

## 1 Introduction

Palestinians represent the biggest refugee population in the world (UNICEF, 2011).

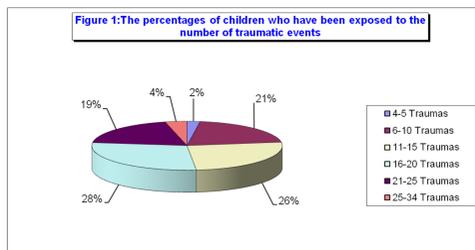
Children who grow up in war zones are typically exposed to multiple stressors and on-going traumatic events which affect every aspect of their lives: somatic, psychological, social, and functional.

Most studies conducted in the Gaza Strip or West Bank found that Palestinian children were at high risk for PTSD, somatoform disorders, and psychosocial problems (e.g., Husain *et al.*, 1998; Thabet, Abed, & Vostanis, 2002; Qouta & El-Sarraj, 2004).

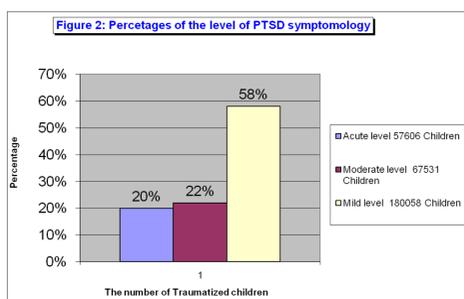
Some of the post-traumatic symptoms persist for several years after the traumatic event and may even appear after few years (Altawil *et al.*, 2008).



In 2006, Altawil *et al.* (2008) conducted a study among 1,137 children aged between ten and 18 years randomly selected from all parts of the Gaza Strip. The study found that every child in Palestine is likely to have been exposed to at least three traumatic events. Importantly, this study also found that 78.4% of Palestinian children inside Gaza suffered from PTSD.



In addition, Altawil *et al.* (2008) found that the support of family, friends, relatives and teachers and positive personality traits were strong protective factors aiding recovery from trauma and PTSD.



The cumulative effect of these complex traumas challenges resilience to depressive disorders. The environment for recovery must be undisturbed for the affected people to be cured (Harrold and Altawil, 2012).

There is a great need for a longitudinal study to investigate different PTSD symptom groups including acute PTSD, resiliency, and developing PTSD over time.

The **aim of this study** is to examine the psychosocial context of events related to PTSD symptom groups and how contextual factors might influence the course of PTSD.

The study is a follow-up study of 160 adolescents of those children who participated in the 2006 study.

## 2 Method

### Design & Participants

The original sample consisted of 1,137 children aged between 10-18 years (mean age: 14.36; SD 1.79), randomly selected from all parts of the Gaza Strip in June 2006. The follow-up sample in 2012 consisted of 160 participants aged between 17-20 years. The follow-up sample was selected from high schools and universities in the Gaza Strip. The participants were interviewed in Arabic using four validated questionnaires which were used in the baseline study (2006).

### Measurements

The researchers conducted the same four questionnaires which had been used in the 2006 study. These were:

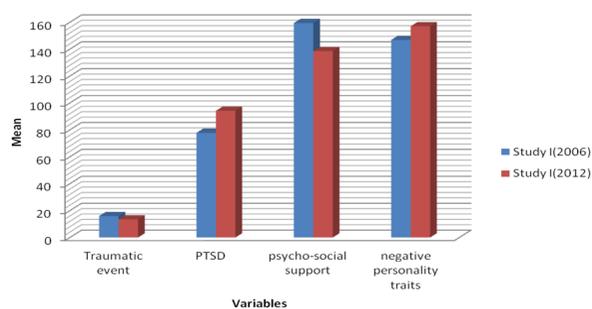
- 1) Checklist of Traumatic Experiences (CTE)
- 2) Symptoms of PTSD Scale (SPTSDS)
- 3) Network of psycho-social support (NPSS)
- 4) Personality Assessment Questionnaire (PAQ) (Ronald & Rohner, 1968).

### Procedure

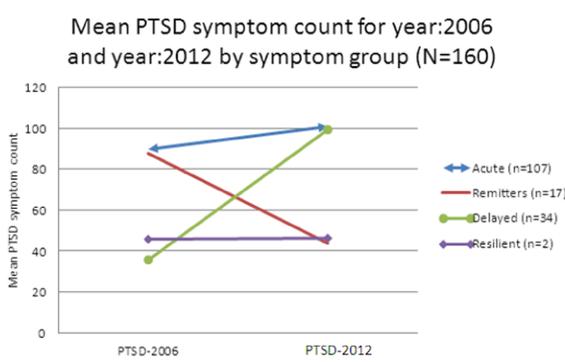
Ethical approval for the study was obtained from Kingston University (UK), the Palestinian Educational Ministry and Palestine Trauma Centre (UK & Gaza). Participants completed the questionnaires in two sessions with a trained researcher and a school counsellor. Each session included 7 to 10 participants and both sessions lasted approximately 1 hour. Those questionnaires are available in English and Arabic.

## 3 Results

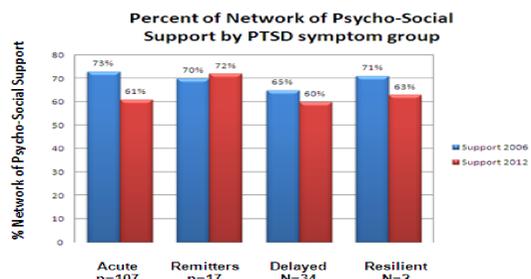
**Figure 1. Exposure to traumatic events, PTSD, Network of psycho-social support and Negative personality traits in study I (2006) and study II (2012)** (F(3,318)=2788.12, p < .001).



**Figure 2. PTSD symptom count for 2006 and 2012 by symptom group.**



**Figure 3. Network of Psycho-Social Support by PTSD symptom group.**



### References

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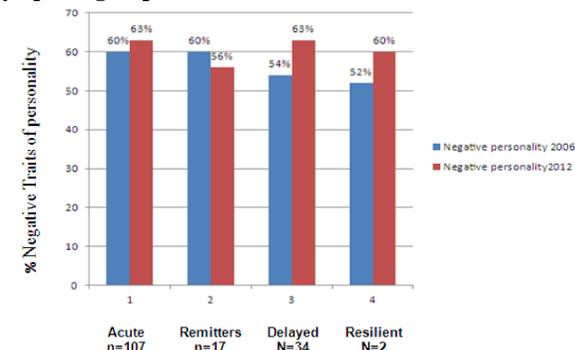
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## 4 Results

**Figure 4. Negative traits of personality by PTSD symptom group.**



**Table 1. Odds Ratio (OR) Results and 95% CI for Acute and Delayed PTSD versus Other Symptoms**

Predictor variables	Acute versus Others		Acute and Delayed versus Others	
	Adjusted OR	95% CI for OR	Adjusted OR	95% CI for OR
<b>Gender</b>				
Female (ref)	1		1	
Male	1.16	0.38 3.48	0.92	0.15 5.85
<b>Number of Traumas (Time 2)</b>				
Low (ref)	1		1	
Moderate	1.58	0.57 4.37	4.50	0.70 28.81
High	3.05	0.60 15.40	5.43	.00 .
<b>Repetitions of traumas (Time 2)</b>				
Low (ref)	1		1	
High	0.38	0.12 1.28	0.55	0.90 3.69
<b>Psychosocial support (Time 2)</b>				
High (ref)	1		1	
Low	4.83*	1.44 16.14	36.19***	5.40 242.71
Moderate	3.21	0.87 11.87	2.92	0.58 14.77
<b>Personality (Time 2)</b>				
Positive (ref)	1		1	
Negative	1.53	0.64 3.65	10.25*	1.10 95.62
<b>Number of Traumas (Time 1)</b>				
Low (ref)	1		1	
Moderate	2.19	0.92 5.20	2.614	0.54 12.61
High	13.37**	2.31 77.21	2.67	0.21 33.69
<b>Repetitions of traumas (Time 1)</b>				
Low (ref)	1		1	
High	2.59*	1.10 6.12	2.41	0.60 9.63
<b>Psychosocial support (Time 1)</b>				
High (ref)	1		1	
Low	0.57	.16 1.97	0.13	0.01 2.15
Moderate	0.79	0.19 3.12	2.13	0.01 4.28
<b>Personality (Time 1)</b>				
Positive (ref)	1		1	
Negative	2.87*	1.21 6.79	0.42	0.11 1.60

\* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001

## 5 Summary

There was a significant main effect of Time on exposure to traumatic events, PTSD, network of psycho-social support and personality traits.

Symptoms of PTSD significantly increased in 2012 after the siege and ongoing exposure of traumatic events. Intense exposure to traumatic events will lead to high level of PTSD (e.g., Bramsen *et al.*, 2000; Nelson-Goff & Schwerdtfeger, 2004).

PTSD was classified into four groups (Adams and Boscarino, 2006):

- a) **Acute group** (n=107, 67%) – high PTSD symptoms in 2006 and in 2012.
- b) **Remitters group** (n=17, 11%) – high PTSD symptoms in 2006 but did not show significant PTSD symptoms in 2012
- c) **Delayed group** (n=34, 21%) - no PTSD symptoms in 2006 but showed significant PTSD symptoms in 2012
- d) **Resilient group** (n=2, 1%) which had no PTSD symptoms in 2006 and did not show PTSD symptoms in 2012.

The Acute and Delayed groups (78% of the total) have not yet recovered from symptoms of PTSD which can lead to very complex psychological problems. Only 11% of sufferers have recovered from PTSD, which could be the resulted of self-healing or some psychological services provided to them. The resilient people are very few in the community.

The researchers found that the Acute and Delayed groups were predicted by low levels of psycho-social support, negative personality traits, repetition of traumas and high number of traumas. The Remitters group reduced their PTSD levels when psycho-social support and positive personality traits were high. The resilient group was not affected when their network of psycho-social support decreased.

## 6 Conclusion

Positive personality traits and a network of psycho-social support can play very effective roles in protecting traumatised children or adults against developing PTSD (e.g., McNally, 2003; Mohlen *et al.*, 2005).

Children and their families in the Gaza Strip are continually at risk of developing PTSD and psychological problems. The repeated trauma did not allow for any proper recovery process.