

Trauma, PTSD, and Traumatic Grief  
among Palestinian ChildrenThabet AA<sup>1\*</sup>, Ahmad Abu Tawahina<sup>2</sup>, Raija-Leena Punamäki<sup>3</sup> and Panos Vostanis<sup>4</sup><sup>1</sup>*Palestine Child Institute School of Public Health, Al Quds University, Palestine*<sup>2</sup>*Gaza Community Mental Health Programme, Palestine*<sup>3</sup>*Professor of Psychology, University of Tampere, Finland*<sup>4</sup>*Professor of Child Psychiatry, Greenwood Institute of Child Health, UK*

## Article Information

Received date: July 01, 2015

Accepted date: Sep 10, 2015

Published date: Sep 25, 2015

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**Keywords** PTSD; Trauma; Traumatic  
Grief; War on Gaza

## Abstract

**Aim:** The aim of this study was to find the relationship between war traumatic experiences due to war on Gaza, PTSD, and traumatic grief in Palestinian children.

**Methods:** The sample included randomly selected 374 children aged 6-16 years. Children completed measures of experience of traumatic events (Gaza Traumatic Checklist), Child Post Traumatic Stress Reaction Index, and Traumatic Grief inventory.

**Results:** Palestinians children experiences variety of traumatic events. No sex differences in reporting trauma. Mean traumatic events reported by children was 12.80 traumatic events. The study showed that 9.3% of the participants lost someone during the war. Mean traumatic grief in boys was 19.96 and 18.29 in girls. For PTSD, 1.3% of children showed no PTSD, 7.2% reported mild PTSD reactions, 29.9% showed moderate PTSD reactions, and 61.5% showed severe to very severe PTSD reactions. Trauma exposure was significantly associated with PTSD. No sex differences in PTSD.

**Conclusions:** This study revealed that children living in area of conflict and war are at risk of developing mental health problems. Study showed that children with traumatic grief need psychosocial support from families and community to enable them of passing through their grief. Moreover, parents have to be involved in all activities given to their children and to be part of such activities to enable them better communication with their children and being able of detecting children with pathological grief and enable them of helping children in overcoming the effect of grief and trauma.

## Introduction

On 27 December 2008, the Israeli Defense Forces launched sudden and intensive airstrikes on the entire Gaza Strip. The attacks began Saturday at 11:30 am and lasted for approximately three hours. These attacks destroyed most of the Gaza security offices including police stations. As a result, more than 230 Palestinians were killed and at least 770 were injured including 100 in critical condition. This military operation was called "Operation Cast" which continued for 23 days. As a result, 1320 Palestinians, including 446 children and 110 women and 108 elderly, were killed and 5320 others, including 1855 children and 795 women, were injured. At least 4000 houses were totally destroyed and other 16,000 houses were partially damaged [1].

Research evidence is strong about the exposure of children to political and military violence associating with children's psychological disorders, including anxiety, psychosomatic, and depression symptoms [2,3]. Earlier research on Palestinian children showed that they reported high levels of PTSD and other psychological problems. [4] In a study of 197 children and 200 parents in the Gaza Strip found that children had experienced a mean number of 8 traumatic events, 70% of children were likely to present with PTSD and 34% had anxiety symptoms of likely clinical significance. Further 43% of children were rated as having significant mental health morbidity by their parents. Furthermore, [5] in a study of Palestinian students from both the West Bank and Gaza Strip showed that nearly all (99%) of participants reported some type of direct exposure to political violence during Al Aqsa Intifada. Boys reported higher exposure than girls (67% vs. 33%), analyses showed that 36% of West Bank and 35% of Gaza Strip participants reported symptoms meeting criteria for full PTSD according to DSM-IV-TR, and 12% of West Bank and 11% of Gaza Strip reported symptoms meeting criteria for partial PTSD. In another community sample of 139 adolescents aged between 12 and 17 years, 58.27% scored above cut off on PTSD scale and were consequently, regarded as likely cases of PTSD, 23.74 % were categorized as likely cases of clinical anxiety, and 52.21% scored above the recommended clinical cut-off of depression [6].

Similarly, in study a sample consisted of 502 randomly selected children from 16 districts of the Gaza Strip. Age ranged from 9 to 16 years on December 2012, showed that 35.9% of children showed full criteria of PTSD and 30.9% of children had anxiety disorder [7]. Recently in study of the sample consisted of 381 children and adolescents with age ranged from 7 to 18 years one month

after the 51 days on Gaza on 2014, displaced children reported more traumatic events than non-displaced ones (Mean=13.6 vs. 9.08). Boys reporting more traumatic events than girls, 10.0% of non-displaced children and 18.4% of displaced children had acute traumatic stress disorder [7].

Underscoring the dynamic interplay between trauma and grief, [8] proposes that circumstance-related distress may be especially prominent in individuals who are both exposed to direct life threat themselves, and who witness the traumatic death of a close person, given that they must contend with both sets of trauma and grief reactions. These dual reactions include traumatic stress reactions to the circumstances of the death and to their own potential life threat or injury, as well as grief reactions to the loss, including acute grief reactions while the event continues to unfold immediately after the death, [9] used the term bereavement for the experience of having lost a loved one and the term grief for the psychobiological response to bereavement. While acute grief is the immediate initial response, complicated grief refers to prolongation of the acute grief or other complications that can ensue. Traumatic grief is related to the traumatic circumstances or exposure surrounding the death [10]. Recently, persistent complex bereavement disorder (PCBD) was introduced as a condition for further study in the Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition [11]. The proposed PCBD criteria combine many of the symptoms that have been studied using the prolonged grief and traumatic grief framework such as persistent longing for the deceased and excessive avoidance of loss reminders. PCBD requires that bereavement reactions be assessed in the context of cultural, religious, and age-appropriate norms. The World Health Organization is also proposing a classification system for a grief disorder that takes into account social, cultural, religious, and contextual factors which is expected to be finalized in 2017 [12]. Losing a loved one inside the family has been evaluated as one of many stressors that children experience following mass trauma. A mass trauma loss will always be part of a complex array of changes in the child's life. Some mass trauma events such as the current conflict in the Gaza Strip also have an ongoing nature where the child has to process a loss under circumstances of continued stress or danger that may impede normal recovery processes.

Following the Nairobi bomb explosion in 1998, [13], found grief associated with bomb-related Posttraumatic Stress (PTS), PTS related to other negative life events, and type of bomb-related loss. Also, One and a half years after the terror at Utøya Island in Norway where 69 young people were killed, 75 % of bereaved siblings scored above the designated cut off level on the Inventory of Complicated Grief [10] indicating that grief had become complicated. Their levels of symptoms in other areas (e.g., PTSD, general psychic distress) were also high and correlated with grief reactions. Around half showed high levels of functional impairment and academic difficulties were very common. Grief reactions in children vary widely depending on the type of mass trauma, the number of deaths involved, the recovery environment, social and family support, and other personal aspects such as coping strategies. We do not have many studies delineating the course and the trajectories of grief following bereavement in mass trauma situations, we tentatively can say that there is a high potential for continuing problems over time. [14] Stress the importance of relying on existing social supports for bereaved people, and we concur with this perspective. Providing comfort and support in the

early bereavement period is usually very natural for family, friends, neighbors and others in the community.

The aim of this study was to establish the relationship between war traumatic experiences due to war on Gaza, PTSD, and traumatic grief among Palestinian children.

## Methods

### Setting and Participants

The Gaza Strip is a narrow elongated piece of land, bordering the Mediterranean Sea between Israel and Egypt, and covers 360 km<sup>2</sup>. 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. Since September 2005, the population of the Gaza Strip has been exposed to regular incursions and shelling, resulting in at least 200 deaths and many more injuries, in the last six months alone.

The target population consisted of 400 children who lived in five localities of the Gaza Strip (north Gaza, Gaza, Middle area, Khan Younis, and Rafah area) exposed to 23 days of shelling, incursion, and bombardment, in the entire Gaza Strip on December 2008. Only 374 children responded to interview. So, 197 were males (52.7%) and 177 were females 47.3%. The age ranged from 6 to 16 years with mean age 11.16 (SD = 3.12).

### Study Procedure

Data collection was conducted by 8 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 on February 2009 which includes the 400 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 6-16 years, and had been in the area for the last year. Families were approached until 374 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.

## Measures

### 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

**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 [15, 16]. This checklist consists of 30 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 6-16, experiencing witnessing of home demolition, killing of others);

and (3) personal experiences (items number 17-30, 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 =.90).

**Grief screening scale [GSS; 17]:** The GSS is a 10- item self-report screening inventory of grief symptoms in adolescents and adults. It is composed to two factor-analytically derived subscales containing five items each: One subscale measures symptoms of normal grief, and the other measures symptoms of complicated grief. Symptoms experienced during the past 4 weeks are measures on a 5 point Likert-type frequency scale consisting of 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = almost always. [17] Reported internal consistency ( $\alpha = .86$ ) for the GSS used in a school-based study in Bosnia in which inclusion was defined by a score of 10 or higher. Internal consistency for the translated tool (Cronbach's  $\alpha$ ) was .85.

**Children's Post Traumatic Stress Reaction Index (CPTSD-RI):** This standardized 20-item self-report measure was designed to assess post-traumatic stress reactions of children aged 6-16 years following exposure to a broad range of traumatic events [8]. It includes three subscales, Intrusion (7 items), Avoidance (5 items) and Arousal (5 items), and three additional items. The scale has been found valid in detecting the likelihood of PTSD. Items are rated on a 0-4 scale, and the range of total CPTSD-RI scores is between 0-80. Scores are classified as 'mild PTSD reaction' (total score 12-24), 'moderate' (25-39), 'severe' (40-59), and 'very severe reaction' (above 60). The CPTSD-RI used in this study was based on DSM-III-R criteria, rather than another PTSD instrument based on DSM-IV criteria, as the CPTSD-RI had already been validated in the Arab culture [18,19].

**Statistics analyses**

The researcher used Statistical Package of Social Science (SPSS.V.18) for data entry and analysis. Data coding and cleaning are done before analysis. Frequency, mean, and standard deviation were used to describe the demographic data. We used t-tests to compare the difference s of all variables between two groups and the Trauma, PTSD, and grief. To analyze the predictive role of traumatic experiences by children, grief, and PTSD, we used multiple regression analyses. The dependent variables were PTSD and grief and 30 traumatic experiences were the independent variables. AP value less than 0.05 was considered statistically significant.

**Results**

**Socio-demographic characteristics of study population (N = 374)**

The sample consisted of 374 children, 197 were males (52.7%) and 177 were females 47.3%. The age ranged from 6 to 16 years with mean age 11.16 (SD = 3.12).

According to place of residence, 34.2% were from North Gaza, 24.9% were from Gaza city, 15.8% were from middle area, 7.8% from Khan Younis, and 17.4% were from Rafah area. According to type of living, 44% live in cities, 20.9% live in villages, and 34.8% live in refugee camps. According to family monthly income, 60.9% had less than \$300 monthly, 26 % had \$ 301-650 monthly, and 13.1% had \$ 651 and above> monthly(Table 1)

**Table 1:** Sociodemographic characteristics of study population (N = 374).

	N	%
<b>1. Sex</b>		
Male	197	52.7
Female	177	47.3
<b>2. Age Mean = 11.16 years (SD = 3.12)</b>		
<b>3. Place of residence</b>		
North Gaza	128	34.2
Gaza	93	24.9
Middle area	59	15.8
Khan Younis	29	7.8
Rafah area	65	17.4
<b>4. Type of residence</b>		
City	166	44.4
Village	78	20.9
Camp	130	34.8
<b>No of siblings</b>		
Less than 4	99	26.5
5-7 siblings	172	46.0
8 and more	103	27.5
<b>Family monthly income</b>		
Less than 300 US \$	190	60.9
301-650 \$	81	26.0
651\$ and more	41	13.1
<b>Father job</b>		
Unemployed	109	36.8
Simple worker	54	18.2
Skilled worker	39	13.2
Employee	72	24.3
Merchant	11	3.7
Others	11	3.7
<b>Mother job</b>		
Housewife	296	90.2
Simple worker	10	3.0
Employee	12	3.7
Others	10	3.0

**Exposure to traumatic events**

As shown in Table 2, the highest frequencies of reported traumatic events were watched mutilated bodies in TV (94.9%), hear shelling of the area by artillery (93.9%), hear the sonic sounds of the jet fighters (93.9%), and witnessed the signs of shelling on the ground (91.4%).

**Differences in children reporting traumatic events according to other socio-demographic variables**

In order to find differences in total traumatic event and other socio-demographic variables such as sex, age, place of residence,

**Table 2:** Percentage of traumatic experiences by children (N = 374).

Types of traumatic events	No.	%
14. Watching mutilated bodies in TV	335	94.9
3. Hearing shelling of the area by artillery	351	93.9
4. Hearing the sonic sounds of the jetfighters	351	93.9
16. Witnessing the signs of shelling on the ground	342	91.4
21. Deprivation from water or electricity during detention at home	273	73
30. Forced to leave your home during the war	258	69
12. Witnessing firing by tanks and heavy artillery at neighbors homes	239	63.9
11. Witnessing of a friend home demolition	225	60.2
15. Witnessing assassination of people by rockets	203	54.3
19. Being detained at home during incursion	198	52.9
1. Hearing killing of a friend	177	47.3
2. Hearing killing of a close relative	167	44.7
5. Hearing of arrest of someone or a friend	157	42
22. Threaten by shooting	150	40.1
23. Destroying of your personal belongings during incursion	133	35.6
13. Witnessing firing by tanks and heavy artillery at own home	127	34
10. Witnessing of own home demolition	124	32.2
27. Deprivation from going to toilet at home where you was detained	101	27
8. Witnessing shooting of a friend	89	23.8
6. Witnessing killing of a friend	86	23
9. Witnessing shooting of a close relative	85	22.7
28. Exposure to burn by bombs and phosphorous bombs	84	22.5
7. Witnessing killing of a close relative	81	21.7
20. Beating and humiliation by the army	72	19.3
25. Threaten of family member of being killed	69	18.4
17. Shooting by bullets, rocket, or bombs	61	16.3
24. Threaten of being killed	61	16.3
18. Physical injury due to bombardment of your home	58	15.5
26. Threatened to death by being used as human shield to arrest your neighbours by the army	54	14.4
29. Being arrested during the last incursion	49	13.1

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.

**Sex differences in traumatic events**

As shown in Table 3, children reported from no events to 30 traumatic events, mean traumatic events was 12.78 (SD = 6.56). The results showed that mean traumatic events reported by males was 13.03 (SD =6.46) compared to mean in females =12.50 (SD = 6.64). Independent t test showed no significant sex differences between males and females in reporting traumatic events (t (372) = 0.78, p = 0.44). No significant differences in total traumatic events according

**Table 3:** Sex differences in total traumatic events (N =374).

Total trauma	Sex	N	Mean	Std. Deviation	Mean Difference	t	p
	Male	197	13.03	6.46	0.53	.78	.44
	Female	177	12.50	6.64	0.50		

to age of children, place of residence, family monthly income, and parents education.

**Post traumatic stress reactions**

Children reported variety of post traumatic psychological reactions, 86.1% identifies event as extreme stressor, 64.4% said they get scared, afraid or upset when they think about the war time, 63.1% had intrusive images and sounds of the war, and 61.2% had fears of recurrence of the war after reminders of the traumatic events due to war.

**Prevalence of post traumatic stress disorder**

Using the previous cut-off point of CPTSD-RI, 1.3% of children showed no PTSD, 7.2% reported mild PTSD reactions, 29.9% showed moderate PTSD reactions, and 61.5% showed severe to very severe PTSD reactions. Chi square test showed no significant sex differences in reporting PTSD reactions ( $\chi^2 = 0.34$ ,  $df = 3$ ,  $p < 0.95$ ).



**Table 4** Sex differences in post traumatic stress disorder (N=374).

CPTSD_RI	Sex	N	Mean	Std. Deviation	Std. Error Mean	t	p
Total PTSD	Male	197	41.80	11.88	.65	.53	.59
	Female	177	41.15	11.66			
Reexperiences	Male	197	16.38	4.92	.70	1.32	.19
	Female	177	15.67	5.35			
Avoidance	Male	197	9.14	3.99	-.25	-.63	.53
	Female	177	9.38	3.58			
Hyperarousal	Male	197	10.32	3.48	.22	.60	.55
	female	177	10.11	3.47			

**Table 5:** Pearson correlation coefficient between exposures to total traumatic Events and post traumatic disorder (total and subscales) scores.

		1	2	3	4
1. Total trauma	Pearson Correlation				
	Sig. (2-tailed)				
	N				
2. PTSD	Pearson Correlation	.14 **			
	Sig. (2-tailed)	.006			
	N	374	374		
3. Reexperiences	Pearson Correlation	.10	.89 **		
	Sig. (2-tailed)	.05	.000		
	N	374	374	374	
4. Avoidance	Pearson Correlation	.01	.74 **	.52 **	
	Sig. (2-tailed)	.716	.000	.000	
	N	374	374	374	374
5. Hyperarousal	Pearson Correlation	.17 **	.81 **	.61 **	.46 **
	Sig. (2-tailed)	.001	.000	.000	.000
	N	374	374	374	374

**Table 6:** Linear regression analysis of each traumatic event and total PTSD scores.

Traumatic events	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	35.50	1.26		28.13	.001
22. Threaten by shooting	4.47	1.27	0.19	3.53	0.001
30. Forced to leave your home during the war	3.26	1.29	0.13	2.52	0.01
6. Witnessing killing of a friend	-4.91	1.53	-0.18	-3.21	0.001
11. Witnessing of a friend home demolition	3.28	1.27	0.14	2.59	0.01
2. Hearing killing of a close relative	2.47	1.25	0.10	1.98	0.05

**Table 7:** Linear regression analysis of each traumatic event and total traumatic grief scores.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	11.25	2.42		4.65	.001
11. Witnessing of a friend home demolition	9.72	3.67	.48	2.64	.01
28. Exposure to burn by bombs and phosphorous bombs	9.70	3.97	.45	2.44	.02

Mean PTSD was 41.4 (SD =11.7), intrusion symptoms mean was 16.04, avoidance mean was 9.25, and hyper arousal mean was 10.2. In order to find the differences in PTSD according to sex, t independent test was done. The results showed that there was no significant difference between boys and girls in total PTSD and other subscale (t (372) = 0.53, p = ns). Also, no significant differences in PTSD between younger age and older age children (6-12, 13 and above) (Table 4).

**Relationship between total traumatic events and post traumatic stress disorder**

Pearson correlation test was done to find the association between PTSD and subscales and trauma. The results showed that there was significant correlation between total traumatic events reported by children and total PTSD (r (374) = 0.14, p < 0.006), hyper arousal and total traumatic events (r (374) =.17, p =0.001).No significant correlations between total traumatic events and re-experiences and avoidance symptoms (Table 5).

The results showed no significant differences in PTSD, intrusion symptoms, avoidance, and hyper arousal and other socio-demographic variables such as age, place of residence, family monthly income, and parent’s education.

**Prediction of post traumatic stress disorder by traumatic events**

In a univariate linear regression analysis, each traumatic event was entered as an independent variable in a multiple regression model, with total PTSD scores as the dependent variable, five traumatic events were significantly associated with PTSD symptoms: threaten by shooting: (β=4.47, p < 0.001); forced to leave home during the war: β=3.26, p<0.01, witnessing killing of a friend (β= -4.91 , p< 0.001), witnessing of a friend home demolition: (β=3.28 , p<0.01), and hearing killing of a close relative (β=2.47, p<0.001) (F = 9.03 p <0.05, R<sup>2</sup>=0.10) (Table 6).

**Loss of someone from the family**

The study showed that from total number of children 36 of the children said that they lost someone from the family (9.3%) and 338 said they did not loss any one (90.7%).

**Traumatic grief reactions in children due to loss**

In the following section we are presenting data of grief of 36 children who lost someone from the family. The results showed that of 62.8% children were enjoying good memories of lost person, 62.8% had unpleasant thoughts (bad or upsetting thoughts) about how the person died get in the way of enjoying good memories of him/her.

**Sex differences in traumatic grief**

Mean traumatic grief in boys was 19.96 (SD=8.89), and 18.29 (SD=9.81) in girls. The results showed no significant differences between boys and girls in reporting traumatic grief items (t=1.21, p < 0.22).

**Prediction of traumatic grief by traumatic events**

The results showed that the following traumatic events were predicting the traumatic grief in children: witnessing killing of close

relative ( $\beta=5.64$ ,  $p<0.001$ ) and witnessing assassination of people by rockets ( $\beta=2.66$ ,  $p<0.04$ ) ( $F = 12.22$   $p < 0.05$ ,  $R^2=0.11$ ) (Table 7).7.

## Discussion

This study aimed to find the relationship between war traumatic experiences due to war on Gaza on 2008-2009, PTSD, and traumatic grief in Palestinian children. This study showed that means traumatic events experienced by each Palestinian children was 12 events. Age, sex, place of residence, and family monthly income did not showed and significant differences in exposure to traumatic events. The finding of such high exposure in children was higher than found in similar studies in Gaza Strip and West Bank [3,5,7,16,20,21]. Our study showed that the best traumatic events predicting total grief were witnessing killing of close relative and witnessing assassination of people by rockets, those traumatic events similar to previous study of Darfur children which found that abduction; 2) death of one or more parents; 3) seeing homes burned; 4) witness shooting; and 5) witnessing rape were predicting grief in children [22].

The study showed the most common psychological reactions were intrusive symptoms such as identifies event as extreme stressor, scared, afraid or upset when they think about the war time, intrusive images and sounds of the war and fear of recurrence of the war on Gaza after reminders. Intrusion symptoms such as fears and nightmares might develop early as an acute response among people being in a continuous state of 'high alert', while avoidance symptoms might develop later, or in response to different types of traumatic situations. Previous studies in the area showed that insomnia, exaggerated startle, and trying to remove memories from their mind were more common those other symptoms [16].

Using the previous cut-off point of CPTSD-RI, 61.5% showed severe to very severe PTSD reactions. However this study rate of PTSD was higher than found in other studies done the area [2,3,7,5,23]. Such high prevalence could be due to the scales used in different studies in which in this study we used the scale which showed reactions, while in new studies we used scales depend on DSM-IV and DSM-V criteria. However this level of PTSD is less than that rate found in Darfur children which showed that prevalence of PTSD symptoms found in 75% of the children [23].

The results showed that losing someone closed to children lead to variety of emotions including enjoying good memories of lost person, feel that, even though he/she is gone, he/she is still an important part of his life, think about getting revenge on whoever is responsible for his/her death, unpleasant thoughts (bad or upsetting thoughts) about how the person died get in the way of enjoying good memories of him/her. These emotions following lose finding different from findings of previous study of Palestinian children in South of Gaza in which the most common grief symptoms were have pleasant or comforting dreams about the person who died, seeing the dead person, crying when remembering him, and denying that he gone [24].

The study showed that mean traumatic grief reported by boys was 19.96, and 18.29 reported by girls. No significant differences between boys and girls in reporting traumatic grief items. Traumatic events predicting the traumatic grief in children were including loss issues such as witnessing killing of close relative and witnessing assassination of people by rockets. Few studies have been undertaken to estimate the prevalence of complicated grief in children, but studies suggest approximately 10 to 30 % of children who are parentally bereaved

experience complicated grief [25, 26]. Losing a loved one to children has been evaluated as one of many stressors that Palestinian children experience following compound and continuous trauma. It may be quite difficult to disentangle the effect of the loss from other stressors such as poverty, siege of Gaza and repeated wars and changes that the child may experience or undergo. For example, following a war, a child may, in addition to losing loved ones, have survived extreme danger, lost his or her house and school, been forced to live in a tent or shelters within a totally changed environment, experienced aftershocks, lacked basic necessities, etc. [27].

Dawson, Joscelyne and coworkers found that grief in Muslim children after the 2004 tsunami (Indonesia) was predicted by female gender, experiencing the death of a parent, the total number of deaths experienced, and a child's reliance on cognitive avoidance. Following the Nairobi bomb explosion in 1998, [13] found grief associated with bomb-related Posttraumatic Stress (PTS), PTS related to other negative life events, and type of bomb related loss. Likewise, one and a half years after the terror at Utøya Island in Norway where 69 young people were killed, 75 % of bereaved siblings scored above the designated cut off level on the Inventory of Complicated Grief indicating that grief had become complicated. Their levels of symptoms in other areas (e.g., PTSD, general psychic distress) were also high and correlated with grief reactions. Around half showed high levels of functional impairment and academic difficulties were very common.

## Study Limitations

This study has a number of limitations. This study was done immediately after the war on Gaza and children and families still under the effect of severe traumatic events which showed that most of the symptoms were due to acute stress and previous traumatic events may play a role in such case. A follow-up study after 3-6 months may help understand better the changes in grief and psychopathology among children in relation to changes in trauma exposure.

## Conclusion and Recommendations

This study revealed that children living in area of conflict and war are at risk of developing mental health problems. Study showed that children with traumatic grief need psychosocial support from families and community to enable them of passing through their grief. Moreover, parents have to be involved in all activities given to their children and to be part of such activities to enable them better communication with their children and being able of detecting children with pathological grief and enable them of helping children in overcoming the effect of grief and trauma.

## Acknowledgement

We are grateful to the team who collected the data under enormous difficulties. Also, our many thanks to families and children who participated in this study, for their openness in sharing such difficult issues. Also to Mr. Khalil Megdad for his work as statistician in this study.

## References

1. Abdeen Z, Qasrawi R, Nabil S, Shaheen M. Psychological reactions to Israeli occupation: Findings from the national study of school-based screening in Palestine International Journal of Behavioral Development. 2008; 32: 290-297.

2. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th edition. Washington, DC. 2013.
3. Dyregrov K, Dyregrov A, Raundalen M. Effective grief and bereavement support: The role of family, friends, colleagues, schools, and support professionals. London and Philadelphia: Jessica Kingsley Publishers. 2008.
4. Dyregrov K, Dyregrov A, Kristensen P. Traumatic bereavement and terror. The psychosocial impact on parents and siblings 1.5 years after the July 2011 terror-killings in Norway. *Journal of Loss and Trauma*. 2014.
5. Ingridsdatter I, Nielsen L, Kolltveit S, Thabet AA, Christian T, Johnsen J, Dyregrov, A, Ståle Pallesen S, Laberg J C. Risk Factors for PTSD, Anxiety, and Depression Among Adolescents in Gaza. *Journal of Traumatic Stress*. 2012; 25: 164-170.
6. Layne C M, Poppleton L E, Saltzman W R, Pynoos R S. Measuring grief responses in traumatically bereaved adolescents: Recent advances in test development using multiple samples. Manuscript submitted for publication. 2006.
7. Layne C M, Saltzman W R, Poppleton L, Burlingame G M, Pasali C A, Durakovic E, Pynoos R S. Effectiveness of a school-based Journal of Traumatic Stress DOI 10.1002/jts. Published on behalf of the International Society for Traumatic Stress Studies. Group psychotherapy program for war-exposed adolescents: A randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2008; 47: 1048-1062.
8. Maercker A, Brewin CR, Bryant R, et al. Diagnosis and classification of disorders specifically associated with stress: proposals for ICD- 11. *World Psychiatry*. 2013; 12: 198-206.
9. Melhem N M, Porta G, Shamseddeen W, et al. Grief in children and adolescents bereaved by sudden parental death. *Arch Gen Psychiatry*. 2011; 68: 911-919.
10. Melhem N M, Porta G, Payne M W, Brent D A. Identifying prolonged grief reactions in children: dimensional and diagnostic approaches. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2013; 52: 599-607.
11. Morgos D, Worden J W, Gupta L. Psychosocial effects of war experiences among displaced children in Southern Darfur. *Journal of Death and Dying*. 2008; 56: 229-253.
12. Pat Horenczyk R, Qasrawi R, Lesack R, Haj Yahia M, Peled O, Shaheen M, et al. Posttraumatic symptoms, functional impairment, and coping among adolescents on both sides of the Israeli-Palestinian conflict: A cross-cultural approach. *Applied Psychology*. 2009; 58: 688-708.
13. Pfefferbaum B, North C S, Doughty D E, et al. Trauma, grief and depression in Nairobi children after the 1998 bombing of the American Embassy. *Death Stud*. 2006; 30: 561-577.
14. Stroebe MS, Hansson RO, Schut H, Stroebe W. Handbook of bereavement research and practice: advances in theory and intervention. Washington: American Psychological Association. 2008.
15. Palestine Red Crescent. Humanitarian Suffering during the last Israeli offensive on Gaza Strip and the Role of the Palestine Red Crescent Society. Humanitarian Duty Report. 2008.
16. Pynoos R, Frederick C, Nader K. Life threat and posttraumatic stress in school-age children. *Arch Gen Psychiatry*. 1987; 44: 1057-1063.
17. Shaat N, Thabet A A. Trauma and grief in children in south of Gaza Strip. *Arabpsynet E. Journal*. 2007; 13: 28-34.
18. Thabet A A, Vostanis P. Posttraumatic stress reactions in children of war. 1999.
19. Association for Child and Adolescent Mental Health. *Journal of Child Psychology and Psychiatry*. 40: 385-391.
20. Thabet AA, Abed Y Vostanis P. Comorbidity of Post-traumatic Stress Disorder and Depression among Refugee Children during War Conflict. *Journal of Child Psychology and Psychiatry*. 2004; 45: 533-542.
21. Thabet AA, Abdulla T, El Helou M, Vostanis P. Effect of trauma on children mental health in the Gaza Strip. (Eds) Greenbaum C W, Veerman P, Bacon Shnoor N. Protection of Children during Armed Political Conflict. A Multidisciplinary Perspective. 2006; 123-138.
22. Thabet A, Abu Tawahina A, El Sarraj E, Vostanis P. Children Exposed to Political Conflict: Implications for Health Policy. *Harvard Health Policy Review*. 2007; 8: 47-57.
23. Thabet A A, Tawahina A, Abu El Sarraj Eyad, Vostanis, Panos. Exposure to War Trauma and PTSD among Parents and Children in the Gaza Strip. *European Child & Adolescent Psychiatry*. 2008; 17: 191-199.
24. Thabet A A, A N, Ibrahim, Shivram R, Winter E W, Vostanis P. Parenting Support and PTSD in Children of a War Zone. *International Journal of Social Psychiatry*. 2009; 55: 226-237.
25. Thabet A A, Matar S, Carpintero A, Bankart J, Vostanis P. Mental health problems among labor children in the Gaza Strip. *Child Care Health Development*. 2011; 37: 89-95.
26. Thabet A A, Omar EL Buhaisi O, Vostanis P. Trauma, PTSD, Anxiety, and coping strategies among Palestinians adolescents exposed to War on Gaza. *The Arab Journal of Psychiatry*. 2014; 25: 71-82.
27. Thabet T, Thabet S. Trauma, PTSD, Anxiety, and Resilience in Palestinian Children in the Gaza Strip. *British Journal of Education, Society & Behavioural Science*. 2015; 11: 1-13.