Chapter 5

Method

5.1 Introduction

This chapter presents a description of the methods used for the quantitative study.

The quantitative study consisted of 1,137 children aged between 10-18 years. A wide sample for this study was selected by clustering random groups representing most of the children in the Gaza Strip based on location, schools (e.g., elementary, preparatory, secondary), gender and age. This represents 0.081% of the child population of the Gaza Strip (1.4 million) (PCBS, 2006). Five new questionnaires were adapted as a result of conducting pilot studies. In addition, ethical issues such as informed consent, confidentiality and the consequences of participation were considered. This chapter also includes descriptions of the procedure to establish validity (e.g., referees validity, discriminatory analyses, concurrent validity) and reliability (e.g., internal consistency, split-half method, Cronbach's Alpha, test-retest) through applying pilot study. Finally, an explanation is given of the procedural method for the current study.

This research was conducted in unusual circumstances in which the collection of data might have influenced the quality of the study. However, the researcher did his best to carry out this study in an objective and neutral way. Collecting data was not easy because the field work was both dangerous and constantly interrupted by the conflict. Access to clashing areas was prevented by the occupying forces and eventually all the border crossings were closed.

Practical difficulties, like transport disruption, arising from the conflict presented the researcher with many challenges in order to complete the work on time. In addition, it was necessary to devote some time to translating it into English and doing proof-reading.

Collecting data from the Gaza Strip for the pilot study proved to be difficult and involved the researcher taking considerable risks. The areas that he visited for this research were areas of armed conflict. In order to carry out this research with a large sample of 1,138 children, the researcher had no choice but to visit these areas of armed conflict. Several attempts to return to Gaza over the past two years failed due to the unfortunate closure of the borders and the siege which meant that the only crossing points into and out of Gaza were via Egypt.

Furthermore, interviewing for the second part of this study had to be delegated to others when it became impossible to get entry to Gaza. The children interviewed were often scared and so their concentration became very hard to sustain. Recording data on computers was often interrupted by power cuts – a familiar event in Gaza.

5.2 Design

In the quantitative first stage, five scales were adapted as follows: Lie Scale (LS); Checklist of Traumatic Experiences (CTE); Symptoms of PTSD Scale (SPTSDS); Network of Psycho-Social Support (NPSS); and Personality Assessment Questionnaire (PAQ). All of these scales were tested prior to administration to ensure reliability and validity (including a pilot study) (See Appendix 3,5,6,7). Those scales are available in English and Arabic.

The researcher gave full training to 20 school counsellors about the rules of applying the questionnaires. The researcher administrated the application of the questionnaires by giving detailed information concerning the study and what was expected along with comprehensive instructions at the beginning of each session on how to complete the questionnaires. The participants completed the questionnaires under the direct supervision of the researcher and school counsellors. The participants were sorted into groups of 7-10 people. Participants completed the questionnaires in two sessions with a trained researcher and a school counsellor. Each session included seven to ten children and both sessions lasted approximately one hour (primary school children were given extra time). The data which was collected was encoded for computer analysis with SPSS for Windows software (release 10.0.0, SPSS, Chicago). The sample consisted of 1,137 children aged between 10-18 years, with clusters randomly selected from schools and classes in all areas of the Gaza Strip.

Ethical approval for the study was obtained from the ethical committee at the University of Hertfordshire and the ethical committee at the Palestinian Educational Ministry and UNRWA's Education Programme.

5.3 Participants

5.3.1 Recruitment

Potential participants were identified in schools and classes in random clusters which represented all areas of the Gaza Strip. Two or three days in advance, the researcher and the school counsellors' team gave the participants, their parents, and their head teacher detailed information sheets and consent forms about the questionnaires and purpose of the study, the reasons to be approached/involved, phases of study, administration of the questionnaires, and the possible risk or benefits of taking part. These information sheets were distributed to participants, their parents, and their head teacher in order to be read, signed, if they agreed, with their families. They also had to send them back to his/her teacher or head teacher. Then, the tester collected them through head teacher. After collection of information sheets and consents forms, the testers ensured that the participants clearly understood all steps in the applying of the questionnaires. As well as this, they were informed that all information obtained was confidential. Then they were asked to confirm verbally before starting to answer the questionnaires.

At the end of recruitment, the participants were given careful guidance and support during and after the completion of the first study.

The researcher administered the application of the questionnaires by giving detailed information concerning the study and what was expected along with comprehensive instructions at the beginning of each session on how to complete the questionnaires. The participants completed the questionnaires under the direct supervision of the researcher and school counsellors. The participants were sorted into groups of 7-10 people. Participants completed the questionnaires in two sessions with a trained researcher and a school counsellor. Each session included seven to ten children and both sessions lasted approximately one hour (primary school children were given extra time).

The collection of data occurred during a hard time of conflict between Palestinians and occupying forces (March 2006 till June 2006). The researcher was uncertain whether it would be possible to carry on this recruitment because of the circumstances on the ground getting worse. The situation was dangerously unstable. Therefore, data had to be collected before the

situation completely collapsed, which, it was expected, could happen at any moment. The help the process of collecting data rapidly, while school counsellors were distributing the questionnaires, the researcher trained another group of 10 qualified friends as volunteers to input data by SPSS. Ten PC computers from a charity in the area were borrowed for this reason. The school counsellors and data input group worked very hard together at the same time. The third trained group consisted of four people who acted as a supervising team to check up on the work of testers and data input groups.

5.3.2 Population

The population consisted of the Palestinian children under the age of 18, representing a ratio of 53.3% of the total Palestinian population in the Gaza Strip and West Bank (The Palestinian Central Bureau of Statistics, 2006). The number of Palestinian children in the Gaza Strip is 742,200 children.

5.3.3 Sample

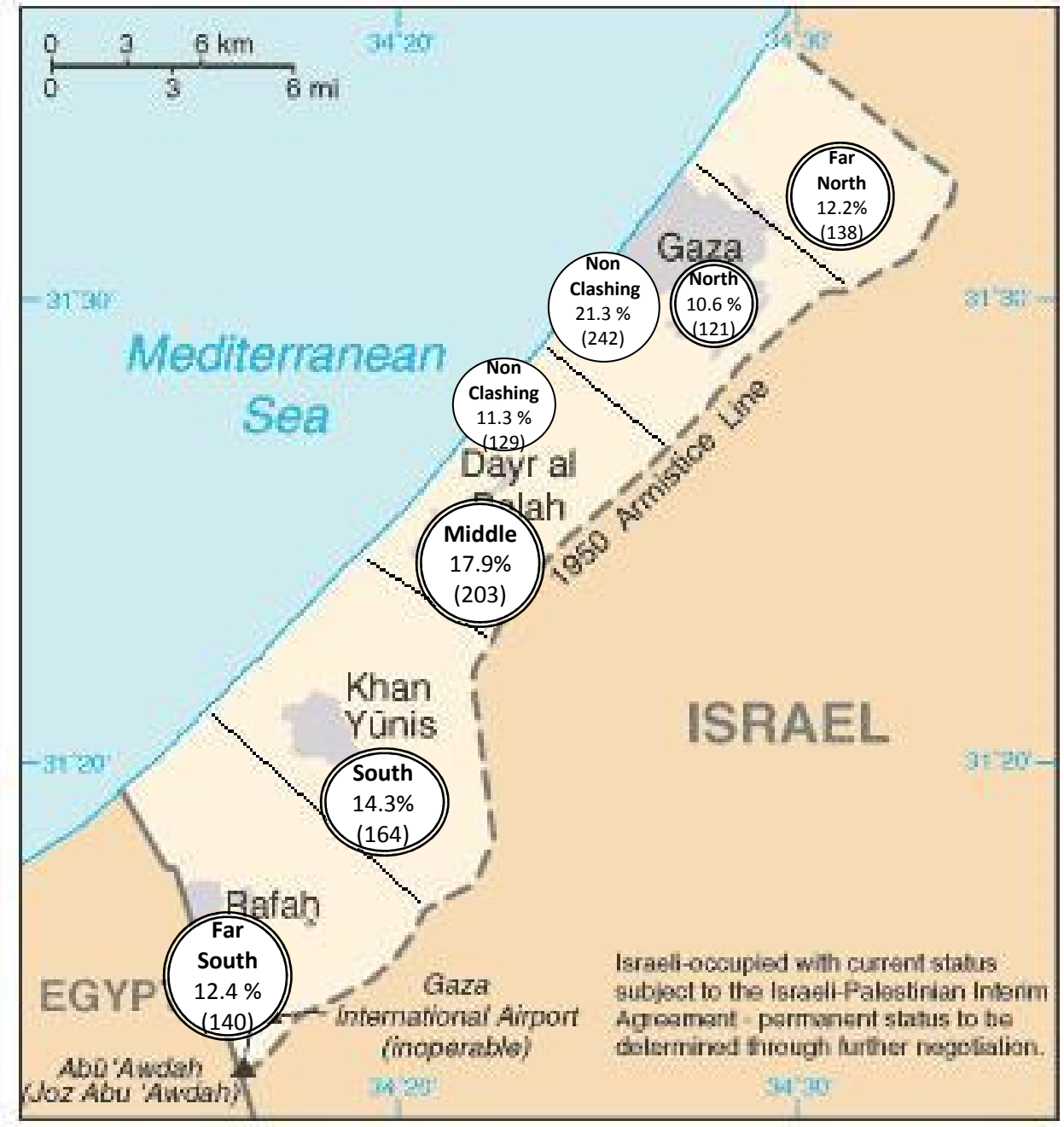
The sample consisted of 1,137 children aged between 10-18 years (mean age: 14.36; SD 1.79), with clusters randomly selected from schools and classes in all areas of the Gaza Strip. The calculating power for the sample of this study was very strong as (N: 800, Power=1.00, Effect Size=0.5, Alpha=0.049, Two-Tailed). In total, 43.8% of the sample were boys (n: 498), while 50.3% were girls (n: 639). Overall, 19.9% (n: 226) of the children were at primary schools (ages: 10-12 years), 47.5% (n: 540) were at the preparatory school (ages: 13-15 years), and 32.6% (n: 370) were at secondary school (ages: 16-18 years). This sample represents 0.081% of the overall child population in the Gaza Strip (1.4 million) (PCBS, 2006).

At the beginning, the initial number of participants was 1300. However, after applying the Lie Scale it was found that 163 participants had accumulated weak answers. As a result, responses from 163 participants were discounted because they did not reach a sufficient level of acceptability with regards to the Lie Scale. The participants came from two main types of living areas. The first type is ‘clashing’ areas where participants lived near the border or by one of the occupation’s settlements; the zones of clashing areas are located in the far north, north, middle, south, and far south of the Gaza Strip. These areas incorporated 766 children,

67.4% out of the total sample. The second type is 'non-clashing' areas where people are less exposed to violent conflict and traumatic events. The number of participants in this group was 371, 32.6% out of the overall sample. The participants were sorted into the following age groups: 10-12 years old [N: 229, 20.2%], 13-15 years old [N: 527, 46.4%] and 16-18 years old [N: 379, 33.4%]. More details about the participants are presented in Tables 3 & 4 below.

Table 3. Description of the sample by the main areas of Gaza Strip (N: 1,137)

Areas of Gaza Strip	Kind of the area	N	Total N	Percent	Total Percent	Percent of population
Rafah(Far south)	Clashing Areas	140	766	12.3	67.4%	
Khanynis(South)		164		14.4		
Mid Zone		203		17.9		
Zietoon & Shjaaia (North)		121		10.6		
Bait.hanon (Far north)		138		12.1		
Rimal (North)	Non Clashing Area	242	371	21.3	32.6	
Nusierat (Middle)		129		11.3		
Total	1137	1137	1137	100 %	100 %	0.081



N=1,137

Figure 1: Distribution map of percentage sample regards to the location of areas

Table 4. Description of the schools (N: 1,137)

Region	Kind of the area	Description *	Number of schools	Level of Class	Number of students	Percent %
Far south Zone	Clashing Areas	Elementary schools	2	Sixth	37	37
		Preparatory sch.	2	Eighth	60	60
		Secondary sch.	2	Eleventh	43	43
Total			**6**		**140**	**12.4**
South Zone	Clashing Areas	Elementary sch.	4	Sixth	45	3.9
		Preparatory sch.	4	Eighth	59	5.2
		Secondary sch.	4	Eleventh	60	4.3
Total			**12**		**164**	**14.3**
Middle Zone	Clashing Areas	Elementary sch.	1	Sixth	21	1.8
		Preparatory sch.	4	Eighth	137	12.1
		Secondary sch.	3	Eleventh	45	4
Total			**8**		**203**	**17.9**
North Zone	Clashing Areas	Elementary sch.	/	Sixth	-	-
		Preparatory sch	2	Eighth	57	5
		Secondary sch	2	Eleventh	64	5.6
Total			**4**		**121**	**10.6**
Far North Zone	Clashing Areas	Elementary sch.	2	Sixth	29	2.6
		Preparatory sch.	2	Eighth	27	2.4
		Secondary sch.	3	Eleventh	82	7.2
Total			**7**		**138**	**12.2**
Overall of clashing areas			**37**		**766**	**67.4**
Middle Zone	**Non Clashing Areas**	Elementary schools	2	Sixth	63	5.5
		Preparatory schools	2	Eighth	66	5.8
		Secondary schools	/	Eleventh	/	/
Total			**4**		**129**	**11.3**
North Zone	**Non Clashing Areas**	Elementary schools	3	Sixth	69	6.1
		Preparatory schools	3	Eighth	73	6.4
		Secondary schools	4	Eleventh	100	8.8
Total			**10**		**242**	**21.3**
Overall of non clashing areas			**14**		**371**	**32.6**
Summation			**51**		**1137**	**100 %**

* The elementary schools consist of six classes from first till sixth, the preparatory schools consist of three classes' seventh till ninth, and the secondary schools consist of three classes from tenth till twelfth.

5.4 Measures

5.4.1 Development of questionnaires

Five scales have been adapted and tested to ensure their validity and reliability: Lie Scale (LS); Checklist of Traumatic Experiences (CTE); Symptoms of PTSD Scale (SPTSDS); Network of Psycho-Social Support (NPSS); and Personality Assessment Questionnaire (PAQ). Moreover, the Arabic versions of the questionnaires were reviewed by seventeen researchers and experts in the fields of mental health and clinical psychology in Palestine and Egypt. Thereafter the questionnaires were translated into English and examined by a group of specialist referees in the UK**.** 90% of these referees accepted these questionnaires. The questionnaires have been adapted by the researcher and all scales were tested prior to administration to ensure reliability and validity (including a pilot study) (See Appendix 1–9). Validity was assessed by discriminatory and concurrent validity. Reliability was measured for internal consistency by Pearson correlation, split half method by Pearson correlation, Cronbach's Alpha, and test-retest by Pearson correlation.

The majority of lie scale items are validated by Minnesota Multiphasic Personality Inventory (MMPI), but the researcher adapted some items according to the ages of the participants. The CTE was also adapted from the Gaza Traumatic Events Checklist (Abu Hein *et al*, 1993) and the Trauma Questionnaire Scale (Qouta & El-Sarraj, 2004). SPTSDS has been adapted from the Child Post Traumatic Stress Reaction Index CPTSD-RI (Pynoos, Frederick, & Nader 1987; World Health Organization ICD-10, 1992*;* American Psychiatric Association DSM-IV, 1994; El-Khosondar, 2004; Hawajri, 2003). Network of psycho-social support questionnaire (NPSS) has been adapted from (Esmael, 2004; Shikhani, 2003; Al-Buhairy and Dimerdash, 1988; Ali, 2003; 2005; El-Kshishy, 2003; Brugha, 1995). The personality assessment questionnaire (PAQ) was created by Ronald Rohner in 1984 and it was translated and carried out in Egypt by Mamdoha Salama in 1988. The researcher has adapted PAQ (Rohner and Abdu-Khaleque, 2004) and made changes to make it appropriate to the Palestinian community, culture and the ages of the participants.

The purpose of adaptating those questionnaires for the Palestinian community was that the current researcher observed that the strategy for dealing with the effects of trauma was based on the terms of the third edition of Diagnostic and Statistical Manual of Mental Disorders

(DSM-III) (American Psychiatric Association, 1980) which introduced the major stressors, including concentration-camp experiences, torture, bombings and natural disaster. They subsumed previous diagnostic categories including post-torture syndrome and rape-trauma syndrome under PTSD. Therefore, this apparently contemporary illness discourse for survivors of political violence is neither altogether new, nor recent. What is perhaps 'new' is the extent to which it has been popularised within Western Culture, and the extent to which psychologists, psychiatrists and other mental-health workers have convinced international agencies, including the United Nations, of the importance of incorporating mental-health work within the rapid and long-term responses to war, natural disasters and other exceptionally difficult circumstances (Lykes, 2002).

This strategy for dealing with war and conflict trauma was applied in many parts of world to children and adults in situations of organised violence, is embedded in traditional Anglo-Saxon medical conceptions of illness, where selected symptoms and behavioural indices provide evidence of PTSD or other 'diseases'. Although this is not, on the surface, a 'bad' or problematic thing, many have suggested that the tendency to understand the effects of war, state-sponsored violence and structural oppression within the biomedical framework of PTSD deeply constrains the understandings available to those who seek to accompany survivors, medicalising and pathologising what are fundamentally political, economic, cultural and psychological phenomena (Lykes, 2002). For all of these reasons the current researcher sought to adapt and develop the relevant questionnaires which considered the cultural, economic, long-term of occupation and conflict, ideological commitment and political and psychological phenomena.

There are a number of reasons for developing and adapting existing questionnaires for this study:

a) Cusack *et al (*2002) believe that the future instruments for assessing potential PTSD, should consider the culture aspects in diagnosis and treatments.

b) The result from the World Trade Centre disaster indicate that many people did have significant symptomatology afterwards, such as insomnia, irritability, general, anxiety, vigilance, and impaired concentration (Amsel & Marshall, 2003). However, those problems

that people sought help for did not fit into the diagnostic categories of the DSM-IV-TR (Wheeler, 2007).

c) The effects of trauma are thought to be much broader than the diagnosis of PTSD and overlap with many other diagnostic categories. This is true for adults as well as children (Wheeler, 2007).

5.4.2 Piloting the questionnaires

After getting ethical approval, a pilot study was conducted with 120 children aged between 10-18 years (mean age: 13.96; SD 1.64), in the Gaza Strip. The sample of the pilot study consisted of three groups of 40 students from primary, preparatory and secondary school, with an equal number of males and females and equal for represented all areas of the Gaza Strip (clashing areas and none clashing areas). Potential participants for the pilot study were identified in schools and classes in random clusters.

Two or three days in advance, the researcher gave the participants, their parents, and their head teacher detailed information sheets and consents forms about the questionnaires and purpose of the study, the reasons to be approached/involved, phases of study, administration of the questionnaires, and the possible risk or benefits of taking part. These information sheets were distributed to participants, their parents, and their head teacher in order to be read and signed with their families, if they agreed. They were also required to send them back to his/her teacher or head teacher. Then, the researcher collected them through the head teacher. After collection of information sheets and consents forms, the testers ensured that the participants understood clearly all steps of applying the questionnaires. They were also informed that all information obtained was confidential and then they were asked to give verbal consent before starting to apply the questionnaires.

At the end of recruitment, during and after the completion of the pilot study, the participants were given careful guidance and support. However, those participants who had been tested in the pilot study were avoided from being used in the real study, because the questionnaires were familiar to them. In addition, the participants might have felt uninterested in being recruited twice.

The researcher administrated the application of the questionnaires by giving detailed information concerning the study and what is expected along with comprehensive instructions at the beginning of each session on how to complete the questionnaires. The participants completed the questionnaires under the direct supervision of the researcher. The participants were sorted into groups of 7-10 people. Participants completed the questionnaires in two sessions. Each session included seven to ten children and both sessions lasted approximately one hour (primary school children were given extra time).

The five adapted questionnaires have been tested to ensure their validity and reliability. Therefore, these questionnaires became validated to use in the real study.

5.5 Validity and Reliability

Five new scales have been adapted to ensure their validity and reliability through conducting a pilot study. The following five measures have been employed and developed by the current researcher such as (Lie Scale (LS), Checklist of Traumatic Experiences (CTE), Symptoms PTSD Scale (SPTSDS), Network of Psycho-Social Support (NPSS) and Personality Assessment Questionnaire (PAQ) by Ronald P. Rohner, 1968).

5.5.1 Lie Scale (LS)

The Lie Scale aims to identify lies or insincere answers by the participants. This scale consists of eight true or false type questions (See table 5).

Table 5. The items of lie scale: *

No	Item	Options	
1	I feel angry sometimes.	True(0)	False(1)
2	I never lie.	True(1)	False(0)
3	I have never been late to school or to work	True(1)	False(0)
4	I sometimes delay work today until tomorrow.	True(0)	False(1)
5	I have bad feelings when I am sick.	True(0)	False(1)
6	I prefer to win rather than lose when playing.	True(0)	False(1)
7	I like everybody that I know.	True(1)	False(0)
8	Sometimes I do bad things	True(0)	False(1)

* The underlined options (true or false) give a score of one, and options which are not underlined give a score of zero. Underlined options mean that the participant has given a false statement. Therefore, if the participant has achieved a high score, it could mean that he/she has lied or applied in careless way.

5.5.1.2 Validity of the Lie Scale

5.5.1.2.1 Referees' validity

The researcher has shown the questionnaire to some referees in Egypt and the UK. Those referees accepted the questionnaire and asked the researcher to change some items and to reduce the number of items.

5.5.1.2.2 Internal consistency

The correlations were significant between the items and the overall results of the questionnaire which ranged ($r= 0.19$ to 0.71, $p<0.05$).

5.5.1.2.3 Discriminatory analyses:

Discriminatory validity has been done through testing of the extreme group between the upper quarter scores, which equal 25% and the lower quarter scores of the lie scale which equal 25%. The pilot study found significant differences between the upper group [M: 5.14, SD: 0.69] and lower group [M: 28.67, SD: 0.45] in the lie scale, ($t = 28.67$, $p=0.001$, $N=116$) in favour of the upper group. A cut-off score was established by visually inspecting the distribution of total scale scores for children high and low for Lie Scale. A cut-off score equal to or greater than five. It means the Lie Scale can discriminate between the responses of the participants and any participant get four scores or more. Subsequently, if the participant has achieved four scores or more, it could mean that he/she has lied or replied in a careless way. Therefore, this scale has a good discriminatory validity.

5.5.1.2.4 Concurrent validity

The pilot study found through conducting the two tests which measured the same phenomenon on the sample. The period between conducting the first test and the second test was two weeks. The result showed a good correlation between lie scale (T1) [M: 2.07, SD: 1.17] and lie scale in MMPI (T2[**]) [M: 4.21, SD:2.36] [$r =.872$, $p< 0.01$, $N=50$]. Thus, the Lie Scale (T1[*]) has an acceptable concurrent validity. Also, Cronbach's Alpha of lie Scale (T1*) was

[*] T1 Indicate to the first test which is adapted through the current research (See table5).
[**] T2 indicates to the second test which is developed in Minnesota Multiphasic Personality Inventory (MMPI-2,2001)

.858 while Lie Scale (T2**) was .864. Thus, both questionnaires are appropriate to use in the current research.

5.5.1. 3 Reliability of the Lie Scale

5.5.1.3.1 Split-half method

The split-half method divides the items into two groups (N=116), the first is the odd group [M:18, SD.1.17] and the even group [M:1.03, SD. 0.85]. Thereafter, the correlation between both groups is ($r=0.41$, $p<0.01$).

5.5.1.3.2 Cronbach's Alpha-reliability

Cronbach's Alpha method calculates the reliability coefficients to whole items of the questionnaire (N=116, Alpha= 0.54, $p<0.001$) which is an acceptable reliability. Also, the results indicated that the Cronbach's Alpha scores if item deleted, were ranged from 0.41 to 0.59 ($p<0.001$), which are likely to be acceptable.

5.5.1.3.3 Test - retest reliability

The result shows that there was a significant and strong relationship between the first application [M: 2.79, SD: 1.78] and second application [M: 3.13, SD: 1.76] of the Lie Scale ($r=0.65$, $p=0.01$, N=47). The results indicated that the Lie Scale has good validity and reliability which means that it is suitable for use in the current study.

5.5.1.4 Norms of the Lie Scale

Calculation of the frequencies and cumulative percent classified the level of serious and honest response as follows: normal group: cumulative percent 0 to %62 = 0-2 scores, borderline group: cumulative percent %63 to %89 = 3 scores, and clinical group: cumulative percent > %90 = 5-8 scores.

The results found that 79% represents a normal response from those who answered in a positive way on the Lie Scale, 12% represents a borderline group, and 9% represents clinical groups of the participants who responded in negative way. Thus, the researcher deleted the responses of the clinical groups who were increasingly achieving high scores on the Lie Scale. As well as, the participants who did not be commitment of the instructions of recruiting the

questionnaire. The overall participants who took part of the first study were 1,300 children. The actual number of participants after conducting the lie scale was of 1,137 participants.

5.5.2 Checklist of Traumatic Experiences (CTE)

5.5.2.1 Description of CTE

The Checklist of Traumatic Experiences (CTE) was adapted in the current study which consisted of 34 items covering different types of the traumatic events that a Palestinian child may have been exposed to during the second Intifada (2000 till now) These events include beating, witnessing the beating, injury, night raid, humiliation, detention, breaking bones, the killing of family members, house demolition, shelling by tanks, artillery, or military planes. CTE includes five dimensions (e.g., direct individual experiences, direct material damage, indirect individual experiences, proximate, distant). This CTE is completed by the child or adolescent (age 10-18) by indicating "Yes" or "No". The content is specific to the military conflict in the area rather than general war events, for example children who experienced raids and different forms of violence rather that being in shelters or their homes being bombed.

The participants were required to indicate whether or not they had been exposed to each event. If they had been exposed to an event then they had to indicate how often on the scale of CTE. In this research the criteria for chronic traumatic experiences were that the participant had been exposed to a repeated trauma or to different trauma events more than three times during the second Intifada (2000-2005). The checklists of traumatic experiences catalogued the most traumatic experiences in Palestine to which the Palestinian child had a high probability of being exposed. Moreover the participants were required to mention the number of traumatic experiences that they encountered.

5.5.2.1.1 Type of traumatic events

The participants who were exposed to several traumatic events were grouped into five types as follows:

First**,** direct individual experience: This means that a child might be exposed to inhaling tear gas, injured by shelling (e.g. wounds, burns, or bone break) by tanks, artillery, or military planes, or shot with live ammunition or a rubber bullet. They might also be injured to the

degree that they lost consciousness, or were exposed to live fire but not injured from shelling by tanks, artillery, or military planes. Other non-injurious traumatic events might include beating, cordoning of the house or zone, threatening with possibility of not allowing access to home, arresting, attending a martyr's funeral, humiliation, the hearing of explosions or the sound bombs from occupying forces.

Second, direct material damage: This means that a child's house might be destroyed completely or partially by shelling or bulldozing, and the occupying forces have destroyed the lands or farms belonging to the child's family or neighbour.

Third, indirect individual experience: This means that a child might be exposed to hearing and seeing a destructive event itself, e.g. witnessing the destruction of someone's house by shelling from tanks, artillery, or military planes. They might also witness a martyr's funeral or the occupying forces not allowing an ambulance to reach a hospital or injured person.

Fourth, proximate experience: This means one of a child's close family members (father, mother, brother, or sister) has been killed or injured, sometimes killed in front of a child's eyes. The child might also be exposed to humiliation by occupying forces and some of a child's friends, neighbours, or relatives will have been killed, and injured by occupying forces.

Fifth, distant experience: This means that a child might have witnessed members of the public exposed to trauma (e.g., someone being killed in front of a child's eyes, witnessing of the occupying forces opening fire against people, witnessing people have being shelled and bombed, witnessing someone being beaten, injured, or arrested, witnessing trees and farms being destroyed by the occupying forces).

5.5.2.1.2 Purpose

The CTE covered the most severe traumatic events that a Palestinian child may have been exposed to during the second Intifada and the occupation period.

However, two scales were conducted in the Gaza Strip: the first was titled Gaza Traumatic Event Checklist (Abu Hein, Qouta, Thabet, & El Sarraj, 1993) and designed during the first Intifada (1987-1993) when the types of traumatic events were probably less severe than those in the second Intifada. It was the first checklist developed by the research department of the

Gaza Community Mental Health Program (G.C.M.H.P). However in the second Intifada, Palestinians were exposed to significant trauma such as shelling by tanks, artillery, or military planes. In addition, this scale was used to investigate the traumatic events among the Palestinian children in Gaza Strip by (Thabet, 1994). (See appendix 2). The second scale, Trauma Questionnaire Scale (TQS) (Qouta & El-Sarraj, 2004) developed during the second Intifada (2000 till now), has only focused on a small number of traumatic events while the current scale covers most of the traumatic events to which the children and adolescents might be exposed. (See appendix 3).

5.5.2.1.3 Population

Palestinian children and adolescent who applied to Checklist of Traumatic Experiences (CTE) in the Gaza Strip.

5.5.2.1.4 Scoring

The summation of traumatic events is scored according to the number of the traumatic events. The participants might indicate “Yes = 1”, “No = 0”. So, whenever the number of traumatic events goes up, it means that the exposure to traumatic events is high. Less than six traumatic events are rated as "F degree", 6-10 events are rated as "E degree", 11-15 events are rated as "D degree", 16-20 events are rated as "C degree", 21-25 events are rated as "B degree", and 26 or more as "A degree".

5.5.2.1.5 Time:

The participants needed between 15-35 minutes to complete the questionnaire.

5.5.2.2 Validity of CTE

5.5.2.2.1 Referees’ validity

The questionnaire has been revised by the referees in Egypt and UK. Those referees accept this questionnaire after the researcher considered their comments (See appendix 51).

5.5.2.2.2 Discriminatory validity by test of extreme group

The research found that there are significant differences between the upper group [M: 17.97, SD: 2.50] and lower groups [M: 7.03, SD: 2.74] in the checklist of traumatic experience scores [t = (15.85), p=0.000). It means the checklist of traumatic experiences is able to classify the responses of the participants. A cut-off score was established by visually inspecting the distribution of total scale scores for children high and low for Checklist of Traumatic Experiences (CTE). A cut-off score equal to or greater than three scores on CTE. The CTE can discriminate between the responses of the participants. Subsequently, if the participant has achieved a score of three or more, it could mean that he/she has been exposed to chronic traumatic experience within six months. Therefore, this scale has obvious discriminatory validity.

5.5.2.2.3 Internal consistency

The results show that there is a significant and strong correlation between the dimensions of the checklist of traumatic experiences with each other and with the overall score of the checklist of traumatic experiences, except for the correlation between the fourth dimension and the third dimension which was r = 0.152 as shown in Table 6.

Table 6. Matrix correlation between the summations of dimensions and the total score of the checklist of traumatic experiences (N:116)

Dimensions of the checklist of traumatic experiences	D1	D2	D3	D4	D5	Total score
Direct individual experiences (D1)	-	.454**	.303**	.422**	.568**	.802**
Indirect individual experiences (D2)		-	.346**	.284**	.648**	.777**
Proximate (D3)			-	.152	.291**	.502**
Direct material damage (D4)				-	.326**	.500**
Distant (D5)					-	.873**
Total score of checklist						-

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

5.5.2.2.4 Concurrent validity

The result found that there is a strong correlation between the checklist of traumatic experiences (T1*) [M: 14.45, SD: 3.88] and checklist of traumatic events (T2**) [M: 5.08, SD: 2.01] with Pearson correlation [r =.706, p< 0.01, N: 50]. It means that the checklist of traumatic experiences (T1) has good concurrent validity. Thus, it is convenient to carry out on the current research. Also, the Cronbach's Alpha of the checklist of traumatic experiences (T1) was 0.808 while the checklist of traumatic events (T2) was 0.628 which means that the T1 is more internally consistent than T2.

5.5.2.3 Reliability of the CTE

5.5.2.3.1 Split-half method

The split half method divided the items into two groups, the first was the odd group, and the second was the even group, and then applying a correlation between summations of both groups of the questionnaire. The result revealed that there are strong correlations between the odd group [M: 7.36, SD: 2.77] and the even group [M: 5.22, SD: 2.48] where (r = .639, p< 0.001, N: 116).

5.5.2.3.2 Cronbach's Alpha-reliability:

The Cronbach's Alpha method calculates the reliability coefficients to all items within each dimension and the overall score of all items. The result found that Cronbach's Alpha coefficient is 0.836, which is a sufficient level and it provides a good degree of reliability. The findings also indicated that the Cronbach's Alpha scores if items are deleted, ranged from 0.821 to 0.837, which are most likely acceptable.

* T1 indicates to the first test which is developed through the current research (See appendix 3).

** T2 indicates to the second test which is developed by Gaza Community Mental Health Program (GCMHP) (Qouta & El-Sarraj, 2004) (See appendix 2).

5.5.2.3.3 Test - retest of the CTE

The results found that there is a significant and a strong relationship between the first application [M: 11.38, SD: 4.85] and second application [M: 11.28, SD: 5.35] of CTE scale which were ($r = 0.65$, $p < 0.001$, $N = 47$). The results indicated that this scale has a good validity and reliability which makes it suitable for the current study.

5.5.2.4 Norms of the traumatic experiences

Based on the frequencies and cumulative percent, the researcher classified the norms of traumatic experiences as follows: normal group: cumulative percent 0 to %62 = 3 to 17 scores, borderline group: cumulative percent %63 to %89 = 18 to 22 scores, and clinical group: cumulative percent > %90 = 23 to 30 scores. Thus, the results found that 59% represents normal people who are exposed to traumatic experiences, 28.3% represents a borderline group, and 12.7% represents the clinical group.

5.5.3 Symptoms PTSD Scale (SPTSDS)

5.5.3.1 Description of SPTSDS:

The Symptoms of Post Traumatic Stress Disorders Scale was adapted in the current study in order to do assessment with children who have been exposed to chronic traumatic experiences and stressful life events in the Gaza Strip in the last five years of the Al-Aqsa Intifada. The scale consists of fifty one items which included five dimensions (somatic symptoms =8 items, cognitive symptoms=11 items, emotional symptoms=10 items, social behavioural problems =13 items, dysfunction academic performance=9 items).

This SPTSDS is completed by the child and adolescent themselves (age 10-18) by indicating how frequently these comments are true for them by marking the relevant column with a circle (please see the example below). See appendix 6 and the following example:

No	Item	Frequency				
*	I am thinking about my trauma and I can not stop it.	Always 4	often 3	sometimes 2	Rarely 1	never 0

The description for dimensions of SPTSDS and its validity resource are explained in Appendix 2 and 3. The scoring of this scale was as follows: [(*Always* equals four scores which

means that the symptom is present continuously approximately 5 or more times per week), (*Often* equals three scores which means that the symptom is present approximately 2 to 4 times per week), (*Sometimes* equals two scores which means that the symptom is present approximately once per week), (*Rarely* equals one score which means that the symptom is present once a month), (*Never* equals zero score which means the symptom is not present).

5.5.3.1.1 Purpose

Both systems, DSM-IV and ICD-10 agree that it is the re-experiencing symptoms that are the hallmark sign of PTSD and mark it out from most other psychopathology (Yule, Williams & Joseph, 1999). However, researchers have identified several similarities to symptoms of PTSD in DSM-IV, but are not limited to: child sexual abuse (e.g., McLeer *et al*., 1998), child physical abuse (Wolfe & McEachran, 1997), domestic violence (e.g., Astin, Ogland-Hand, Coleman, & Foy, 1995), accidental injury such as burns and motor vehicle accidents (e.g. Scotti, Beach, Northrop, Rode, & Forsyth, 1995), war-related events (e.g., Nader, Pynoos, Fairbanks, Al-Ajeel, & Al-Asfour, 1993), natural disasters (e.g., Pynoos *et al*., 1993), and technological disasters (Smith, North, McCool, & Shea, 1990). Additionally, witnesses to severe violent events (e.g., domestic violence, suicide, homicide) tend to report increased symptomatology relative to non-witnesses (e.g., Nader, Pynoos, Fairbanks, & Frederick, 1990; Pynoos & Nader, 1990).

Researchers have also reported other predominantly child-specific responses to potentially traumatic events, such as a regression of previously learned skills, withdrawn behaviour, and separation difficulties (see Perrin, Smith, & Yule, 2000; Scheeringa, Zeanah, Drell, & Larrieu, 1995; Vogel & Vernberg, 1993). However, these symptoms currently are not included among the diagnostic criteria for PTSD. Symptom patterns vary greatly, but common reactions include intrusive thoughts, anxiety, depression, difficulty concentrating, psychosomatic disturbances, and sleep disorders (Martinez & Richters, 1993).

The current researcher found there is gap between symptoms and functional disorders for the children who were exposed to severe and chronic traumatic events. Also, there are some symptoms which were not listed in (DSM-IV, 1994). Therefore, the researcher revised many scales in this field and developed the Children Post Traumatic Stress Reaction Index (PTSD-

RI) was created by *(*Pynoos, Frederick, & Nader, (1987).This scale was applied at the beginning of group therapy and three months after starting the therapy. This scale was translated into Arabic and validity and reliability testing was done and adapted to Arabic cultures.

The current researcher added more specific symptoms than existed in DSM-IV. Not all the symptoms of PTSD in DSM-IV for children or adolescents in war areas were covered properly.

In the current study, five questionnaires/scales were updated to be more related to culture, environment and research questions, which is not highly considered in the other studies. For example, the current researcher could not find clearly the functional disturbance problems (e.g. Social behavioural problems, dysfunction academic performance) in the other questionnaires of symptoms of PTSD which were conducted on the Palestinians children in the Gaza Strip such as the Child Post Traumatic Stress Reaction Index CPTSD-RI (Pynoos, Frederick, & Nader *et al*, 1987; El-Khosondar, 2004; Hawajri, 2003). DSM-IV, however, did mention specifically, in the diagnosis of PTSD, about the functional disturbance among patients such as achievement (job, school, university) and social life (World Health Organization ICD-10, 1992*;* American Psychiatric Association DSM-IV).

So, the current scale has been developed for chronic conditions and some items which are more specific depending on the criteria in (DSM-IV, 1994) and (ICD-10, 1992). The current scale *(SPTSDS)* covers the symptoms and functional disorders of PTSD. Also, the current researcher took some validated items according to criteria in (DSM-IV & ICD-10) which were validated as well as adapted to Arab Culture and particularly Palestinian children in Gaza Strip such as (Hawajri, 2003, El-Khosondar, 2004, Pynoos, *et al*., 1987).

The researcher also revised the related questionnaires of symptoms PTSD from different studies accordingly (Bernstein, & Fink, 1998; Turner & Lee, 1998; Armstrong *et al.,* 1997; Briere *et al*., 2001; Chemtob *et al*., 2002; Ford *et al*., 2000; Goodman *et al*.,1998; Saigh, 2004; Smith *et al*., 2003).

5.5.3.1.2 Population

Palestinian children and adolescents who applied to Symptoms PTSD Scale (SPTSDS) in the Gaza Strip.

5.5.3.1.3 Scoring

Based on the procedure of Pynoos *et al*. (1987) (See appendix 5), scoring norms were created. Items were rated from 0 (never) to 4 (always) as shown below:

Always (4) = the symptom is present continuously (approximately 5 or more times per week)

Often (3) = the symptom is present approximately 2 to 4 times per week.

Sometimes (2) = the symptom is present approximately once per week.

Rarely (1) = the symptom is present once a month.

Never (0) = the symptom is not present.

The scores of SPTSDS, 51 items, were classified from mild level of PTSD = [1*51, (=<51) scores], moderate level = [2*51, (min 52- max102)], severe level = [3* 51, (min103 - max153), very severe level = [4*51, (min154 – max 204)].

5.5.3.1.4 Time

The participants needed between 35-45 minutes to complete the questionnaire.

5.5.3.2 Validity of symptoms of PTSD

5.5.3.2.1 Referees' validity

The questionnaire has been revised by the referees in Egypt and UK. Those referees accept this questionnaire after the researcher considered their comments (See appendix 51).

5.5.3.2.2 Discriminatory analyses

It was found that there were significant differences between the upper group and the lower group in symptoms of PTSD scores (p=0.001) in favour of the upper group. This means that the symptoms listed in the PTSD scale have the ability to differentiate the level of responses in participants. A cut-off score was established by visually inspecting the distribution of total scale scores for children high and low for symptoms of PTSD Scale (SPTSDS). A cut-off score equal to or greater than one on SPTSDS means the SPTSDS can discriminate between the responses of the participants. Subsequently, if the participant has achieved a score of one

or more, it could mean that he/she suffered from a different level of PTSD according to the following criteria: the scores of SPTSDS, 51 items, were classified from mild level of PTSD = [1*51, (=<51) scores], moderate level = [2*51, (min 52- max102)], severe level = [3* 51, (min103 - max153), very severe level = [4*51, (min154 – max 204)]. Therefore, this scale has obvious discriminatory validity. Therefore, the questionnaire has an obvious discriminatory validity as shown in Table 7.

Table 7. Result of t-test to compare between upper quarters and lower quarter scores of SPTSDS (N: 116)

Variables	Upper group N=29		Lower group N=29		T	D.F	P	Level Sig.
	Mean	Std. Deviation	Mean	Std. Deviation				
Somatic symptoms	15.17	3.208	3.07	1.223	18.986	47	.000	**
Cognitive symptoms	42.31	6.268	13.79	3.717	21.073	47	.000	**
Emotional symptoms	24.66	3.003	6.86	2.628	24.008	47	.000	**
Social behavioural problems	27.55	4.793	4.62	2.227	23.367	47	.000	**
Academic behavioural problems	21.66	3.394	5.07	1.510	24.044	47	.000	**
Overall score	124.72	14.895	39.52	10.305	25.335	47	.000	**

** It is significant at the 0.001 level (2-tailed).

5.5.3.2.3 Internal consistency validity

The results showed that there is a significant and a strong correlation between the dimensions of symptoms PTSD with each other and with the overall score of symptoms PTSD (r=0.53 to 0.92, p<0.01) as shown below in Table 8.

Table 8. Matrix correlation between the summations of dimensions and the total score of SPTSDS (N: 116)

Dimensions of symptoms PTSD	D1	D2	D3	D4	D5	Total score
Somatic symptoms(D1)	-	.599**	.618**	.642**	.581**	.766**
Cognitive symptoms(D2)		-	.594**	.781**	.804**	.917**
Emotional symptoms (D3)			-	.594**	.526**	.763**
Social behavioural disorders(D4)				-	.815**	.912**
Dysfunction of academic Performance (D5)					-	.883**
Total score of symptoms PTSD						-

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

5.5.3.2.4 Concurrent Validity of SPTSDS

The result found that there is a significant and positive correlations between symptoms of PTSD Scale which adapted by the current researcher (T1[*]) [M: 78.83, SD: 29.83] and reactions of the traumatic events who developed by Hawajry (2003) (T2). [M: 25.30, SD: 8.75]; [r =.520, p< 0.01, N=50]. Also, the Cronbach's Alpha of symptoms of PTSD (T1*) was 0.917 while the reactions of the traumatic events (T2[**]) were 0.819 which means that the (T1*) is more internally consistent than (T2*). Thus, the symptoms of PTSD (T1*) have a good concurrent validity. Therefore, it is convenient to carry it out in the current research.

Additional findings found that there is a significant and good correlation between symptoms of PTSD Scale (TT1^) which were adapted by the current researcher [M: 78.83, SD: 29.83] and children post traumatic stress reaction Index (PTSD-RI) adapted by (Pynoos *et al*., 1987) (TT2^^) [M: 32.95, SD: 11.59]; [r =.427, p< 0.01, N=50]. Also, Cronbach's Alpha of Symptoms of PTSD Scale (TT1^) was .917 while PTSD-RI (TT2^^) was .831 which means that (TT1^) is more internally consistent than (TT2^). Thus, the symptoms of PTSD (TT1^) have a good concurrent validity. Therefore, it is convenient to carry it out on current research.

5.5.3.3 Reliability of SPTSDS:

5.5.3.3.1 Split-half method:

The results revealed that there were significant and strong correlations between the first part, and the second part [r = (.432) to (.856), p <0.01]. The reliability coefficient was created between each dimension of SPTSDS and between the overall score of questionnaire is shown in Table 9.

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[*] T1 indicates to the first test which is developed through the current research (See appendix 5).

[**] T2 indicates to the second test which is developed in Gaza by (Hawajry, 2003).

^ indicates to the first test which is developed through the current research (See appendix 5).

^^ T2 indicates to the second test (PTSD-RI) is an international scale which is developed by (Pynoos *et al.*, 1987). It was also conducted few times in the Palestinian territories (See appendix 4).

Table 9. Correlation between first part and second part of SPTSDS (N: 116)

SPTSDS	First Part (odd)		Second Part (Even)		Person Coefficient
	Mean	Std. Deviation	Mean	Std. Deviation	
Somatic symptoms(D1)	3.4397	2.68422	5.1034	3.05423	.467(**)
Cognitive symptoms(D2)	13.6207	5.76293	13.7241	6.48957	.625(**)
Emotional symptoms (D3)	7.7586	3.48318	7.8793	4.43338	.510(**)
Social behavioural disorders(D4)	7.6379	4.95439	7.4828	4.79580	.701(**)
Academic behavioural disorders(D5)	6.8276	4.13527	5.5086	3.64392	.432(**)
Total score of symptoms PTSD	43.6466	16.62698	35.3362	17.80276	.856(**)

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

5.5.3.3.2 Cronbach's Alpha-reliability:

The result found that Cronbach's Alpha coefficient is (0.917) which is of a sufficient level and it provided a good degree of reliability. Cronbach's Alpha scores if the items discounted are ranged from 0.697 to 0.820 which are likely acceptable (See Table 10).

Table 10. Results of Cronbach's Alpha-reliability coefficients to SPTSDS (N:116)

Description	**N of Items**	**Cronbach's Alpha**
Somatic symptoms(D1)	8	.715*
Cognitive symptoms(D2)	17	.827*
Emotional symptoms (D3)	10	.697*
Social behavioural disorders(D4)	14	.820*
Academic behavioural disorders(D5)	11	.730*
Overall score of symptoms PTSD	60	.917 *

* Cronbach's Alpha is acceptable at that level .

5.5.3.3.3 Test - retest the SPTSDS

The result found that there were significant and a strong relationship between the first application [M: 63.30, SD: 26.02] and second conduct of SPTSDS [M: 59:85, SD: 28.45] ($r = 0.641$, $N = 47$, $p < 0.001$). The results indicated good validity and reliability which make it appropriate for the current study.

5.5.3.4 Norms of SPTSDS

Based on the cumulative percent, the researcher has classified the norms of symptoms of traumatic experiences (normal people who were exposed to trauma) as follows: [(normal group: cumulative percent 0 to %62), (borderline group: cumulative percent %63 to %89), (clinical group: cumulative percent > %90)]. The results found that 62% represents the normal group who are exposed to traumatic experiences, 27.3% represents a borderline group, and 10.1% represent a clinical group (N=1,137).

5.5.4 Network of psycho-social support (NPSS)

5.5.4.1 Description of NPSS:

Psycho-Social Support can be provided by many people/organisations (e.g., family, friends, relatives, neighbours, schools, mosques, government, and NGOs). This means they may or may not help the children emotionally and physically to alleviate the negative affects of trauma and stresses that the participant experienced.

The network of psycho-social support (NPSS) questionnaire which was adapted by the current research, included 55 items which measured aspects of psychological and social support for the Palestinian children who are exposed daily to traumatic experiences in the Gaza Strip. This scale consists of seven dimensions (family =18, Government & NGOs = 4, friend = 5, school = 5, relatives and neighbours support = 6, spiritual and religious support = 9, national pride = 8). Each item indicates how frequently these comments are true for the child according to four scales ranging from always to never. See Appendix 6 and the following example:

I can talk frankly with family members about my troubles.	Always	Often	Sometimes	rarely	never
	4	3	2	1	0

5.5.4.1.1 Purpose

In this current research, the researcher has adapted the Network of Psycho-Social Support (NPSS) in order to make the questionnaire more relevant to the current study. Therefore, the researcher used the appropriate questionnaire for current research which was concerned with aspects of psycho-social support like family, Government & NGOs, friend, school, relatives and neighbours support, spiritual and religious support, and national pride.

The current researcher considered in adaptation process for NPSS on social support scale (Diab, 2006) which was validated recently in the Gaza Strip. The researcher also revised the related International and local questionnaires of psychological and social support from different studies which helps in developing NPSS such as (Esmael, 2004), (Shikhani, 2003), (Al-Buhairy & Dimerdash, 1988), (Ali, 2003, 2005), (El-Kshishy, Heba, 2003), (Brugha, 1995).

5.5.4.1.2 Population

Palestinian children and adolescents who applied to Network of psycho-social support (NPSS) in the Gaza Strip.

5.5.4.1.3 Scoring

The scoring of NPSS was as follows: [(*Always* takes four scores which means that the child receives very good support more than 90%), (*Often* takes three scores which means that the child receives good support 70-89%), (*Sometimes* takes two scores which means that the child receives moderate support 40-69%), (*Rarely* takes one score which means that the child received very little support less than 40%), (*Never* takes zero score which means the child receives no support). In this scale, the researcher used the same criteria of symptoms on the PTSD scale. Items are rated on a 0-4 scale. Scores will be classified as low support equal total score of 1-55], [moderate equal 56-110 scores], [high equal 111-165 scores], and [very high equal above 166 scores]. Whenever the degrees of the social psychological support questionnaire increase, that indicates the rise of the support level.

5.5.4.1.4 Time

The participants needed between 35-45 minutes to complete this questionnaire.

5.5.4.2 Validity of NPSS

5.5.4.2.1 Face validity (Referees' validity)

The questionnaire has been revised by the referees in Egypt and UK. Those referees accept this questionnaire after the researcher considered their comments (See appendix 51).

5.5.4.2.2 Discriminatory analyses

The research found that there are significant differences between upper group and lower group in network of psycho-social support scores [t = (13.90 – 26.59), N=116, p=0.000)]. It means that symptoms of PTSD scale have the ability to classify the responses of the participants by overall summation or individual dimensions. A cut-off score was established by visually inspecting the distribution of total scale scores for children high and low for Network of psycho-social support (NPSS). A cut-off score equal to or greater than one score on NPSS. Therefore, NPSS can discriminate between the responses of the participants. Subsequently, items are rated on a 0-4 scale. Scores will be classified as low support equal total score of 1-55], [moderate equal 56-110 scores], [high equal 111-165 scores], and [very high equal above 166 scores]. Whenever the degrees of the social psychological support questionnaire increase, that indicates the rise of the support level. Therefore, this questionnaire has an obvious discriminatory validity as shown in Table 11.

Table 11. Result of t. test to compare between upper quarters and lower quarter scores of NPSS (N: 116).

NPSS	Upper group N=29		Lower group N=29		T	D.F	P	Level Sig.
	Mean	Std. Deviation	Mean	Std. Deviation				
Family	66.86	2.031	35.55	9.140	18.008	56	.000	**
Governmental and NGOs	12.3448	1.54170	3.8276	1.77420	19.514	56	.000	**
Friend	17.76	1.215	7.07	1.791	26.596	56	.000	**
Relatives and neighbours	21.03	1.375	10.59	2.442	20.073	56	.000	**
Spiritual and religious	33.59	1.376	19.66	3.903	18.127	56	.000	**
National pride	31.76	.435	19.41	4.762	13.901	56	.000	**
School	15.5517	1.50205	5.0690	1.77142	24.306	56	.000	**
Overall score	188.17	8.481	111.83	20.052	18.884	56	.000	**

** It is significant at the 0.001 level (2-tailed).

5.5.4.2.3 Internal consistency

The results show that there is significant and strong correlation between the dimensions of network of psycho-social support (NPSS) with each other and with the overall score of NPSS (r=0.28 to 0.92, p<0.01) as shown below in table 12.

Table 12. Matrix correlation between the summations of dimensions and the total score of NPSS (N: 116)

Dimensions of NPSS	D1	D2	D3	D4	D5	D6	D7	Total score
Family (D1)	-	.576**	.611**	.716**	.583**	.606**	.433**	.924**
Governmental & NGOs (D2)		-	.477**	.474**	.396**	.340**	.477**	.670**
Friend (D3)			-	.655**	.375**	.531**	.358**	.735**
Relatives and neighbours (D4)				-	.441**	.584**	.422**	.808**
Spiritual and religious (D5)					-	.600**	.280**	.717**
National pride (D6)						-	.282**	.757**
School (D7)							-	.569**
Total score of NPSS								-

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

5.5.4.2.4 Concurrent validity of NPSS

The result found that there are good correlations between network of psycho-social support which was adapted by the current researcher (T1*) [M: 145.65, SD: 22.06] and social support scale which was developed by Diab (2006) (T2**). [M: 51.37, SD: 6.29]; [r =0.508, p< 0.01, N=50]. This means that the network of psycho-social support (T1*) has a good concurrent validity. Also, The Cronbach's Alpha of NPSS (T1*) was 0.890 while the Social Support Scale (T2**) was 0.711 which means that the (T1*) is more internally consistent than T2. Therefore, the NPSS has got an extensive concurrent validity because it has a good correlation degree between itself and other test.

* indicates to the first test which is developed through the current research.

** T2 indicates to the second test which is developed in Gaza Strip by (Diab, 2006)

5.5.4.3 Reliability of NPSS

5.5.4.3.1 Split-half method

The result revealed that there were significant and strong correlations between first group and the second group [r = (.524) to (.917), N=116, P<0.001] as shown below in Table 13.

Table 13. Correlation between first part and second part in NPSS (N: 116)

Network of NPSS	First part		Second part		Guttman Split-Half Coefficient
	N	Cronbach's Alpha	N	Cronbach's Alpha	
Family (D1)	9	.834	9	.877	.917
Governmental & NGOs (D2)	2	.313	2	.318	.585
Friend (D3)	2	.655	3	.647	.657
Relatives and neighbours (D4)	3	.519	3	.463	.569
Spiritual and religious (D5)	5	.581	4	.491	.649
National pride (D6)	4	.636	4	.776	.774
School (D7)	3	.652	2	.385	.524
Total score of NPSS	28	.870	27	.893	.863

5.5.4.3.2 Cronbach's Alpha-reliability:

The result found that Cronbach's Alpha coefficient of each dimension of NPSS ranged from [(0.539) to (0.922), N=116, p<0.001]. Cronbach's Alpha coefficient for all the items of NPSS is .931 as shown below in Table 14. Thus, high reliability was found.

Table 14. Results of Cronbach's Alpha-reliability coefficients to NPSS (N: 116)

Description	**N of Items**	**Cronbach's Alpha**
Family support (D1)	18	.922
Formal and informal organization support (D2)	4	.539
Friend support (D3)	5	.751
Relatives and neighbours support (D4)	6	.625
Spiritual and religious support (D5)	9	.694
National pride support (D6)	8	.811
School support (D7)	5	.661
Total score of NPSS	55	.931

* Cronbach's Alpha is acceptable at that level.

5.5.4.3.3 Test - retest of NPSS

It was found that there was a significant and strong correlation between the first and second conduct of the network psycho-social support questionnaire ($r=0.60$, $N=47$, $p<0.001$). It means that this questionnaire has a good reliability. Therefore, the questionnaire of NPSS is valid to apply in the current study.

5.5.5 Personality Assessment Questionnaire (PAQ)

5.5.5.1 Description of PAQ:

The personality assessment questionnaire (P.A.Q) was created by Ronald Rohner (1984) and it has been translated into Arabic and used in Egypt by Mamdoha Salama (1988).

P.A.Q is a self-report instrument consisting of 63 items on seven dimensions each of which contains nine items. PAQ was designed to assess an individual's perceptions of themselves with respect to seven behavioural dispositions: (1) hostility and aggression, including physical aggression, verbal aggression, passive aggression, and problems with the management of hostility and aggression, (2) dependency, (3) self-esteem, (4) self-adequacy, (5) emotional responsiveness, (6) emotional stability, and (7) worldview. P.A.Q consists of two versions in which the child version is designed to be used with children from about seven through twelve years of age. Adolescents and adults normally use the adult PAQ (Rohner and Abdu-Khaleque, 2004). See Appendix 7 and the following example:

Item	Frequency			
I get so angry I throw and break things.	Almost Always True 4	Sometimes True 3	Rarely True 2	Almost Never True 1

5.5.5.1.1 Translation and validity in the *Arab Community*

PAQ in its Arabic version was translated and adapted by Salama (1988). The Arabic version was used on a sample which consisted of 84 students, 41 males and 43 females from severeal departments of Sociology, Psychology and English Language in the Faculty of Arts. The ages of the participants ranged from 18 - 25 years, (age average: 21.52; standard deviation: 2.29). The reliability of adolescent and adult PAQ reliability coefficients (alphas) range from 0.59 to .79, with a median reliability of 0.68. The validity is done by internal consistency and factorial

analysis. The internal consistency was based on the correlation between each item in each subscale and the overall score dimension, and then the correlation between each total subscale score and overall score of PAQ was calculated. The hostility/aggression ranged [(.38 to .65), (.65) = p<0.01], the dependency ranged [(.36 to .70), (.50)= p<0.01], the negative self-esteem ranged [(.47 to .73), (.79)= p<0.01], the negative self-adequacy ranged [(.51 to .72), (.81) = p<0.01], the emotional unresponsiveness ranged [(.41 to .76), (.63)= p<0.01], the emotional instability ranged [(.50 to .69), (.75) = p<0.01], and the negative worldview ranged [(.60 to .80), (.75) = p<0.01].

The factorial analysis of PAQ found that there are five factors behind the questionnaire items of 63. The results indicated that the Arabic version of adolescent PAQ measures the same factors that are in the original English language version. Also, PAQ was not affected in a clear way by the language factor or the difference of culture.

5.5.5.1.2 Purpose

The current researcher found this questionnaire to be very useful and related to current research and covered the most required aspects of traits of personality among children and adolescents. The personality assessment questionnaire (P.A.Q) is created by Ronald Rohner (1984) and it is translated and carried out in Egypt by Salama (1989). Therefore, it is likely to be suitable in Arab cultures.

However, for the current research it was adapted for the following reasons:

A) There are two versions of PAQ, one for young children (aged 7 to 12) and other for adolescents and adults. So, the researcher found the second version more suitable for use in Palestinian society. Therefore, the current researcher consulted some experts and they agreed to carry out this version for adolescents and adults. Subsequently, the researcher made sure to adapt the vocabulary of the Arabic questionnaire version to make it simplified and suitable for the ages of children tested without changing the meaning of the items.

B) To make sure that PAQ issued in 1988 was still valid to be carried out in 2006.

C) The current researcher needed to modify some aspects of language so that the meaning remains the same but it would be clearer and easier to understand. Thus, the reliability and the

validity were applied by conducting a pilot study among 120 Palestinian children in Gaza Strip in order to make sure about the suitability of each scale in this instrument.

5.5.5.1.3 Population

Palestinian children and adolescent who applied to Personality Assessment Questionnaire (PAQ)in the Gaza Strip.

5.5.5.1.4 Scoring

PAQ is a self-report instrument consisting of 63 items on seven dimensions each of which contains nine items. The scores for each subscale are nine to 9-36 and for overall score 63-252. The PAQ spread is from a low of 63 which reveals excellent psychological adjustment, to a high of 252 which reveals serious psychological maladjustment.

5.5.5.1.5 Time

The participants needed between 35-45 minutes to complete the questionnaire.

5.5.5.2 Validity of PAQ

5.5.5.2.1 Referees' validity

The researcher considered the feedback of referees in Egypt and the UK.

5.5.5.2.2 Discriminatory analyses

The research found that there were strong and significant differences between the upper group and the lower group in PAQ scores [(t = 16.48 – 26.03), N=116, (p=0.000)]. This means that PAQ can classify the responses of the participants according to the PAQ. Therefore, this questionnaire has an obvious discriminatory validity as shown in Table 15. A cut-off score was established by visually inspecting the distribution of total scale scores for children high and low for the Personality Assessment Questionnaire (PAQ). A cut-off score for overall score was equal to or greater than 63 on PAQ, but a cut-off for score for each dimension was equal to or greater than nine.

Table 15. Result of t-test to compare between upper quarter and lower quarter scores of PAQ (N: 116).

Personality Assessment Questionnaire (PAQ)	Upper group N=29		Lower group N=29		T	D.F	P	Level Sig.
	Mean	Std. Deviation	Mean	Std. Deviation				
Hostility/Aggression (D1)	24.03	2.822	12.72	1.556	18.901	56	.000	***
Dependence (D2)	30.48	1.405	20.76	2.849	16.485	56	.000	***
Negative self-esteem (D3)	22.66	2.454	12.83	.928	20.174	56	.000	***
Negative self-adequacy (D4)	21.41	1.268	11.69	1.561	26.039	56	.000	***
Emotional unresponsiveness (D5)	22.21	1.346	13.72	1.771	20.536	56	.000	***
Emotional instability (D6)	27.07	2.103	17.07	1.580	20.473	56	.000	***
Negative worldview (D7)	27.14	2.973	14.55	1.882	19.264	56	.000	***
Overall score	160.38	9.623	116.45	7.994	18.911	56	.000	***

*** It is significant at the 0.001 level (2-tailed).

5.5.5.2.3 Internal consistency

The results show that there is a significant and strong correlation between the dimensions of PAQ with each other and with the overall score of PAQ ($r=0.18$ to 0.74, $p<0.05$) as shown below in Table 16.

Table 16. Matrix correlation between the summations of subscales score and the total score of PAQ (N: 116)

Dimensions of PAQ	D1	D2	D3	D4	D5	D6	D7	Total score
Hostility/Aggression (D1)	-	.089	.409**	.274**	.377**	.544**	.424**	.742**
Dependence (D2)		-	.025	.058	-.021	.146	-.020	.290**
Negative self-esteem (D3)			-	.596**	.445**	.335**	.287**	.702**
Negative self-adequacy (D4)				-	.511**	.222*	.186*	.630**
Emotional unresponsiveness (D5)					-	.178	.275**	.609**
Emotional instability (D6)						-	.452**	.682**
Negative worldview (D7)							-	.646**
Overall score								-

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

5.5.5.3 Reliability of PAQ

5.5.5.3.1 Split-half method

The results revealed that there were significant and strong correlations between the first part, and the second part [r = (0.501) to (0.838), N=116, P<0.001] which is acceptable.

Table 17. Correlation between first part and second part in PAQ (N: 116)

Dimensions of PAQ	first part		second part		Guttman Split-Half Coefficient
	N	Cronbach's Alpha	N	Cronbach's Alpha	
Hostility/Aggression (D1)	5	.236	4	.586	.719
Dependence (D2)	5	.563	4	.266	.598
Negative self-esteem (D3)	5	.514	4	.182	.633
Negative self-adequacy (D4)	5	.488	4	.203	.592
Emotional unresponsiveness (D5)	5	.425	4	.372	.501
Emotional instability (D6)	5	.512	4	.213	.532
Negative worldview (D7)	5	.615	4	.640	.791
Overall score	32	.777	31	.745	.838

5.5.5.3.2 Cronbach's Alpha-reliability

It was found that Cronbach's Alpha coefficient for each dimension ranged from 0.555 to 0.986(N=116, P<0.001). While, Cronbach's Alpha coefficient to all the items of the PAQ was (0.901) which is strong and acceptable (See Table 18).

Table 18. Results of Cronbach's Alpha-reliability coefficients to PAQ (N: 116).

Description	N of Items	Cronbach's Alpha
Hostility/Aggression (D1)	9	.799
Dependence (D2)	9	.624
Negative self-esteem (D3)	9	.728
Negative self-adequacy (D4)	9	.614
Emotional unresponsiveness (D5)	9	.555
Emotional instability (D6)	9	.671
Negative worldview (D7)	9	.861
Total score of PAQ	63	.901

5.5.5.3.3 Test - retest of PAQ

It was found that there were significant and strong correlations between the first and second conduct of the PAQ [r=(0.48) to (0.75), N=47 p> 0.01] as shown below in table 19. It means that this questionnaire has a good reliability.

Table 19. The result of correlation between the first and second conduct of PAQ (N: 47).

Dimensions of PAQ	First test		Retest		Person correlation Coefficient
	Mean	Std. Deviation	Mean	Std. Deviation	
Hostility/Aggression (D1)	17.72	4.920	18.43	4.422	.641(**)
Dependence (D2)	25.76	3.962	25.30	5.094	.485(**)
Negative self-esteem (D3)	16.67	3.528	17.51	4.048	.594(**)
Negative self-adequacy (D4)	15.93	3.617	17.36	4.204	.534(**)
Emotional unresponsiveness (D5)	16.76	3.240	18.81	3.048	.488(**)
Emotional instability (D6)	22.24	4.352	21.60	4.839	.518(**)
Negative worldview (D7)	20.07	4.730	20.32	5.905	.652(**)
Overall PAQ	135.15	18.322	139.32	18.595	.752(**)

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

5.5.5.4 Norms of PAQ

Based on the cumulative percent the norms of personality assessments were classified as follows: normal group: cumulative percent 0 to %62 = 92 to 154 scores, borderline group: cumulative percent %63 to %89 = 155 to 171 scores, clinical group: cumulative percent > %90 = 172 to 219 scores, N=1,137. It was revealed that 62% represents the normal group who have positive aspects of personality, 27.5% represents the borderline group, and 10.5% represents the clinical group.

5.6 Procedure

The researcher gave full training to 20 school counsellors about the rules of applying the questionnaires. Participants completed the questionnaires in two sessions with a trained researcher and a school counsellor. Each session included seven to ten children and both sessions lasted approximately one hour (primary school children were given extra time). All scales were tested prior to administration to ensure reliability and validity (including a pilot study). Those scales are available in English and Arabic.

Ethical approval for the study was obtained and the main ethical issues considered for this study such as informed consent, confidentially and consequence of participation.

The participants were identified in schools and classes in random clusters which represented all areas of the Gaza Strip. The researcher and the school counsellors' team recruited the participants throughout distributing, the information sheets and the questionnaires to 1,137

participants, their parents, and their head teacher in order to be read and signed if agreed with their families.

The testers ensured that the participants understood clearly all steps of applying the questionnaires. In addition, they were giving prior detailed information concerning the study and were informed that all obtained information would be confidential through asking them verbally before starting to apply the questionnaires.

The participants completed the questionnaires under the direct supervision of the researcher and school counsellors. The participants were sorted into groups of 7-10 people. Participants completed the questionnaires in two sessions with a trained researcher and a school counsellor. Each session included seven to ten children and both sessions lasted approximately one hour (primary school children were given extra time).

The collection of data occurred during a very hard time of conflict between Palestinians and the occupying forces (March 2006 till June 2006). The researcher was not quite sure whether it was be possible to carry on this recruitment because the circumstances on the ground were getting worse. The situation was extremely unstable. Therefore, we tried to finish our work and collect data before the situation reached a point of collapse. The process of rapidly collecting data continued while school counsellors were distributing the questionnaires. The researcher trained another group of 10 qualified friends as volunteers to input data by SPSS. Ten PC computers were borrowed from charities in the area for this purpose. The school counsellors and data input group worked together very hard at the same time. A third trained group formed a supervising team to check the work of testers and data input groups.

Finally, the participants were given careful guidance and support after the completion of each questionnaire the first study. In addition, the participants were debriefed and encouraged to relax through the following exercises:

Debriefing exercises:

- Free open drawing or an opportunity to talk about favourite activities and hobbies.
- One of them to discuss any personal issues in the group of participants and then receive some advice and support. For example, a participant might be asked what they do to reduce the feeling of stress and anger. Answers might include: take a shower, talk to parents or friends about the problem, go to the Gym and draw something.

b) Relaxation: the researcher gave them a short exercise for physical relaxation through inhaling and exhaling 6 times: the first three times they are to imagine the best things in their life and imagine they breathe them in, the other three times to focus on the stressful things and then try to get them out when they exhale, as if they are blowing them away.

5.7 Data analysis

The data which was collected was encoded for computer analysis with SPSS for Windows software (release 10.0.0, SPSS, Chicago). The data for each child was examined and outliers were verified before the data was combined with the main study data set for analysis. Pearson correlation and Cronbach's Alpha were used to test for reliability and validity. T-Test and mean outcomes were compared with use of Standard Deviations (SD), as appropriate to compare levels of trauma and chronic trauma for children.

5.8 Ethical issues

Ethical approval for the study was obtained from the ethical committee at University of Hertfordshire and the ethical committee at the Palestinian educational ministry and UNRWA's Education Programme.

The main ethical issues considered for this study were informed consent, confidentially and consequence of participation.

Firstly, to get informed consent, all the participants were informed of the overall purpose of the research project and the main features of the design before any data was collected. All participants, as well as their head teachers and parents, signed a consent form before completing questionnaires (Quantitative study).

Secondly, to guarantee confidentially in the first (quantitative) study, codes will be used instead of names for all participants in order to preserve their anonymity. Finally, to determine the consequences of participation, the first study used questionnaires to obtain data. Details of how to complete the questionnaires were given verbally and in writing. Furthermore, participants did not complete the questionnaires until the researcher was confident they fully understood the procedure. The participants in the current study did not become distressed

during the application of questionnaires. The researcher also provided some general guidance and support to all of the participants at the end of each session.