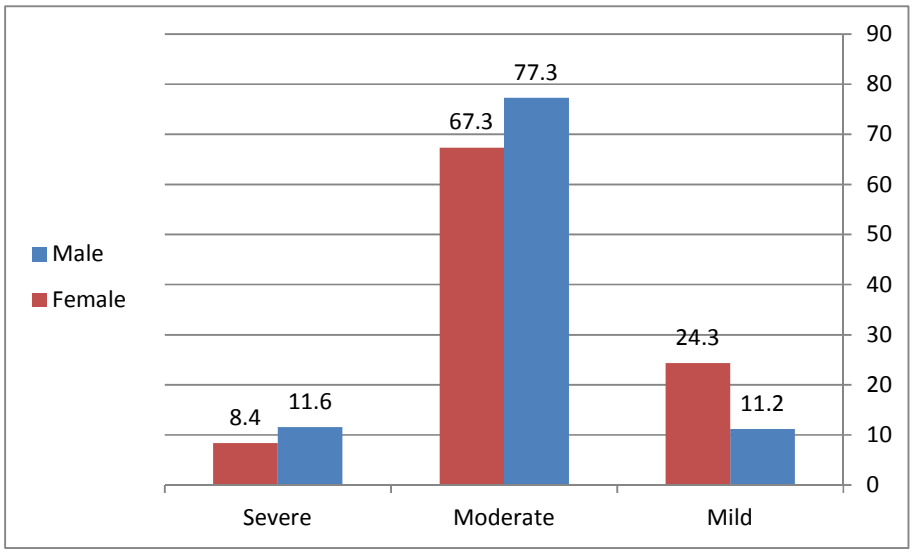

Fig. 1. Severity of traumatic events in children due to 8 days war on Gaza in children (N= 502)

One-way ANOVA was conducted in which total traumatic events was entered as dependent variable and other sociodemographic variables as independent variables. Post hoc analyses using Tukey's HSD showed that mean traumatic events for children's' place of residence (city, village, and camp) was (9.36, 7.69, and 8.63 respectively). There was significantly more experiences of traumatic events in children living in city than in village or camp, $F(2, 499) = 9.34$, $p = 0.01$). There were no statistically significant differences in traumatic events according to

families monthly income, F(2,499)= 2.407, *p* = .59.

3.2.3 Post traumatic distress reactions in children and adolescents

Children commonly reported post traumatic stress disorder symptoms such as 50.8% of children said that they had exaggerated startle response, 37.6% had acting or feeling as if the traumatic event were recurring, 37.6% had intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event, 36.9% doing efforts to avoid thoughts, feelings, or conversations associated with the trauma. While, the least common reactions symptoms were: 10% said that they had restricted range of affect (e.g., unable to have loving feelings), and 11% said they had feeling of detachment or estrangement from others.

3.2.3.1 Prevalence of PTSD

Using DSM-TR diagnostic criteria for PTSD of summing of (one reexperiencing, 3 avoidance, and 2 arousal symptoms), the study results showed that 31 of children (6%) showed no PTSD, 136 of children (27%) showed at least one criteria of PTSD (B or C or D), 31% showed PTSD and 36% of children showed full criteria of PTSD.

3.2.3.2 Means and standard deviations of PTSD

The results showed mean total scores of PTSD was 26.93 (*SD* =12.71), mean reexperiencing symptoms was 9.43 (*SD* =4.72) mean avoidance was 9.02 (*SD*= 5.49), and mean arousal was 8.47 (*SD* = 4.96). There was significantly more PTSD in girls than boys (*M*= 28.20 girls vs. 25.68 boys) (t (500)= 2.22, *p*< 0.02), and also for reexperiencing symptoms which were significantly more in girls than boys (*Mean* = 10.10 for girls vs. 8.77 for boys) (t (500)= 3.19, *p* < 0.002). Independent-samples-t test showed that there no significant differences in total PTSD according to age group of children (9-12, 13-16 years) (*M* = 37.78 vs. 26.13) (*t*(500) = 1.45, *p* < 0.14).

3.2.3.3 Differences in PTSD according to other sociodemographic variables such as type of residence, and family monthly income

Analysis of variance showed a main effect of place of residence on PTSD. Post hoc analyses using Tukey's HSD indicated that children living in city were higher in PTSD than for children living in village or camp, F(2, 499) = 6.73, p = .001. Also, total PSTD was higher in children coming from families with family monthly income less than $300, F(3) 499 = 6.01, p = 0.003).

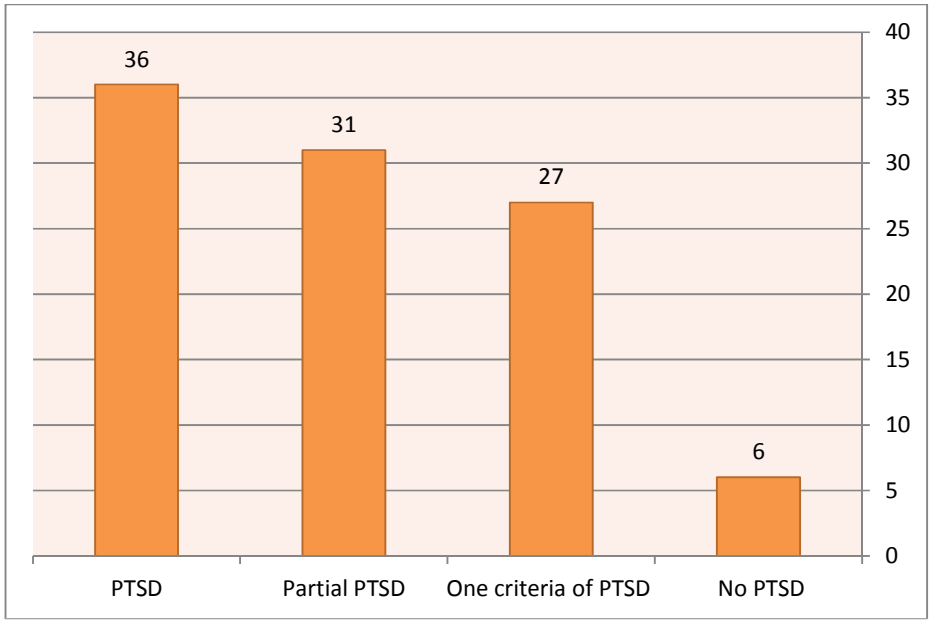

Fig. 2. Prevalence of PTSD (N = 502)

3.2.3.4 Relationship between PTSD and total trauma

Pearson correlation test was done to find the relationship between PTSD and trauma. Correlations are reported with the degrees of freedom (which is *N*-2), total traumatic events reported by children were strongly correlated with total PTSD (r (502)= 0.19, p < 0.001), reexperiencing (r (502)=0.19, p < 0.001), avoidance (r (502) =0.16, p < 0.001), and arousal symptoms (r (502)=0.13, p < 0.01).

3.2.4 Prediction of PTSD by types of traumatic events

In order to test the predictive value of specific traumatic events on PTSD symptoms, PTSD (yes/no) were entered as the dependent variable in a logistic regression analysis, with the 18 types of traumatic events as the covariates. Traumatic events that significantly predicted children post-traumatic stress disorder were: forced to leave home with family members due to shelling (β =0.12, p< 0.01), receiving pamphlets from air planes to leave home at the border and to move to the city centers (β=0.13, p< 0.01), and receiving threaten letters by the Israeli army through local Television or Radio (β = 0.10, p< 0.03).

3.3 Anxiety Disorder Symptoms in Children

The children anxiety symptoms were rated according to Revised Child Manifest Anxiety scale. The most common anxiety symptoms reported by children were: Others seem to do things easier than I can (81.3%), other children are happier than me (71.7%), and I get nervous when things do not go the right way for me (64.3%).

3.3.1 Prevalence of anxiety disorder in children

We used cut of point of 18 and above as indicator of presence of anxiety in children. The result showed that 155 children had anxiety disorder (31%) and 347 children (69%) had no anxiety disorder and. According to gender of children, 76 of boys (15.2%) had anxiety disorder and 79 of girls (15.8%) had anxiety disorder. Chi-square test of independence was performed to examine the relation between gender and anxiety. There were no significant differences in anxiety disorder according to children gender, $\chi 2$ (1, N = 502) = 0.08, p <.77.

3.3.2 Means and standard deviations of anxiety according to sociodemographic variables of children

The results showed that mean anxiety in boys was 14.24 (*SD* = 6.76) and mean anxiety in girls was 13.89 (*SD* = 6.07). No statistically significant differences in anxiety disorder according to gender of children (t (500)= .67, *p* < 0.44). The results showed no significant differences in total anxiety scores according to age group of children (9-12, 13-16) (t(500) = 1.71, p < 0.35). Post hoc analyses using Tukey's HSD indicated that anxiety was higher in children living in camps than in city and village (F (2, 499) = 4.78, p = 0.01). Anxiety was higher in children coming from families with family monthly income less than $300 (F(2, 499) = 5.9, p = .003).

3.4 Resilience in Children and Adolescents

3.4.1 Frequency of resilience items

According to the children report of the most common resilience items were: 94.6% said they were proud of their citizenship 92.4% said they feel safe when they were with their caregivers, 91.4% said that their spiritual (religious) beliefs were a source of strength for them, and 91% said they were proud of their family background.

3.4.2 Means and standard deviations of resilience according to sociodemographic variables of children

3.4.2.1 Gender of children and resilience

The results showed that mean total resilience in boys was 114.69 (*SD* =14.75) and mean resilience in girls was 117.76 (*SD* = 12.94). Mean personal skills for boys was 19.07 and 19.63 for girls, mean peer component for boys was 7.23 and 7.81 for girls, social skills for boys was 15.35 and 15.75 for girls, relationship with caregiver for boys was 29.98 and 30.20 for girls, spiritual (religious) beliefs for boys was 12.71 and 13.08 for girls, culture factor for boys was 21.59 and 21.80 for girls, and educational items for boys was 8.74 and 9.50 for girls. Girls were significantly reported more resilience than boys (*t*(500) = 2.48, *p* < 0.01). This was applicable for subscales of resilience, girls reported more peer component (*t* (500) = 2.69, *p* <0.01), and educational factor than boys (*t* (500)= 4.51, *p* < 0.001).

Table 3. Means and standard deviations of resilience factors according to gender of children (N = 502)

	Gender	Mean	SD	t	p
Total resilience in children	Male	114.7	14.75	-2.48	.01
	Female	117.8	12.94		
Personal skills	Male	19.07	3.71	-1.64	.10
	Female	19.63	3.89		
Peer component	Male	7.23	2.61	-2.69	.01
	Female	7.81	2.24		
Social skills	Male	15.37	3.48	-1.26	.21
	Female	15.75	3.17		
Relationship with caregiver	Male	29.98	4.97	-.52	.60
	Female	30.20	4.45		
Spiritual (religious) beliefs	Male	12.71	2.27	-1.89	.06
	Female	13.08	2.08		
Culture factor	Male	21.59	3.49	-.74	.46
	Female	21.80	3.02		
Educational factor	Male	8.74	2.28	-4.51	.001
	Female	9.50	1.37		

3.4.3 Differences in resilience factors according to other sociodemographic variables of children

The results showed no significant differences in total resilience scores and subscales according to age group of children (9-12, 13-16) (t(500) = .33, p <0.37).

Post hoc analyses using Tukey's HSD indicated that total resilience scores, F (2,499) =9.62, p = 0.01, and contextual components, F (2,499)=10.85, p = 0.01 was higher in children living in camps and village than in city. Also there were significant differences in individual factor toward children living in a camp than in a city, F (2,499)= 4.69, p = 0.01), and relationship with caregiver were more in children live in a village than in a city, F (2,499)= 5.58, p = 0.01). There were no significant differences in total resilience, relationship with caregiver, and contextual components according to family monthly income. However, there were statistically significant differences in individual factor toward children from family monthly income $301-750 than families with monthly income of $300 and less, F (2,499)= 4.93, p = .01). There were no significant differences in total resilience and three factors scores according to father education. There were significant differences in total resilience, F (2,499)= 4.26, p = 0.01), and individual factor toward mothers with university education than less than elementary education group, F (2,499) = 6.70, p = .01).

3.4.4 Relationships between traumatic events, security, anxiety, PTSD symptoms, and total resilience of children

Pearson correlation test was done to find the relationship between traumatic events, anxiety, PTSD symptoms, and total resilience. Correlations are reported with the degrees of freedom (which is N-2), Total traumatic events reported by children were negatively strongly correlated with total resilience in children (r (502)= - 0.13, p=0.001), peer component (r (502)= - 0.10, p=0.001), and relationship with caregiver (r (502)= - 0.13, p=0.001). However, traumatic experiences by children were positively correlated with PTSD (r (502)= 0.19, p =0.001) and anxiety (r (502)= 0.29, p=0.001).

Table 4. Pearson rank correlation coefficient: traumatic events, anxiety, PTSD, and resilience

	Traumatic events
Total PTSD	.19**
Total Anxiety	.29**
Total resilience in children	-.13**
Personal skills	-.09
Peer component	-.10 *
Social skills	-.06
Relationship with caregiver	-.13**
Spiritual (religious) beliefs	-.05
Culture	-.05
Education	-.05

*$p<0.05$, **$p<0.01$, **$p< 0.001$

4. DISCUSSION

This study showed that mean traumatic events experienced by each Palestinian children was 7 events. Children living in city and being boys were more traumatized. Such findings may be explained by cultural factors because boys are more free to move outside the home and girls are kept at homes and being in city was another risk factors in which major cities were exposed more to bombardment than villages and refugee camps. Others found similar results; girls generally showed increased vulnerability for PTSD following exposure to potentially traumatic events [27]. These findings were consistent with most of the studies conducted in the area [4,28].

Our study showed that exposure to war traumatic events lead to post traumatic stress disorder in which 36% of children showed full criteria of PTSD. Such rate of PTSD was consistent with previous studies in the area [4,28, 29,5]. Also, in study of 600 adolescents aged 12-16 years from South Lebanon and Gaza Strip showed that adolescents from Gaza Strip and South Lebanon have been exposed to various types of trauma during war, namely having family members killed, injured and houses demolished. Prevalence of PTSD in Palestinian and Lebanese adolescents was 25.7% [30]. Regarding gender, females reported more traumatic events than boys. This gender differences had been reported in previous studies involving adolescent and adult population [31,32]. Our rate of PTSD is consistent with study of 920 children and adolescents from refugee minor's population 12 to 18 years old in 2002 in the Netherlands, 40% met criteria for PTSD at time one, and 16% endorsed late-onset PTSD [33]. Similarly data collected from a sample of 139 adolescents 12 to 17 years old in Gaza Strip showed that rate of posttraumatic stress disorder (PTSD) was 56.8%. Significant risk factors for PTSD were exposure, female gender, older age, and an unemployed father living in city and village had more PTSD than children live in camps, avoidance was more in children living in city and intrusion was more in children living in village [34]. These findings could be explained by exposure of children living in cities to heavy bombardment and shelling than villages and camps.

The results showed that 30.9% of Palestinian children reported anxiety disorder and no differences between boys and girls in anxiety disorder. This results is consistent with previous study in the area in study with 409 children and young people aged 9-18 years in the Gaza Strip during continuing exposure to political trauma during the last incursion of the Gaza Strip on summer of 2006 showed that 25.4% reported anxiety disorder, girls had more anxiety than boys [35]. Also in another study [4] in study of 200 families from North Gaza and East Gaza who had exposed to continuous shelling in 2006, the sample includes 197 children and 200 parents. The results showed that 33.9% of children had anxiety disorder. Children living in camps presented higher levels of anxiety than children living in the city and villages, anxiety was more in children coming from families with family income less than $300 and whom father and mother education was less than elementary education. This is more than previously rates of anxiety in the same area [36,37].

The study showed that Palestinian children were proud of their citizenship; they feel safe when they were with their caregivers, and their spiritual beliefs were a source of strength for them, and were proud of their ethnic background. The study showed that the highest factor for resilience was contextual components that facilitate a sense of belonging. Being a girl was more protective in which they were more resilience and had more personal skills, peer component, and social skills, spiritual beliefs, culture, and educational items. Total resilience scores and subscale contextual components were more in children living in camps and villages than in cities, individual factor was more in children living in camps than in cities and relationship with caregiver were more in children live in villages than in cities. Children with family monthly income more than $301 had more individual factor than children from families of $300 and less. Our results were consistent with study of 600 adolescents aged 12-16 years from South Lebanon and Gaza Strip which found that adolescents from Gaza who were under economic pressure were at the highest risk for psychological distress including PTSD, depression and anxiety [30]. Economic pressure has an impact on adolescents' mental health both directly as a source of stress and indirectly through reducing resources that may buffer the impact of traumatic events. The results showed that having high traumatic events, more anxiety symptoms, and high PSTD significantly decreased total resilience in Palestinian children. Our findings were consistent with previous findings regarding the negative impact of loss on children's functioning [38] and the impact of traumatic events on resilience [15]. Our results

consistent with study of 90 children and adolescents and their families who participated in an investigation assessing the impact of residential fires in USA on children and their families which indicated that loss and age predicted resilience in children and adolescents. Specifically, older children exhibited higher levels of resilience as compared to younger children and children who reported lower resource loss also exhibited higher levels of resilience. Gender, however, did not emerge as a predictor of resilience [39].

5. CONCLUSION AND RECOMMENDATIONS

The study showed that boys living in a city reported severe traumatic events, decrease their resilience, and affect negatively their relationship with peers and parents and increase psychological problems such as PTSD and anxiety. Due to political complexity, psyhocosical programs targeting children in safe places including both boys and girls and their parents much continue for longer period to overcome the long-standing effect of trauma on children psychological wellbeing. Such programs could be carried out by local NOGs and CBOs working in civil society and funding of such programs from international community. Our findings again highlighted the need to create new programs teaching children ways of coping and overcoming stressors and being more resilient. Such programs could include non-curriculum activities, using theater and music, role play, creative activities, folklore dancing, and handcraft for girls. Local NGOs, CBOs, schools, sport clubs, and other community places funded by international donors could carry out such activities.

This study had opened ideas for new era of research which may include impact of other important factors beside trauma such as stress due to siege and blockade on children, and role of poverty and community violence in increasing children mental health problems. Also, further study of types of coping strategies used by children to overcome the impact of stress. Moreover, other protective factors such as the role of social and family support in helping children dealing with stress and trauma. And finally, impact of stress on children school performance and relation with peers.

6. STUDY LIMITATIONS

There is limitation of the study in which only we investigated the impact of trauma and not other risk factors such as poverty, large family size, community violence, parental influence, and stressors due to siege and closure.

NOTE

We used for the entire format of our paper the following style:

https://owl.english.purdue.edu/media/pdf/20090212013008_560.pdf [40]

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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