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Post Traumatic Stress Disorder and Resilience among Palestinian Adolescents in the Gaza Strip

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Dedication

I would like to dedicate my thesis

To my dear father, who supported and encouraged me. *"It's impossible to thank you adequately for everything you've done"*

To my beloved mother, the sun that brightens my way. *"Words can never express the deepest gratitude I have for you, and I cannot tell you how thankful I am for being always there for me"*

To my dear brothers and sisters, who encouraged and inspired me

And to everyone who contributed to make this study a reality

With respect

Issa M. Al-ibwaini

Declaration

I hereby declare that this thesis submitted for the degree of master in community mental health is my own work and effort, and it has not been submitted anywhere for a higher degree in any university or institution.

Signature:

Issa Mahmoud Al-ibwaini

Date:

Acknowledgment

All praise to Allah, the one to whom all dignity, honor, and glory are due, my lord and creator for the blessing and reconcile me in my scientific and practical life.

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Issa M. Al-ibwaini

Abstract

This study aimed to investigate posttraumatic stress disorder and resilience among adolescents in the Gaza Strip, especially after 51 day war on Gaza Strip. Descriptive analytic, cross sectional design was used. By using four applied tools as follow: socio-demographic characteristic questionnaire, Gaza traumatic events checklist, PTSD Scale for DSM-IV, and resilience scale for adolescents. The sample consisted of 408 students (209 boys and 199 girls) from the five governorates of Gaza Strip aged from 13-18 years old with mean age=15.49. The result showed that the total mean of traumatic experiences was 10.91 (sever experiences), and there was relationship between trauma and sex, boys statistically significantly reported severe traumatic events than girls. The result showed that the mean total scores of PTSD was 29.52, mean re-experiencing symptoms was 9.95, mean avoidance was 10.37, and mean arousal was 9.21. The results showed that 20.1% of adolescents showed no PTSD, 31.1% showed at least one criteria of PTSD (B or C or D), 29.7% showed partial PTSD, and 19.1% of adolescents showed full criteria of PTSD. The results showed that there were statistically significant differences in total PTSD, avoidance, and arousal symptoms according to place of residence in favor of adolescents from middle area. The study demonstrated that the mean of total resilience was 82.15, Personal skills 14.01, peer component 5.68, social skills 10.75, physical relationship with caregiver 5.19, psychological relationship with caregiver 15.51, spiritual beliefs 9.36, culture 14.87, and educational items 6.79. The results showed that boys expressed more social skills factors than girls, with no statistically significant differences in other factors according to sex. The results showed statistically significant differences in personal skills, peer component, and psychological relationship with caregiver scores according to place of residence in favor of adolescents from North Gaza. The results showed statistically significant differences in personal skills according to monthly income in favor of adolescents from families with monthly income from 2001 to 3000 NIS, and showed statistically significant differences in social skills in favor of adolescents from families with monthly income more than 3000 NIS. The results showed statistically significant differences in peer component, social skills according to number of siblings in favor of adolescents had 4 and less siblings, and showed statistically significant differences in psychological relationship with caregiver in favor of adolescents had 5 to 7 siblings. The results showed that there was significant correlation between total traumatic events reported by adolescents and total PTSD (r = 0.418), re-experiencing (r = 0.399), avoidance (r = 0.366), and arousal (r = 0.315). The results showed that total number of experienced traumatic events was negatively associated with personal skills (r = - 0.119) and peer component (r = - 0.099). While PTSD was negatively associated with total resilience (r = - 0.122), personal skills (r = - 0.136), social skills (r = - 0.125) and psychological relationship with caregiver (r = -0.134).

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Abbreviations

ANOVA	Analysis of Variables
APA	American Psychiatric Association
CBOs	Community Based Organizations
DSM	Diagnostic and Statistical Manual of mental disorders
GS	Gaza Strip
GTEC	Gaza Traumatic Events Checklist
MOH	Ministry of Health
NCPTSD	National Center for Post-Traumatic Stress Disorder
NCTSN	National Child Traumatic Stress Network
OCHA	Office for the Coordination of Humanitarian Affairs
PCBS	Palestinian Central Bureau of statistics
PCHR	Palestinian Center for Human Rights
PRC	Palestinian Red Crescent
PTSD	Post-Traumatic Stress Disorder
SPSS	Statistical Package for Social Sciences
UNRWA	United Nations Relief and Works Agency
UNSCO	United Nations Special Coordinator Office
WB	West Bank
WHO	World Health Organization

Chapter (1)
Introduction

1.1 Background

Armed conflicts have been associated with a wide array of negative impacts on the mental health of conflict-affected populations and seriously affect the social determinants of mental health and wellbeing, including family and community care networks; access to basic needs and education; morality and spirituality (Batniji et al., 2006). Although there is ample evidence demonstrating high resilience in terms of mental health among children and adolescents exposed to war, but a substantial minority of these children suffer from adverse psychological reactions (Cairns, 1996). Psychological reactions to physical threat and environmental instability include but are not limited to fear, anger, helplessness, isolation, irritability, nervousness, and confusion (Webster & Harris, 2009). Further, children and adolescents exposed to high levels of conflict and violence may be especially likely to develop diagnosable mental health problems such as posttraumatic stress disorder, depression, and anxiety (Thabet et al., 2008).

Post-Traumatic Stress Disorder (PTSD) is a reactive psychopathological response to a traumatic event, and those with PTSD are more likely to report poorer life satisfaction and physical health problems, experience depression and other psychological, behavioral, and emotional problems (Schnurr & Greenm 2004). These findings suggest that PTSD constitutes a major problem for the public health of this nation and the world, and highlight the importance of prevention and intervention efforts. However, exposure to trauma does not necessarily lead to impairment and the development of psychopathology in all exposed victims, depends on their level of resilience (Yehuda et al., 2006).

Resilience is most often considered a personality characteristic that mitigates the negative effects of stress and promotes adaptation. It has been defined as the ability to successfully cope with change or misfortune (Wagnild & Young, 1993). Resilience is made of ordinary rather than extraordinary outlook on human development and adaptation, as well as direction for policy and practice aimed at enhancing the development of children at risk for problems and psychopathology (Masten, 2001).

According to Palestinian Central Bureau of Statistics (2010), there are direct and indirect exposure to violence is common among children and adolescents in Palestine, and especially among those living in the Gaza Strip. Gaza Strip has been badly affected by wars and conflicts over the last many years especially in 2008, 2012, and 2014. Many reports and statistics demonstrated that the conflict in 2014 was the most sever and destructive one on all aspects of life and population in Gaza Strip. This study concerns with traumatic events experience and it possibility to develop PTSD among adolescents in Gaza Strip, and how resilient they are after recurrent conflicts.

1.2 Research problem

Exposure to traumatic events can result in behavioral and emotional problems in children and adolescents (Dimitry, 2011). In Gaza Strip, at the end of December 2008, more than 1420 Palestinians, including 446 children, were killed after a military operation on Gaza Strip. At least 4000 houses were totally destroyed and 16000 partially damaged (Palestinian Red Crescent, 2008). Another war on 14 November 2012 with the killing of Ahmed Jabari, chief of the Gaza military wing of Hamas, another conflict developed, which lasted for 8 days, in which 158 Palestinians were killed , 102 of them were civilians, including 27 children (Palestinian Centre for Human Rights, 2012). The last war on Gaza Strip was in August 2014, it is considered the most destructive one in comparison with two previous wars, which lasted for 51 day. According to Office for the Coordination of Humanitarian Affairs (2014), this war caused killing 2,145 Palestinians, 578 of them were children and adolescents, about 11,000 others had been wounded, more than 500,000 Palestinians internally displaced at the height of the hostilities, Over 100,000 still displaced, and approximately 18,000 housing units destroyed or severely damaged.

A growing number of studies have specifically focused on the traumatic effects of wars and conflicts on people live in Gaza Strip (e.g. Thabet, 2014; Altawil et al., 2008; Afana et al., 2010; El-Sarraj et al., 2011). These studies showed that people who lived in conflicts (especially children and adolescents) had been exposed and experienced many traumatic events such as witnessing killing, watching mutilated bodies, witnessing bombardment and destruction of big buildings, and many other traumatic events. The results of these studies demonstrated great rates of psychopathology development such as chronic PTSD and other behavioral and emotional problems. This study focused on the relationship between trauma, PTSD and resilience among adolescents in Gaza Strip after the 51 day war on Gaza.

1.3 Justification

Military trauma and stressful life-events in early adolescence formed a risk for PTSD and decreased satisfaction with the quality of life in adolescence (Qouta, et al., 2007). The 51 day war left a heavy destruction in Gaza Strip. This war was different from last two wars in duration and severity. It is considered the longest and the most destructive one, and the first war caused destruction of large towers, and whole neighborhoods. During this war, many families from alnassr area evacuated their homes and escaped to Al-Nassr pediatric hospital (where the researcher work) after they received warning call from Israeli army to leave their homes. When we received these families and provided them with emergency services, we witnessed clear symptoms of panic, overwhelming, anxiety and fear on these families members especially children and adolescents. Many other children and adolescents were injured due to conflict and came to this hospital seeking help, they were excessively crying and shouting, strongly hanging their parents, and afraid of death. The importance of this study arise from such circumstances during the conflict, where most of families were exposed to many traumatic events. The significance of this study that it focuses on the psychological effect in adolescents after conflict, more specifically to investigate PTSD symptoms among them, and how resilient they are after 51 day of war.

1.4 Study objectives

1.4.1 General objective

The aim of this study is to investigate PTSD and resilience among adolescents exposed to trauma due to 51 day war on Gaza.

1.4.2 Specific objectives

1. To assess the impact of traumatic experiences on adolescents in Gaza Strip.
2. To find out the prevalence of PTSD among adolescents in Gaza Strip.
3. To explore the psychological resilience factors among adolescents in Gaza Strip.
4. To find out the relationship between trauma, PTSD, and resilience of Gaza' adolescents.
5. Make some recommendation for policy makers.

1.5 Study questions

1. What is the impact of traumatic experiences on adolescents in Gaza Strip?
2. What is the prevalence of PTSD among adolescents in Gaza Strip?
3. Had the trauma impact on resilience factors among the Palestinian adolescents?

4. What are the psychological resilience factors among adolescents in Gaza Strip?
5. Is there relationship between trauma and PTSD?
6. Is there relationship between trauma, PTSD and resilience of adolescents in Gaza Strip?

1.6 Definitions of variables

1.6.1 Trauma

Psychological trauma is the unique individual experience of an event or enduring conditions, in which the individual's ability to integrate his/her emotional experience is overwhelmed or the individual experiences (subjectively) a threat to life, bodily integrity, or sanity (Pearlman & Saakvitne, 1995).

1.6.2 Post-traumatic stress disorder

Post-traumatic stress disorder is an anxiety problem that develops in some people after extremely traumatic events, such as combat, crime, an accident or natural disaster.

1.6.3 Resilience

Resilience is one of the essential components to lead a happy and healthy life, according to Ahanger (2010) it refers to successful adaptation of an individual despite risk, acute stressors and chronic adversities. Therefore, in his opinion resilient people are more determined and they can enhance their efforts especially under difficult situations.

1.6.4 Adolescence

Adolescence is difficult to define in precise terms, for several reasons. First, it is widely acknowledged that each individual experiences this period differently depending on her or his physical, emotional and cognitive maturation as well as other contingencies. It is the period in life when most of a person's biological, cognitive, psychological, and social characteristics are changing in an interrelated manner from what is considered childlike to what is considered adult like (Lerner et al, 2010). United Nations defined the adolescents as individuals aged from 10 to 19 years. In this study the researcher defines the adolescents as individuals aged from 13 to 18 years.

1.7 Context of the study

This study was conducted in Gaza Strip, which is a part of Palestine. Therefore, here are some information about the demographic, socioeconomic, and environmental context.

1.7.1 Demographic context

The entire area of historical Palestine is about 27,000 Km2, Palatine stretches from Ras Al-Nakoura in the north to Rafah in the south. Palestine is boarded by Lebanon in the north, the Gulf of Aqaba in the south, Syria and Jordan in the east and by Egypt and Mediterranean Sea in the west. Palestine was places under British mandate, finished by Israel establishment in 1948 in implementing the Balfour Declaration in 1917 to providing a homeland for Jews, the result was uprooted most of Palestinian from their cities, towns, and Villages and migrate to West bank, Gaza strip, Jordan, Lebanon, Syria, and others countries. Now Palestine is limited to two geographically separated area, Gaza Strip (GS), and West Bank (WB), total both areas is 6020 km2, Which represents 22% of historical Palestine area (MOH, 2006).

According to Palestinian Central Bureau of statistics (2014), the estimated number of population in Palestinian territories is 4.6 million: 2.8 million in the West Bank and 1.8 million in Gaza Strip, 909,439 males and 880,571 females. Population density in Gaza Strip is very high compared with the density in West Bank and the neighboring countries. Density rate is about 4,904 inhabitants per one square kilometer in Gaza Strip, and about 500 inhabitants per one square kilometer in West Bank (PCBS, 2014).

1.7.2 Socioeconomic context

Gaza is an urban economy, heavily reliant on intensive trade, communication and movement of people. The area has been essentially isolated since 2005, meaning that, in the longer term, its economy is fundamentally unviable under present circumstances. People of Gaza remain worse off than they were in the 1990s, despite increases in real gross domestic product (GDP) per capita over the past three years (United Nations Special Coordinator Office, 2012). People in Gaza are complaining of a high unemployment rate, socio-economic deprivation.

According to the latest World Bank economic update (2015), Gaza's unemployment rate - at 43.9 per cent - is now the highest in the world. Even more alarming is the situation of youth unemployment which soared to more than 60 percent by the end of 2014. According to the report, Gaza's GDP would have been about four times higher than it currently is if it weren't for the conflicts and multiple restrictions. It also considers that the Israeli imposed blockade, in place since 2007, has resulted in a 50 per cent decrease of Gaza's GDP. The report further states that in 2014 the average monthly salary in Gaza amounted to US$ 174; with a poverty rate of 39 per cent, an 11 per cent increase from 2013.

1.7.3 Environmental context

Gaza Strip is a narrow, elongated piece of land bordering the Mediterranean Sea between Israel and Egypt, and covers 365 km2. Gaza Strip has been under an Israeli blockade for over seven years, with access and movement of goods and people in and out of Gaza severily restricted and at times forced to a complete halt. Since 2006, Palestinians in Gaza face regular power cuts as provision of electricity remains well below demand. The cuts affect private business and homes, health services, waste water treatment plants, and schools. They also suffering from overcrowding, short life expectancy, increasing infringements of their economic, social, civil, political, security and human rights and on their freedom of movement. Gaza's health system suffers from chronic shortages in medicine, medical supplies and equipment; also the water and wastewater situation in Gaza is critical (OCHA, 2014).

1.7.4 Mental health system

Mental health system reform is urgently needed in Gaza to respond to increasing mental health consequences of conflict. The World Health Organization (WHO) estimates that about 360,000 people—20 per cent of Gaza's population—are suffering a range of mental health challenges after the recent conflict. (OCHA, 2014).

Saymah et al. (2015) aimed in their study to provide new knowledge on current mental health policy and legislation, and services and resource use, in Gaza to identify quality gaps and areas for urgent intervention. They found that Gaza's mental health policy suggests some positive steps toward reform such as supporting deinstitutionalisation of mental health services. The decrease in the number of beds in the psychiatric hospital and the progressive transition of mental healthcare toward more community based care are indicative of deinstitutionalisation. However, mental health legislation in support of deinstitutionalisation in Gaza is lacking. The integration of mental health into primary health care and general hospitals has not been fully achieved. Mental health in Gaza is underfunded, human rights protection of service users is absent, and human resources, service user advocacy, and mental health training are limited (Saymah et al., 2015).

Chapter (2)

Literature Review

Part I: Theoretical framework

2.1 Introduction

In this chapter the researcher will talk about theoretical framework and literature review. The first part will present a review about the concepts of trauma, PTSD, and resilience, by examining the early use of these terms in research and theories that interpreted these concepts, and factors associated with them. The second part will present the previous studies about the three concepts (trauma, PTSD, and resilience), and the relationship between these concepts.

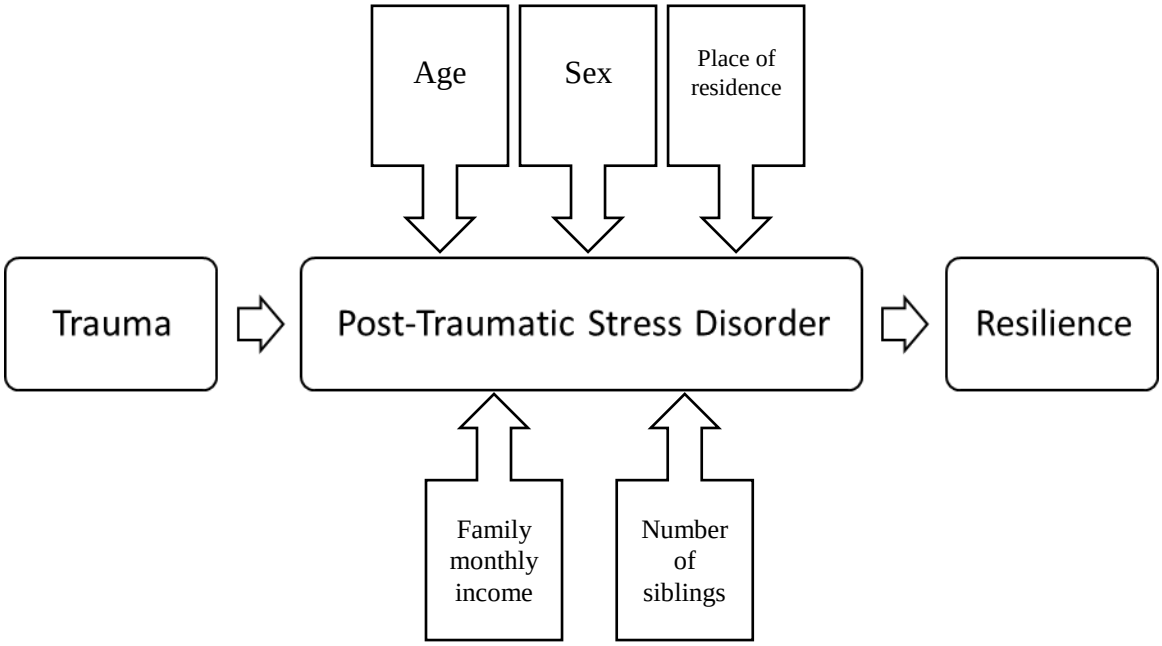

Figure 2.1: conceptual framework diagram-self developed.

This conceptual framework was developed by the researcher to portray the relationship between the independent variable "trauma" and the dependent variable PTSD, resilience as outcome to exposure to traumatic event.

The researcher explains that there are three major elements in that process: the first is the trauma in which the adolescent emotionally response to a terrible event and experience, witness, threatened death or serious injury, or a threat to the physical integrity of self or others. The second is the PTSD which is a development of characteristic symptoms following exposure to an extreme traumatic stressor and the symptoms of hyper arousal, avoidance, and re-experiencing the trauma appeared and continued for more than one month. The third element is the resilience which means how the individual able to maintain relatively stable mental function throughout the course of events, and the ability to function competently in the face of adversity or stress.

Level of exposure has most consistently been associated with later problems including PTSD following various types of trauma (Pine & Cohen, 2002). In the researcher own opinion the model of traumatic events experience and possibility to develop PTSD is useful paradigms by which to examine the resilience among the adolescents: How is it that adolescent recover and "spring back" from psychological trauma? And what are the psychological and resilience factors that are associated with that process?

The researcher also investigated many factors that may affect the previous process and play an important role in response to traumatic events and in developing PTSD and resilience factors. These socio-demographic factors include age, sex, place of residence, monthly income, and number of siblings.

Age and sex are very important factors and most of researchers take these two important variables into account in their studies. The researcher believes that there are great physical, cognitive, and emotional differences between males and females, also there are ability differences according to age group which were selected. These inevitable differences make age and sex variables deserved to be considered and studied.

The place of residence factor included to be studied despite the fact that Gaza is a small piece of land and many people may find it is not important to study that variable and there is no difference between adolescents live in Gaza Strip according to their residence. However there are many studies conducted in Gaza which found differences among people according to their place of residence, so the researcher considered that and studied that factor.

Gaza's people complain of bad economic status, as we have mentioned in the chapter one, there are a high unemployment and poverty rates in the Gaza and these dangerous rates are increasing with time. The researcher thinks that income level is so sensitive and important factor and certainly it would interfere and affect mental health status and resilience level among adolescents. Those from families with a high income level will be surely different from those with low income level, so the researcher consider that factor to study. Finally the researcher studied the sibling number factor and if it play a role in PTSD or resilience development among adolescents after 51 day of war on Gaza.

2.2 Trauma

2.2.1 Trauma definition

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000) definition of traumatic stressors includes experiencing, witnessing, threatened death or serious injury, or a threat to the physical integrity of self or others. It also defined as an emotional response to a terrible event like an accident, rape or natural disaster. Immediately after the event, shock and denial are typical. Longer term reactions include unpredictable emotions, flashbacks, strained relationships and even physical symptoms like headaches or nausea. While these feelings are normal, some people have difficulty moving on with their lives. Psychological trauma is the unique individual experience of an event or enduring conditions, in which the individual's ability to integrate his/her emotional experience is overwhelmed, or the individual experiences (subjectively) a threat to life, bodily integrity, or sanity. (Pearlman & Saakvitne, 1995)

2.2.2 History of trauma theory

The relationship between trauma and mental illness was first investigated by the neurologist Jean Martin Charcot, a French physician who was working with traumatized women in the Salpetriere hospital. During the late 19th century, a major focus of Charcot's study was hysteria, a disorder commonly diagnosed in women. Hysterical symptoms were characterized by sudden paralysis, amnesia, sensory loss, and convulsions. Women comprised the vast majority of patients with hysteria, and at the time, such symptoms were thought to originate in the uterus. Until Charcot, the common treatment for hysteria was hysterectomy. Charcot was the first to understand that the origin of hysterical symptoms was not physiological but rather psychological in nature, although he was not interested in the inner lives of his female patients. He noted that traumatic events could induce a

hypnotic state in his patients and was the first to "describe both the problems of suggestibility in these patients, and the fact that hysterical attacks are dissociative problems—the results of having endured unbearable experiences" (Van der Kolk, Weisaeth, & Van der Hart, 1996). In Salpetriere, young women who suffered violence, rape, and sexual abuse found safety and shelter, and Charcot presented his theory to large audiences through live demonstrations in which patients were hypnotized and then helped to remember their trauma, a process that culminated in the abrogation of their symptoms (Herman, 1992).

2.2.3 Traumatic event

Most everyone has been through a stressful event in his or her life. When the event, or series of events, causes a lot of stress, it is called a traumatic event. Traumatic events are marked by a sense of horror, helplessness, serious injury, or the threat of serious injury or death. Traumatic events affect survivors, rescue workers, and the friends and relatives of victims who have been involved. They may also have an impact on people who have seen the event either firsthand or on television. Traumatic event is one in which a person experiences or witnesses actual or threatened death or serious injury, or a threat to the physical integrity of self or others (Wethington et al, 2008).

2.2.4 Trauma Victims

There are two types of trauma victims:

- Primary Trauma Victim: Individuals who are directly involved in the trauma.
- Secondary Victim: Individuals who are directly involved in the trauma. These include relatives and loved ones, members of the immediate community or surrounding area, and of course may include relief workers and persons who respond to the incident, and people who experience the trauma through the media (Dayton, 2000).

2.2.5 Types of trauma

- Simple: this type of trauma is usually caused by a single incident. The incident is usually one that involves life threatening events and/or events that have the potential to cause serious injury. Examples: car accident, fire cyclone, and shooting.

- Complex: this type of trauma is usually longer in duration and involves multiple incidents. The incidents are usually ones that involve interpersonal violence or violation and as a result they are almost always associated with a sense of shame and stigma. Examples: all forms of child abuse, bullying, experiences of war, and imprisonment (Meichenbaum, 1994).

2.2.6 Types of traumatic events

There are many types of traumatic events potentially experienced by those seeking mental health services. According to the National Child Traumatic Stress Network (2008), there are 14 different types of trauma:

Sexual abuse or assault

- NOTE: If perpetrator is in a caretaking role for youth, event is classified as sexual abuse. Sexual contact/exposure by others (i.e., non-caretakers) is classified as sexual assault/rape.
- Actual or attempted sexual contact (e.g., fondling; genital contact; penetration, etc.) and/or exposure to age-inappropriate sexual material or environments (e.g., print, internet or broadcast pornography; witnessing of adult sexual activity) by an adult to a minor child.
- Sexual exploitation of a minor child by an adult for the sexual gratification or financial benefit of the perpetrator (e.g., prostitution; pornography; orchestration of sexual contact between two or more minor children).
- Unwanted or coercive sexual contact or exposure between two or more minors.

Physical abuse or assault

- NOTE: If perpetrator is in a caretaking role for youth, event is classified as physical abuse. Sexual contact/exposure by others (i.e., non-caretakers) is classified as physical assault.
- Actual or attempted infliction of physical pain (e.g., stabbings; bruising; burns; suffocation) by an adult, another child, or group of children to a minor child with or without use of an object or weapon and including use of severe corporeal punishment.

- Does not include rough and tumble play or developmentally normative fighting between siblings or peers of similar age and physical capacity (e.g., assault of a physically disabled child by a non-disabled same-aged peer would be included in this category of trauma exposure).

Emotional abuse/psychological maltreatment

- Acts of commission against a minor child, other than physical or sexual abuse, that caused or could have caused conduct, cognitive, affective or other mental disturbance. These acts include:

a) Verbal abuse (e.g., insults; debasement; threats of violence)
b) Emotional abuse (e.g., bullying; terrorizing; coercive control)
c) Excessive demands on a child's performance (e.g., scholastic; athletic; musical; pageantry) that may lead to negative self-image and disturbed behavior.

- Acts of omission against a minor child that caused or could have caused conduct, cognitive, affective or other mental disturbance. These include:

a) Emotional neglect (e.g., shunning; withdrawal of love)
b) Intentional social deprivation (e.g., isolation; enforced separation from a parent, caregiver or other close family member)

Neglect

- Failure by the child victim's caretaker(s) to provide needed, age-appropriate care although financially able to do so, or offered financial or other means to do so.
- Includes:

a) Physical neglect (e.g., deprivation of food, clothing, shelter)
b) Medical neglect (e.g., failure to provide child victim with access to needed medical or mental health treatments and services; failure to consistently disperse or administer prescribed medications or treatments (e.g., insulin shots)
c) Educational neglect (e.g., withholding child victim from school; failure to attend to special educational needs; truancy)

Serious accident or illness/medical procedure

- Unintentional injury or accident such as car accident, house fire, serious playground injury, or accidental fall down stairs (accident caused intentionally by another would be classified as Physical Abuse or Assault).
- Having a physical illness or experiencing medical procedures that are extremely painful and/or life threatening. Examples of illnesses include AIDS or cancer. Medical procedures include changing burn dressings or undergoing chemotherapy, etc.

Witness to domestic violence

- Exposure to emotional abuse, actual/attempted physical or sexual assault, or aggressive control perpetrated between a parent/caretaker and another adult in the child victim's home environment.
- Exposure to any of the above acts perpetrated by an adolescent against one or more adults (e.g., parents, grandparent) in the child victim's home environment.

Victim/witness to community violence

- Extreme violence in the community (i.e., neighborhood violence). Includes exposure to gang-related violence (e.g., drive-by-shootings).

School violence

- Violence that occurs in a school setting. It includes, but is not limited to, school shootings, bullying, interpersonal violence among classmates, classmate suicide.

Natural or manmade disasters

- Major accident or disaster that is an unintentional result of a manmade or natural event (e.g., tornado, nuclear reactor explosion).
- Does not include disasters that are intentionally caused, which would be classified as acts of terrorism/political violence.

Forced Displacement

- Forced relocation to a new home due to political reasons. Generally includes political asylees or immigrants fleeing political persecution. Refugees or political asylees who were forced to move and were exposed to war may be classified here and also under war/terrorism/political violence.

War/terrorism/political violence

- Exposure to acts of war/terrorism/political violence, including incidents such bombing, shooting, looting, or accidents that are a result of terrorist activity as well as actions of individuals acting in isolation if they are considered political in nature.

Victim/witness to extreme personal/interpersonal violence

- Includes extreme violence by or between individuals that has not been reported elsewhere (hence, if the child witnessed domestic violence, this should be recorded as Witness to Domestic Violence and NOT repeated here).
- Intended to include exposure to homicide, suicide and other similar extreme events.

Traumatic grief/separation

- Death of a parent, primary caretaker or sibling.
- Abrupt, unexpected, accidental or premature death or homicide of a close friend, family member, or other close relative.
- Abrupt, unexplained and/or indefinite separation from a parent, primary caretaker, or sibling due to circumstances beyond the child victim's control (e.g., contentious divorce, parental incarceration, or parental hospitalization). Does not include placement in foster care.

System-induced trauma

- Traumatic removal from the home, traumatic foster placement, sibling separation, or multiple placements in a short amount of time.

2.2.7 The effects of trauma

It is known that every child or adolescent who is exposed to a previous traumatic events will experience and respond to it in his or her own way, depending on their age, developmental stage, the type of the previous traumatic events and the social environment surrounding the child (Rice & Groves, 2005). Young trauma victims often come to believe there is something inherently wrong with them, that they are at fault, unlovable, hateful, helpless and unworthy of protection and love. Such feelings lead to poor self-image, self-abandonment, and self-destructiveness. Children who experience severe early trauma often develop a foreshortened sense of the future. They come to expect that life will be dangerous, that they may not survive, and as a result, they give up hope and expectations for themselves that reach into the future (Terr, 1992). Van der Kolk, et al., (1996), described the following long term effects of trauma:

- Generalized hyper-arousal and difficulty in modulating arousal

a) Aggression against self and others
b) Inability to modulate sexual impulses
c) Problems with social attachments – excessive dependence or isolation

- Alterations in neurobiological processes involved in stimulus discrimination

a) Problems with attention and concentration
b) Dissociation
c) Somatization

- Conditioned fear responses to trauma related stimuli
- Loss of trust, hope, and a sense of personal agency
- Social avoidance
- Loss of meaningful attachments
- Lack of participation in preparing for the future

2.2.8 Theories of trauma

2.2.8.1 Classical Freudian perspective: Repression

Freud's theory, relative to the role of trauma in pathology, went through several refinements. In this early collaboration with Josef Breuer, their work with hysterics led them to postulate that these patients suffer from "reminiscences" which were conceptualized as a return to conscious awareness of an anxiety–provoking memory in the

symbolic form of a symptom. In this early formulation, the trauma given rise to the anxiety was considered to be intra-psychic rather external. In other words, only thing–any memory, thought or feeling–that might be considered unacceptable or overwhelming to the person's ego given him /her personality and idiosyncratic sensitivities, could by definition be considered "traumatic" and therefore pushed into forgetfulness by the ego. The process of pushing traumatic material into forgetfulness or what come to be trauma as the process of repression– ordinarily relieved the person of the anxiety associated with the traumatic memory, thought, or, feeling. For hysteria, however, the process of forgetting or repression was only partially successful.

Although the content of the traumatic memory or idea might be forgotten, the associated affect remained and was expressed as a symptom, indirectly and often somatically. Importantly, this early formulation providing a basic for understanding trauma experience broadly, functionally and idiosyncratically:" trauma" was anything (whether a memory of an actual event or thought or feeling) that was capable of creating within the individual sufficient intra-psychic conflict such that it would, if left in conscious awareness, produce an intolerable level of anxiety. What could be considered traumatic was, in effect, subjectively determined the person himself or herself. Repression involved an unconscious defensive pushing out of awareness of the actual conflictual material. Treatment of the hysterics symptom involved reconnecting the displaced affect with its original content through catharsis and, indeed, S. Freud took the successful symptom relief provided by this treatment as support for the underlying causal mechanisms postulated in his theory of repression of traumatic material.

Within just a few years, Freud had further refined his history. He found in his work with hysterical patients that the content that was uncovered did not always seem to have sufficient "traumatic power" or to be sufficiently connected to hysterical symptom. He postulated that there must, in fact, be some experience or memory at work that did possess sufficient traumatic power to account for his patient's symptoms, a memory that had been pushed even further into unconscious. Thus, in S. Freud A etiology of Hysteria, he proposed that every case of hysteria could be linked to "premature sexual experience" that is to an earlier sexual trauma experienced in childhood .This refinement in Freud's earlier thinking is typically referred to as his "seduction theory", suggesting that the adult patient presenting with the symptoms of hysterical conversion had in fact been traumatized as a

child by adult, and that the memory of the event itself the content of the memory, but not the associated affect had been pushed from conscious awareness through repression. The symptoms currently being experienced by the adult patient were traceable back to that earlier traumatic experience.

The third refinement of Freud's theory came with the development of what is called the "fantasy theory". By this time Freud wanted to find a more universal explanation for the causes of neurotic symptoms, and he recognized that it was necessary to postulate that an actual sexual trauma was at the base of every patient's symptoms. However, he wished to retrain his emphasis and found what he thought would provide a more universal basic for the emergence of neurotic symptoms in what he understood to be the nature of childhood sexuality. In this reformulated account, sufficient and more universal explanations for the neurotic's symptoms could be found by positing that all children experienced sexual fantasies toward a parent, fantasies which generated intra-psychic conflict which therefore must be repressed. This intra-psychic conflict was called Oedipal complex for boys and Electra complex for girls. However, because psychic energy is conserved, the repressing of the child's conflictual desires was rarely entirely successful and typically would emerge during adulthood in the form of neurotic symptoms. These symptoms, again, indirectly and symbolically pointed to their underlying cause. Ultimately, perhaps Freud's most enduring contribution to trauma theory rests with neither seduction theory nor fantasy theory but, rather, with his initial formulation of the functional and idiosyncratic understanding of the traumatic experience. In his initial formulation, trauma is understood as that which subjectively intolerable to the individual which, therefore, is pushed from conscious awareness in an effort to reduce the associated anxiety.

2.2.8.2 New psychoanalytic approach: Character

Freudian psychoanalytic has itself undergone numerous revisions in the century or so since it was the first proposed. Many clinicians now accept, with few reservations, Freud's notions that the childhood experiences continue to exert an influence on the person throughout childhood, and that some forms of psychopathology reflect the operation of unconscious process and conflicts. These clinicians do not necessarily accept other psychoanalytic propositions such as drive theory or the presumed etiology of neurosis in the Oedipal / Electra complex (Lever, 2012).

Relevant to trauma theory is one perspective that incorporates the more widely accepted aspects of psychoanalytic while building on the more recent work of Reich (1972) and Shapiro (1985). In this vein, Piers (1998) proposed that character provides a critical lens for understanding the ongoing significance of past traumatic experiences. Drawing notions of character structure and character armor, character which may be distinguished from the broader construct-personality respects the individual formal way of organizing subjective experience. In other word, the mere fact of traumatic experience is not sufficient to understand its impact on the individual; one must takes into account the person's characteristic ways of organizing and interpreting his or her experiences. In this regard, character pathology refers to "a dynamic and restrictive way of organizing conscious experience through which entire aspects of ongoing subjectivity (including thoughts, reactions, sensations and feelings) are effectively excluded, leaving the patient estranged from himself or herself ". This process of self-alienation can refer both to one's past traumatic experiences as well as to ongoing experiences in the present. Similar to Freud earlier view, this view proposes that the experience and interpretation of events as traumatic is subjective and idiosyncratic. Importantly, working with clients entails understanding the interpretive lens of character. This approach focuses on helping clients become more able to explore feelings, thoughts and reactions to past trauma, as well as, to any area of conflicts.

2.2.8.3 Contemporary trauma theory: Dissociation

Many contemporary trauma theorists have adopted a traumagenic approach to psychopathology that is based on the process of dissociation rather than that of repression entailed in the Freudian model. With dissociation, a traumatic experience is thought to be recorded in memory whole and intact, unaltered by any interpretive process on the part of the one experiencing trauma. Whereas repression involves a motivated or defensive forgetting, dissociation reflects a passive encoding and encasing of the traumatic experience. In this view, the traumatic memory is segregated memories and remains nonconscious. The dissociated traumatic memory, however, can continue to influence the person in various ways of particular relevance are trigger experiences which typically come in the form of cues in the environment that enactment , they can lead to behavioral cortical processing . In a certain sense, the person who has been traumatized is essentially passive, transmitting into the future and reliving in the present the traumatic experience that happened in the past.

2.2.8.4 Self-determination theory: Basic psychological needs

It is empirically grounded theory of motivation, personality and development that has roots in the existential–phenomenological and humanistic traditions. However, it is also shares an appreciation for the understanding of unconscious and defensive process first explored by Freud and, in particular, for Freud's articulation of the synthetic function of the ego. In Freudian thought, the synthetic function suggests that the ego serves to organize and integrate aspects of experiences into a coherent and meaningful whole. In addition, self-determination theory acknowledges the contributions of newer psychodynamic approaches such as the attachment and object relations perspectives; these perspectives underscore the importance of interpersonal experiences that serve to support or underscore the psychological needs of the child and later of the adult throughout development. Self–determination theory argues that there are three basic psychological needs that humans require for optimal growth and development from childhood and throughout the life span. These are the needs for relatedness or the feeling of being connected in meaningful and mutually satisfying ways to important others; competence, or the feeling that one is able to use and to extend one's current abilities through experiences of optimal changes; and for autonomy for the feeling that one is able to make personally meaningful choices, and that one endorses or stands behind the choices one makes.

Although the needs for relatedness and competence are restively uncontroversial in contemporary psychological theorizing, the need for autonomy has required some justification, as it has frequently been confused with independence or individualism (Levers, 2012).

2.3 Posttraumatic stress disorder (PTSD)

Psychological trauma occurs at high rates in children and adolescents (Giaconia et al., 1995), and PTSD in this age group has attracted considerable clinical and research interest. The DSM diagnosis of PTSD addressed immediate symptoms following combat experiences, rape, domestic violence, and child abuse; symptoms were then categorized along four clusters: intrusive re-experiencing, avoidance, hyperarousal, and hypervigilance, with general symptoms of anxiety and dysphoria in addition (Ford & Courtois, 2009).

2.3.1 Posttraumatic stress disorder definition

PTSD is an acute, chronic, delayed, debilitating, and complex mental disorder. It includes altered awareness, detachment, dissociative states, ego fragmentation, personality changes, paranoid ideation, trigger events, and vivid intrusive traumatic recollections. The critical feature of PTSD is the development of characteristic symptoms following exposure to an extreme traumatic stressor involving direct personal experience of an event involving direct or threatened death or severe injury, threat to one's physical integrity or that of another person, or being witness to an unexpected violent death, serious harm, or threat of injury to self or another. DSM-IV-TR criteria specify that the presence of symptoms of hyper arousal, avoidance, and re-experiencing the trauma must have been present for more than one month. The DSM-IV-TR provides clinicians the opportunity to specify acute (with symptoms having lasted less than 3 months) or chronic (with symptoms lasting greater than 3 months). There is also provision for delayed onset, if the appearance of symptoms occurs 6 months or more after the stressful event.

2.3.2 History of posttraumatic stress disorder

The history of PTSD stems from the work of Jacob DaCosta's 1871 paper "On Irritable Heart" describing the symptoms of stress witnessed in Civil War soldiers. The disorder was referred to as traumatic neurosis resulting from the strong influence of psychoanalysis. However, this was replaced by the term *shell shock* during World War I, as psychiatrists hypothesized this was the impact of brain trauma resulting from the percussion blows of exploding bombshells. It was not until 1941, when the survivors of the Coconut Grove nightclub fire began to demonstrate symptoms of nervousness, nightmares, and graphic recollections of the tragedy, that the operational definition was expanded to operational fatigue, delayed grief, and/or combat neurosis. It was not until the return of Vietnam War veterans that the notion of PTSD emerged in the current context. Throughout the history of this disorder an inescapable fact has been present: the appearance of the disorder was roughly correlated with the severity of the disorder, with the most severe stressor resulting emergence of characteristic symptomatology in 75% of the victims.

2.3.3 Psychological processes and posttraumatic stress disorder

PTSD is associated with disturbances in a wide range of psychological processes including memory, attention, cognitive–affective reactions, beliefs, coping strategies, and social support.

2.3.3.1 Memory and posttraumatic stress disorder

In PTSD, a number of changes in memory functioning have been identified that are comparable with studies of depressed patients: There tends to be a bias toward enhanced recall of trauma-related material and difficulties in retrieving autobiographical memories of specific incidents (Buckley et al., 2000). More specific to PTSD is a contradictory pattern of recall related to the traumatic material itself, similar to that found in studies of emotion and memory in nonclinical samples: In some studies, high levels of emotion are associated with more vivid and long-lasting memories (e.g., Pillemer, 1998), while in others, they are associated with memories that are vague, lacking in detail, and error prone (e.g., Koss et al., 1996). The DSM-IV describes PTSD as characterized both by high-frequency, distressing, intrusive memories and by amnesia for the details of the event. Consistent with this are clinical studies and observations reporting that confusion and forgetting are as typical of trauma memories as is vivid, lasting recall (Herman, 1992; Terr, 1990). The other notable feature of memory in PTSD is the reliving experiences or ‘‘flashbacks’’ to the trauma. Compared to normal autobiographical memory, flashbacks are dominated by sensory detail such as vivid visual images and may include sounds and other sensations. However, these images and sensations are typically disjointed and fragmentary. ‘‘Reliving’’ of these memories is reflected in a distortion in the sense of time such that the traumatic events seem to be happening in the present rather than (as in the case of ordinary memories) belonging to the past. Reliving episodes also do not seem to occur as a result of a deliberate search of memory, but are triggered involuntarily by specific reminders that relate in some way to the circumstances of the trauma, such as the sound of a police siren or the smell of smoke, or particular thoughts or images relating to the event.

2.3.3.2 Attention and posttraumatic stress disorder

Studies of attention in PTSD have recently been reviewed by Buckley et al. (2000), who divided the literature into studies of automatic and strategic processing. Two studies have suggested that there is an attentional bias operating very early in processing, as shown by slowed color naming following subliminal presentation of trauma words on a Stroop test

(Harvey et al., 1996) and speeded reaction time to trauma words in a dot probe paradigm (Bryant & Harvey, 1997). However, comparable results were not obtained using an auditory recognition task with Vietnam veterans (Trandel & McNally, 1987). Thus, strong conclusions cannot be drawn, and further evidence is needed concerning automatic processing. In contrast, Buckley et al. argued that the evidence for attentional bias is clearer in studies targeting post-recognition processes, for example using Stroop tasks with supraliminal presentation times (Bryant & Harvey, 1995). While attentional bias is clearly important in PTSD, the research does not provide evidence that the effects are unique to PTSD. Rather than using the above paradigms, tasks which look at sustained attention and repeated exposure to threat stimuli may be more relevant to cognitive and exposure treatments which require patients to attend and process their trauma memories for an extended period of time. They may also be more ecologically valid in terms of patients' daily experience of vigilance in environments rich in threat cues. However, the available evidence on whether PTSD is associated with deficits in sustained attention is inconsistent (Yehuda et al., 1995).

2.3.3.3 Dissociation and posttraumatic stress disorder

''Dissociation'' has sometimes been defined as any kind of temporary breakdown in what we think of as the relatively continuous, interrelated processes of perceiving the world around us, remembering the past, or having a single identity that links our past with our future (Spiegel & Carden˜ a, 1991). Mild dissociative reactions are common under stress, for example, being reported by 96% of soldiers undergoing survival training (Morgan et al., 2001). Dissociative symptoms most commonly encountered in trauma include emotional numbing, derealization, depersonalization, and 'out-of-body' experiences. They are related to the severity of the trauma, fear of death, and feeling helpless (Holman & Silver, 1998). It has been suggested that such reactions reflect a defensive response related to immobilization (''freezing'') in animals (Nijenhuis et al., 1998). In contrast to fight–flight reactions, in which heart rate normally increases, dissociation has been linked to a decrease in heart rate (Griffin et al., 1997). When these symptoms occur in the course of a traumatic experience, they are referred to as 'peri-traumatic dissociation'.

2.3.3.4 Cognitive–affective reactions and posttraumatic stress disorder

A requirement of the PTSD diagnosis according to DSM-IV is to experience intense fear, helplessness, or horror at the time of the trauma. Consistent with this, there is a strong relationship between each of these specific reactions in victims of violent crime and the risk of PTSD 6 months later (Brewin et al., 2000). Of those victims who did not go on to develop PTSD, 44% reported at least one of these reactions at an intense level, compared to 89% of those who did go on to develop PTSD. However, consistent with other studies, a small number of victims who would have met previous diagnostic criteria for PTSD did not report experiencing any of these reactions intensely. Instead, they reported high levels of anger or shame. Other investigators have identified a variety of emotions including shame and anger as sometimes being present during the most intense moments of the traumatic event (Grey et al., 2001). Closely related to helplessness is the idea of 'mental defeat,' defined as ''the perceived loss of all autonomy, a state of giving up in one's own mind all efforts to retain one's identity as a human being with a will of one's own'' (Ehlers et al., 2000). It is a profound state that, like helplessness, defies categorization as either an emotion or a belief, having some characteristics of both. Trauma victims who experience mental defeat may describe themselves as like an object or as being destroyed, or as ceasing to care whether they lived or died. Mental defeat, then, goes beyond mere helplessness in attacking the person's very identity. Ehlers et al. (2000) studied former political prisoners in East Germany and found that even allowing for the degree of torture experienced, those who still had PTSD years after their imprisonment were characterized by having reacted during the trauma with mental defeat.

Whereas some emotions are the direct result of outcomes, others depend on an element of cognitive appraisal (e.g., Weiner, 1986). Traumatic events vary considerably in the time that is available to the victim to appraise what is happening and to generate corresponding emotions. Posttrauma, however, cognitive appraisal of the cause of, responsibility for, and future implications of the trauma will provide numerous opportunities to generate negative emotions. There is abundant evidence that feelings of guilt, shame, sadness, betrayal, humiliation, and anger frequently accompany PTSD (Freyd, 1996).

2.3.3.5 Beliefs and posttraumatic stress disorder

The significance of beliefs is illustrated by the fact that although threat to life consistently emerges as a powerful predictor in studies of populations as diverse as combat veterans, political prisoners, assault victims, and motor vehicle accident victims (e.g., Dunmore et al., 2001), the subjective perception of threat is often a more influential predictor of distress and even of failure to respond to treatment than more 'objective' indicators (Bernat et al., 1998). However, in PTSD the beliefs that are believed to be important include much more than threat. A central idea is that traumatic events shatter people's basic beliefs and assumptions (Bolton & Hill, 1996). Consistent with this, a general increase in negative beliefs about the self, others, and the world has been found in trauma victims with PTSD compared to victims not suffering from PTSD (Dunmore et al., 1999). A number of authors have emphasized the potential for trauma to destroy trust and lead to the belief in victims that they have been let down or betrayed, for example by caregivers (Freyd, 1996; Herman, 1992) or superior officers (Shay, 1995). High levels of anger with others reported by PTSD patients are also consistent with a loss of belief in the good intentions of other people (Andrews et al., 2000). These negative beliefs do not have to occur during the trauma itself but may represent the outcome of a separate appraisal process that only begins after the danger is past. Were beliefs to have occurred peri-traumatically, however, they could form part of the reexperienced trauma memory and thus be triggered by reminders of the trauma (Grey et al., 2002).

2.3.3.6 Cognitive coping strategies and posttraumatic stress disorder

There is now extensive evidence that attempts to suppress unwanted thoughts are usually doomed to failure and that afterwards, the thoughts return even more strongly, and it has been suggested that the deliberate avoidance of intrusive thoughts and memories will similarly be unhelpful for the majority of trauma victims. The theoretical link between greater avoidance and higher symptom levels has been confirmed in a number of retrospective studies of assault and motor vehicle accident victims (Dunmore et al., 1999). Prospective studies have shown that avoidance and thought suppression are related to a slower recovery from PTSD (Dunmore et al., 2001). Other coping strategies that are associated with a greater risk of PTSD include rumination (Ehlers et al., 1998) and increased use of safety behaviors (Dunmore et al., 2001).

2.3.3.7 Social support and posttraumatic stress disorder

Of 14 separate risk factors for PTSD investigated in a recent meta-analysis, including trauma severity and gender, social support was shown to have the strongest effect size (Brewin et al., 2000). Although most studies have only considered positive elements such as the perception of emotional and practical support, several recent investigations have also considered negative aspects of support such as indifference or criticism. When both positive and negative support elements are investigated, a negative social environment is a better indicator of PTSD symptomatology than lack of positive support (Ullman & Filipas, 2001). Moreover, negative appraisal of others' support attempts at initial assessment predicted PTSD symptoms 6 and 9 months later (Dunmore et al., 2001). Negative social support, at least in the case of violent crime, appears to be more prevalent for women than for men victims, and in addition, the relationship between negative social support and later PTSD symptoms is stronger for women than for men. Negative social support by partners has also been found to predict a poorer response to treatment for PTSD (Tarrier et al., 1999).

2.3.4 Comorbidity of posttraumatic stress disorder

Significant overlap in symptoms exists among disorders. For DSM disorders, when a PTSD diagnosis is possible, it supersedes other diagnoses when symptoms are directly related to a PTSD Criterion A experience and other PTSD criteria algorithms are met (Nader, 2007). Comorbidity is common with PTSD (Kessler, 2000). When studies control for lifetime comorbidities, whether or not adversities meet PTSD Criterion A, their effects include more similarities than differences. Adults with psychiatric disorders significantly more often than others retrospectively report exposure to childhood adversities (Kessler et al., 1997). Particular adverse events are not associated with any one class of disorders. Mood and anxiety disorders are often comorbid; mood disorders most often arise after anxiety disorders (de Graaf et al., 2004).

The personality traits of neuroticism (Eysenck, 1967), childhood trauma, and parental (especially maternal) psychiatric history have been more strongly associated with comorbidity than with solitary disorders (de Graaf et al., 2004; Kessler et al., 1997). Impairments in functioning have been more strongly associated with comorbid than with single disorders (de Graaf et al., 2004). For children, comorbidity may indicate a more complicated form of trauma. Youths exposed to traumas that may result in complex

reactions have been diagnosed with a number of disorders, including separation anxiety, overanxious, phobic, PTSD, depressive, dissociative, attention deficit hyperactivity, oppositional defiant, eating, sleep, communication, reactive attachment, substance abuse, and conduct disorders (Cook et al., 2005).

2.3.5 Theories of posttraumatic stress disorder

2.3.5.1 Early theories

Early theories can be divided into three types. Social-cognitive theories primarily focus on the way trauma breaches existing mental structures and on innate mechanisms for reconciling incompatible information with previous beliefs. Conditioning theories deal with learned associations and avoidance behavior. Information-processing theories focus on the encoding, storage, and recall of fear-inducing events and their associated stimuli and responses. Within their frame of reference, all of them are consistent with much of the available evidence and have provided important insights into PTSD.

2.3.5.1.1 Theory of shattered assumptions

The origins of this social-cognitive model also lie in the tradition of individual internal models or assumptive worlds that, though they may be illusory, help to sustain people in their everyday lives and motivate them to overcome difficulties and plan for the future. The three common assumptions Janoff-Bulman (1992) regarded as the most significant in influencing response to trauma are that the world is benevolent, the world is meaningful, and the self is worthy. That is, other people are in general well-disposed towards us, there are reliable rules and principles that enable us to predict which behaviors will produce which kinds of outcome, and we ourselves are personally good, moral, and well-meaning. Being attacked by a complete stranger without any provocation, being involved in a serious road traffic accident when we have been obeying the rules of the road, and putting our own survival ahead of anything else when our life is threatened are all situations that have the potential to be traumatic in that they may shatter deeply held and probably unexamined assumptions about how we believe the world and ourselves to be. Updating of assumptions can take place spontaneously through the re-experiencing and avoidance cycle described by (Horowitz, 1986). In addition, updating can be made to occur deliberately by reflecting on the trauma. As in stress response theory, the strength of the approach lies more in its description of longer term adjustment after a trauma rather than the specification of how trauma impacts on the individual in the short term or how trauma is represented in

memory. The theory of shattered assumptions is important, however, in identifying common themes in schema change, specifying the role of the person's social and interpersonal context in facilitating or blocking this process, and emphasizing the possibility of positive reframing of the trauma and of posttraumatic growth.

2.3.5.1.2 Conditioning theory

This approach sought to apply conditioning theories developed for other anxiety disorders to PTSD. Following Mowrer's (1960) two-factor learning theory, an initial phase of fear acquisition through classical conditioning results in neutral stimuli present in the traumatic situation acquiring fear-eliciting properties through their association with the unconditioned stimulus (in this case, those elements of the traumatic situation that directly arouse fear). Keane, Zimering, and Caddell (1985) proposed that a wide variety of associated stimuli would acquire the ability to arouse fear through the processes of stimulus generalization and higher order conditioning. Although repeated exposure to spontaneous memories of the trauma would normally be sufficient to extinguish these associations, extinction would fail to occur if the person attempted to distract themselves or block out the memories, rendering the exposure incomplete. Avoidance of the conditioned stimuli, whether through distraction, blocking of memories, or other behaviors, would be reinforced by a reduction in fear, leading to the maintenance of PTSD.

2.3.5.1.3 Information-processing theories

Cognitive theories that have focused mainly on the traumatic event itself rather than on its wider personal and social context have been termed ‘‘information-processing’’ theories (Foa et al., 1989). The central idea is that there is something special about the way the traumatic event is represented in memory and that if it is not processed in an appropriate way, psychopathology will result. Like social-cognitive theories, this approach emphasizes the need for information about the event to be integrated within the wider memory system. However, the difficulty in achieving this is attributed more to characteristics of the trauma memory itself than to conflict with preexisting beliefs and assumptions. Most early theories had their origins in attempts to understand fear conditioning and phobic responding, and particularly in the work of Lang (1979). Lang reformulated behavioristic accounts of fear conditioning that depended on the learning of associations between stimuli and responses within a more comprehensive cognitive framework. He proposed that frightening events were represented within memory as interconnections between nodes in

an associative network. A fear memory consisted of interconnections between different nodes representing three types of propositional information: Stimulus information about the traumatic event, such as sights and sounds, information about the person's emotional and physiological response to the event, and meaning information, primarily about the degree of threat. Thus, cognition and affect were integrated within an overall response program designed to rapidly escape or avoid danger.

2.3.5.1.4 Anxious apprehension model

Jones and Barlow (1990) argued that variables implicated in the etiology and maintenance of panic disorder are also involved in PTSD, and that there is a marked similarity between panic attacks and traumatic flashbacks. While recognizing the role of biological vulnerability, the trauma itself, and the experience of intense emotions at the time, their key point is the inclusion of cognitive factors that occur after the trauma and produce a feedback cycle of anxious apprehension. That is, patients with PTSD focus their attention upon and are hypervigilant for information about 'emotional alarms' and associated stimuli. Although in the face of actual trauma, the alarm is genuine, false alarms can occur subsequently in the absence of danger, as described in Barlow's (1988) model of panic disorder. In PTSD, the focus of people's anxious apprehension is on cognitive and physiological cues from the time of the actual trauma as they wish to avoid the distress generated by alarms. The learned alarms generate hyperarousal symptoms, which through their association to cues present at the time of the original trauma (the real alarm) result in a negative feedback loop ensuring successive reexperiencing symptoms. To prevent the triggering of alarms, the person will tend to avoid emotional interoceptive information, for example, through emotional numbing, as well as avoid external trauma-related stimuli. Jones and Barlow argued that coping styles and social support can, as in other anxiety disorders, moderate the expression of PTSD. This approach emphasizes the similarity of PTSD to other anxiety disorders and the importance of distorted information processing in PTSD. Consistent with the model, panic symptoms are often reported both during and after trauma and may be a risk factor for later PTSD symptoms.

2.3.5.2 Recent theories

2.3.5.2.1 Emotional processing theory

The earlier network theory of Foa et al. (1989) has been elaborated by Foa and Riggs (1993) and Foa and Rothbaum (1998) in several ways in order to take account of

accumulating knowledge, particularly with respect to assault and rape victims. One development was to elaborate the relationship between PTSD and knowledge available prior to the trauma, during the trauma, and after the trauma. They proposed that individuals with more rigid pre-trauma views would be more vulnerable to PTSD. These could be rigid positive views about the self as being extremely competent and the world as extremely safe, which would be contradicted by the event, or rigid negative views about the self as being extremely incompetent and the world as being extremely dangerous, which would be confirmed by the event. Another development was an increased emphasis on negative appraisals of responses and behaviors which could exacerbate perceptions of incompetence. Foa et al. outlined how these appraisals might relate to events that took place at the time of the trauma, to symptoms that developed afterwards, to disruption in daily activities, and to the responses of others. Beliefs that were present before, during, and after the trauma could interact to reinforce the critical negative schemas involving incompetence and danger that they hypothesized underlie chronic PTSD.

2.3.5.2.2 Ehlers and Clark's cognitive model

Ehlers and Clark (2000) drew attention to the paradox in PTSD whereby patients feel anxious about the future, even though the trauma lies in the past. They proposed that pathological responses to trauma arise when individuals process the traumatic information in a way that produces a sense of current threat, either an external threat to safety or an internal threat to the self and the future. The two major mechanisms that produce this effect involve negative appraisals of the trauma or its sequelae and the nature of the trauma memory itself.

Expanding on the work of Foa and Rothbaum (1998), Ehlers and Clark identified a wide range of relevant negative appraisals. Some of these are focused on the traumatic event and signal overgeneralization of danger (e.g., ''Others can see I am a victim'') or negative appraisal of own actions (e.g., ''I deserve that bad things happen to me''). Other appraisals focus on sequelae, such as the PTSD symptom of numbing (''I'll never be able to relate to people again''), other people's reactions (''They think I am too weak to cope on my own''), and life prospects (''My body is ruined''). The different types of appraisal, variously involving danger, violation of standards by self or others, or loss, explain the variety of emotions reported by patients with PTSD.

2.3.6 The treatment of trauma and posttraumatic stress disorder

Many effective therapeutic approaches and techniques have been used with trauma survivors. Most practitioners use a combination of approaches depending on their training and background. The client's needs, however, should be the final determinant of the approach the therapist chooses to use to support recovery. When shaping interventions, the therapist must consider the client's cultural and social background. The therapist's awareness of these factors inevitably affects the progress of treatment. If practitioners are not familiar with the culture of the client, they should make every effort to gain this cultural understanding. It is important to remember that trauma work is often integrated into therapeutic work with clients. Often, trauma material does not surface until much later in the therapeutic process. Establishing rapport and trust should be critical goals of any therapy, especially those that are trauma specific. For some practitioners, these goals remain the primary focus of therapy with their clients for several years.

2.3.6.1 Brief Psychodynamic Psychotherapy

Brief psychodynamic psychotherapy is an abbreviated form of psychodynamic therapy in which the emotional conflicts caused by the traumatic event are the focus of treatment, particularly as they relate to the client's early life experiences (Horowitz, 1997). The rationale of brief psychodynamic psychotherapy is that a client's retelling the traumatic event to a calm, empathetic, compassionate, and nonjudgmental therapist will result in greater self-esteem, more effective thinking strategies, and an increased ability to manage intense emotions successfully (Marmar et al., 1995). Throughout the process, the therapist helps the client identify current life situations that trigger traumatic memories and exacerbate PTSD symptoms. In this model of treatment, the therapist emphasizes concepts such as denial, abreaction, and catharsis (Horowitz et al., 1997). By using a psychoanalytic approach, Burton (2004) found that clients were able to reenact their trauma. He concluded that these reenactments serve several purposes. First, reenacting a trauma is validating since it confirms for the client that the trauma really happened. Second, a reenactment helps the client gain mastery over the situation that was once an experience of helplessness. Finally, reenactments present the possibility of reversing prior outcomes, controlling what was uncontrollable in the past, and dealing with the trauma in different and more hopeful ways.

2.3.6.2 Cognitive behavioral therapy

Cognitive-behavioral therapy (CBT) combines two very effective kinds of psychotherapy: cognitive therapy and behavior therapy. Behavior therapy, based on learning theory, helps clients weaken the connections between troublesome thoughts and situations and their habitual reactions to them. Cognitive therapy teaches clients how certain thinking patterns may be the cause of their difficulties by giving them a distorted picture and making them feel anxious, depressed, or angry (Beck, 1995). When combined into CBT, behavior therapy and cognitive therapy provide powerful tools for symptom alleviation and help clients resume normal functioning. A cognitive approach has been found to be a suitable framework for trauma therapy because traumatic experiences usually impede the emotional process by conflicting with pre-existing cognitive schemas (Jaycox et al., 2002). Cognitive dissonance, which occurs when thoughts, memories, and images of trauma cannot be reconciled with current meaning structures, causes distress. The cognitive system is driven by a completion tendency: a psychological need "to match new information with inner models based on older information, and the revision of both until they agree" (Horowitz, 1986). During the acute phase of the trauma, in an attempt to comprehend and integrate the traumatic experience, the trauma survivor normally replays the event that has been stored in active memory. Each replay, however, distresses the traumatized individual, who may inhibit thought processes to modulate the active processing of traumatic information. This observable inhibition gives the appearance that the traumatized individual has disengaged from processing the traumatic memory. Thus, some trauma survivors, as a result of excessive inhibition, display withdrawn and avoidant behaviors. However, when an individual is unable to inhibit traumatic thoughts, the intrusive symptoms are expressed in the hyperarousal symptoms of flashbacks during the waking states and nightmares during sleep states (Van der Kolk, 1996). For this reason, researchers commonly observe trauma survivors as oscillating between denial and numbness, or intrusion and hyperarousal (Lindy, 1996). Once clients can reappraise the event and revise the cognitive schemas they previously held, the completion tendency is served. These common reactions and cognitive processes seen among trauma survivors can be explained using the framework of cognitive theory. However, the therapist's central focus on the client's internal cognitive mechanisms and how the client processes information may result in a neglect of contextual and sociocultural factors in cognitive theory. CBT primarily involves working with a client is cognitions to change emotions, thoughts, and behaviors (Meichenbaum, 1977, 1997).

2.3.6.3 Eye movement desensitization and reprocessing

In Eye Movement Desensitization and Reprocessing (EMDR), the goal is to help the client desensitize to traumatic stimuli through saccadic eye movements (Shapiro, 1995). The treatment procedure follows a structured sequence. Clients are first asked to perform bilateral eye movements while recalling a disturbing image or memory. The therapist then waves a finger repeatedly across a client's visual field while he/she tracks it with his/her eyes (Shapiro, 1995). The treatment involves a combination of exposure therapy elements and eye movements, hand taps, or sounds to distract clients' attention. After each sequence, clients indicate their subjective units of distress (SUD). If the SUD is high, the client practices relaxation techniques. When the client is ready, EMDR is resumed. Shapiro (1989, 1995) maintains that EMDR, with its brief exposures to associated material, external/internal focus, and structured therapeutic protocol, represents a distinctly different and new paradigm in therapy.

2.3.6.4 A stage-specific model

Herman (1997) describes trauma recovery as unfolding in three broad stages. The first stage focuses on establishing a client's safety and stabilization. Once these goals are reached, the client proceeds to the next stage of remembering, exploring, and mourning past traumas. The third and final stage of recovery is described as one of reconnection. This stage focuses on expanding and revitalizing the relational world of the client. The therapeutic alliance is described as a collaborative relationship with the client in charge of recovery; the therapist's role is described as that of witness, consultant, and ally (Herman, 1997).

2.3.6.5 A self-trauma model

The trauma model developed by Briere (1996) is a blend of humanistic, psychodynamic, and cognitive-behavioral theories. Important principles of Briere's treatment model include respect, positive regard, and the assumption of growth. Key concepts for practitioners to follow are safety, support, therapeutic feedback, and working through the trauma.

2.3.6.6 A Stage-Oriented Treatment Model

Chu (1998) describes a stage-oriented trauma treatment model that includes self-care, acknowledgment of the trauma, improving functioning, expression of affect, and relationship building. It is summarized and represented by the acronym SAFER: S = Self-Care, A = Acknowledgment, F = Functioning, E = Expression, and R = Relationships.

2.4 Resilience

2.4.1 Resilience definitions

Resilience, the opposite of vulnerability, is defined as the individual's ability to resist the potential negative consequences of the risk and develop adequately (Engle et al., 1996). Resilience has been defined also as the ability to successfully cope with change or misfortune (Wagnild & Young, 1993). According to Luthar et al. (2000), the term resilience reflects the ability of individuals to maintain relatively stable mental function throughout the course of events. It's the ability of an individual to function competently in the face of adversity or stress. It can be defined also as the capacity to rebound from adversity strengthened and more resourceful. It is an active process of endurance, self-righting and growth in response to crisis and challenges (Walsh, 2006).

Resilience is a cryptic concept which defined as the ability to successfully negotiate life's adversities and continue along the path of self-actualization (Theron, 2004). Resilience is a characteristic that moderates the negative effects of stress, and promotes adjustment to circumstances. It is the ability and capacity of individuals to withstand situational discontinuities and being able to adapt to new risk environments (Cleary & Malleret, 2006). Luther (2003), stated that the resilience refers to patterns of positive adaption in the context of significant risk or adversity, it is interference about person's life that requires two fundamental judgments (1) the person is doing okay and (2) that there is now or has been significant risk or adversity to overcome. According to VanBreda (2001), resilience means the skills, abilities, knowledge, and insight that accumulate over time as people struggle to surmount adversity and meet challenges. It is an ongoing and developing fund of energy and skill that can be used in current situations. Discussion around the defining of resilience led to the conclusion that resilience is “the process of, capacity for, or outcome of successful adaptation despite serious challenging or threatening circumstance” (Masten et al., 1990).

2.4.2 History of resilience

The word "resilience" is derived from the verb "resilie", which means that when an object is stretched or bent, it tends to spring back, to recoil and to resume its former shape and size. The development of resilience as a concept extends from 1800s and continues to the present time (Jackson et al., 2007). The history of resilience is such that it has been blessed with dedicated and professional researchers who have tried to determine what it is that makes one person more resilient to life's challenges than the next. Many social researchers in 1970's began focusing on why some people not only stay healthy, but also do well in the face of adversity and risk. This perception is called "resilience" (Patterson, 2002). These early studies were designed to identify contributing factors to the development of psychopathology, and in doing so the qualities of children that were resilient to stress also became evident (Luthar et al., 2000). These studies led to the conclusion that children who were better adjusted, despite the adversity of their living conditions, had special abilities and writers in the field began to refer to these children as being invincible or invulnerable to adversity (Masten, 2001). Risk and vulnerability factors, along with protective factors, remained key terms to describe the different variables under examination and the construct of resilience began to be discussed from a process orientation (Rutter, 1993).

2.4.3 Resilience theory

Resilience theory is an emerging theoretical perspective that has been developed within developmental psychopathology and ecosystems perspectives and is influenced by stress and coping theories. Although this theory has not been explicitly developed as an outgrowth of life span theory, it is developmental in focus, and theory-driven research typically examines a specific chronological life stage as a starting point. This theoretical framework addresses health development of at-risk populations, and overcoming stress and adversity to achieve functional outcomes either during a life stage, a specific trajectory (e.g.: educational or deviancy), or throughout the life span. The initial focus of theory development has been on childhood and adolescence and associations of traits and events at these life stages with outcomes later in life. Some recent research in this field has applied resiliency constructs to adults at risk.

2.4.4 Resilience characteristics

Most early resilience research focused on individual traits and disposition, such as an easy going temperament and higher intelligence which were found to be helpful, although not essential for resilience. Such qualities tend to elicit more positive responses from others and to facilitate coping strategies and problem solving skills (Walsh, 2006). More scientifically, gender, empathy with others, responsibility, internal locus of control, social maturity, achievement orientation, gentleness and nurturance, social perceptiveness, intelligence (Daniel & Wassell, 2002); high self-esteem and self-efficacy, with the sense of hope and personal control, make a successful coping. Resilience can also be viewed as the product of the stressors an adolescent is currently bearing; the adolescent's genetic temperament; his or her competence both for independence and for seeking help when appropriate; and the social support provided by family members and others (Werner, 1995). An adolescent who is resilient has an advantage when it comes to meeting the challenges and responsibilities of adulthood, even if he or she has experienced circumstances such as poverty, health problems, or strained family relationships (Werner, 1995). In the context of mental health, resilience can be viewed as the ability to handle stress positively. Adolescents' stress can come from multiple directions—school; relationships (with friends, romantic partners, and parents); hormonal and physical changes associated with adolescence; impending decisions about college and career; pressures to conform or to engage in risky behaviors; family financial problems; dangerous neighborhoods; and more.

2.4.4.1 Relationships with caring adults

Parents are usually the most important adults in adolescents' lives (Borkowski et al., 2001). Parents who maintain open communication with their adolescent—and support their adolescent's growing independence—also promote the young person's self-worth (Zaff et al., 2002). However, adolescents do not always want advice. In light of this reality, some research suggests that parents establish ongoing communication and discuss solutions rather than deliver lectures. Thus, providing reassurance, encouragement, and support can be more useful approaches for parents to take with their adolescents than offering unsolicited advice. In contrast, it is not helpful if parents respond to their adolescent's concerns by minimizing what the young person is feeling or by saying "you'll get over it." Parenting practices—as well as parents' own mental health—have an influence on adolescents' emotional well-being. Many parents strive to promote their child's

competence or achievement, which can boost the child's self-esteem. But putting pressure on a child to achieve may also cause stress if he or she perceives parents' efforts as overbearing (Grolnick & Ryan, 1989). Parents can support adolescents' participation in a variety of healthy activities—academics, but also sports and social pastimes. Such participation can help adolescents relieve stress, as well as help them develop stress management and conflict resolution skills (Bandy& Moore, 2011). Adolescents whose parents are actively involved in their education are also more likely to be resilient (Cove et al., 2005). Adolescents who have positive relationships with adults outside their families also experience mental health benefits: they feel more supported, are more socially expressive, and are less likely to be depressed than are adolescents who lack such relationships (Hair et al., 2002). Adolescents who have these caring adults in their lives are also more likely to be resilient (Cowen & Work, 1988).

2.4.4.2 Disposition

Adolescents who bring a good-natured disposition to their interactions with others seem to be more likely to develop resilience, as do those who take on reasonable levels of independence while also being able to ask for help when needed. These adolescents are probably more likely to develop supportive relationships with others, which further builds their resilience (Werner, 1995).

2.4.4.3 Relationship skills/social competence

The ability to apply problem-solving skills to interpersonal problems or conflicts, to show empathy for the feelings of others, and to voluntarily help others, are additional hallmarks of positive development. Adolescents with good intimacy skills—that is, those who are able to be emotionally close to another individual—are also more likely to be resilient (Hair et al., 2002).Many social skills can be taught; many of the effective approaches involve adolescents leading activities or partnering with peers (Bandy& Moore, 2011).

2.4.4.4 Emotional self-regulation

The concept of "emotional intelligence" recently has also gained recognition (Goleman, 2006). While the concept generally encompasses more than what is typically meant by resilience or positive mental health, it does include managing one's emotions, which can be especially important to adolescent well-being. In response, schools increasingly are incorporating social-emotional learning into their programming. Doing so can involve

direct teaching of skills to recognize and regulate one's emotions, and/or school wide initiatives that focus on increasing supportive relationships among students and adults. Such efforts have been spurred, in part, by evidence showing that being able to manage one's emotions, and having supportive relationships with adults, contribute to students' academic success, as well as to their adopting positive social attitudes and behaviors (Payton et al., 2008).

2.4.4.5 Cognitive skills

Intelligence, good judgment, and problem-solving skills seem to help many adolescents get through stressful times (Masten & Coatsworth, 1998). Intellectual abilities may make it easier for some adolescents to generate multiple, or more effective, solutions to problems.

2.4.4.6 Talents

Having one or more things one can do well, can take pride in, and can share with others seems to be another factor that promotes resilience among adolescents. Such activities can include hobbies, athletics, performing arts, and computer technology (Werner, 1995).

2.4.4.7 Confidence and inner-directedness

Children and young adolescents who are resilient are more likely to have an "internal locus of control," which encompasses confidence (belief in oneself and one's powers or abilities) and "inner-directedness" (trust in one's own decisions and being able to act on them.) That is, these adolescents see themselves as being able to influence outcomes, not just as the passive recipients of "fate." (Compas et al., 1991). Having an optimistic outlook also seems to be related to positive mental health. In one recent study, adolescents who were rated as having a more "optimistic thinking style" were much less likely to be or to get depressed (Patton et al., 2011).

2.4.5 Models of Resilience

Several models of resilience were developed by early resilience researchers. These models tested interactions between risk and protective factors and how they related to the outcome of interest (Garmezy et al., 1984). There are three major models of resilience.

2.4.5.1 Compensatory model of resilience

The Compensatory Model suggests that risk factors have independent and direct effects on increasing a negative outcome while protective factors counteract or neutralize the effects of risk by having a direct effect on the outcome (Garmezy et al., 1984; Masten et al., 1988). It is defined when a promotive factor counteracts or operates in an opposite direction of a risk factor. A compensatory model therefore involves a direct effect of a promotive factor on an outcome. This effect is independent of the effect of a risk. Youth living in poverty, for example, are more likely to commit violent behavior than are youth not living in poverty, but adult monitoring of behavior may help compensate for the negative effects of poverty.

2.4.5.2 Risk-protective model of resilience

The Risk-Protective Model suggests that protective factors interact with risk factors to produce a buffering effect that can dampen or amplify the impact of the risk factor on the outcome (Garmezy et al., 1984; Masten, 2001). Sometimes this model referred to as "Buffering Model" (Fitzpatrick, 1997), "Moderation Model", or "Multiplicative Model" (Masten, 2001), is the most widely studied model in the literature (Zimmerman & Arunkumar, 1994). In this model, protective factors interact with risk factors to produce a buffering effect that can dampen or amplify the impact of the risk factors on the outcome (Garmezy et al., 1984; Masten, 2001). This model suggests that protective factors have a greater effect on the outcome at one particular level of risk than other levels of risk (Garmezy et al., 1984). Statistically, the risk-protective model is tested in the regression analysis by adding an interaction term to the equation. This model is supported when the interaction effect of the risk and protective factors is significant in the regression equation (Garmezy et al., 1984). It is important to note that the Risk-Protective model outlines a different relationship between risk and protective factors than the compensatory model. In the interactive model, protective factors have an indirect effect on the outcome through risk factors (i. e. they buffer the effects of risk on the outcome) while in compensatory model, protective factors directly affect the outcome and independently compensate for the effects of risk factors.

2.4.5.3 Challenge model of resilience

The Challenge Model asserts that a moderate amount of risk exposure is more beneficial than no exposure to risk in reducing the negative outcome (Garmezy et al., 1984; Masten, 2001). The Challenge Model, also referred to as "Inoculation" or "Steeling Model" (Rutter, 1987), suggests that a moderate amount of risk exposure is more beneficial than no exposure to risk in reducing the negative outcome (Garmezy et al., 1984; Masten, 2001). This model claims that once the challenge is met, one has the potential to strengthen his/her competence to prepare for the next difficulty (Zimmerman & Arunkumar, 1994). This model has rarely been tested in the resiliency literature since researchers typically focus on functions of protective factors, whereas primary concern of challenge model is the effect of different levels of risk on outcome (Masten, 2001).

It is important to note that the models of resiliency are not mutually exclusive (Masten, 2001; Zimmerman & Arunkumar, 1994). That is, a protective factor might compensate for a risk factor in predicting an outcome, whereas the same protective factor might interact with a risk factor to have a different effect on a different outcome. Thus, different effects of risk and protective factors on a given domain are crucial to consider since the implications could be different for subpopulations of at-risk youth, including substance abusing runaways.

2.4.6 How to build resilience

According to APA (2014), there are 10 ways to build resilience:

1. Make connections**.** Good relationships with close family members, friends or others are important. Accepting help and support from those who care about you and will listen to you strengthens resilience. Some people find that being active in civic groups, faith-based organizations, or other local groups provides social support and can help with reclaiming hope. Assisting others in their time of need also can benefit the helper.
2. Avoid seeing crises as insurmountable problems**.** You can't change the fact that highly stressful events happen, but you can change how you interpret and respond to these events. Try looking beyond the present to how future circumstances may be a little better. Note any subtle ways in which you might already feel somewhat better as you deal with difficult situations.

3. Accept that change is a part of living. Certain goals may no longer be attainable as a result of adverse situations. Accepting circumstances that cannot be changed can help you focus on circumstances that you can alter.
4. Move toward your goals. Develop some realistic goals. Do something regularly — even if it seems like a small accomplishment — that enables you to move toward your goals. Instead of focusing on tasks that seem unachievable, ask yourself, "What's one thing I know I can accomplish today that helps me move in the direction I want to go?"
5. Take decisive actions**.** Act on adverse situations as much as you can. Take decisive actions, rather than detaching completely from problems and stresses and wishing they would just go away.
6. Look for opportunities for self-discovery**.** People often learn something about themselves and may find that they have grown in some respect as a result of their struggle with loss. Many people who have experienced tragedies and hardship have reported better relationships, greater sense of strength even while feeling vulnerable, increased sense of self-worth, a more developed spirituality and heightened appreciation for life.
7. Nurture a positive view of yourself. Developing confidence in your ability to solve problems and trusting your instincts helps build resilience.
8. Keep things in perspective. Even when facing very painful events, try to consider the stressful situation in a broader context and keep a long-term perspective. Avoid blowing the event out of proportion.
9. Maintain a hopeful outlook**.** An optimistic outlook enables you to expect that good things will happen in your life. Try visualizing what you want, rather than worrying about what you fear.
10. Take care of yourself. Pay attention to your own needs and feelings. Engage in activities that you enjoy and find relaxing. Exercise regularly. Taking care of yourself helps to keep your mind and body primed to deal with situations that require resilience.

Additional ways of strengthening resilience may be helpful. For example, some people write about their deepest thoughts and feelings related to trauma or other stressful events in their life. Meditation and spiritual practices help some people build connections and restore hope.

2.5 Summary of literature review

This part summarized and discussed theoretical frame for the three variables trauma, PTSD, and resilience.

2.5.1 Trauma

Trauma has been described as an experiencing, witnessing, threatened death or serious injury, or a threat to the physical integrity of self or others. Trauma theorists tried to classify trauma into many categories as single or complex, trauma victims as primary and secondary, also nature and types of the traumatic events.

There are many factors can increase the severity of traumatic events such as prolonged, repeated traumatic events, and individual nature of the event or situation. The development of posttraumatic stress disorder as well as to a variety of other psychiatric disorders, including depression, generalized anxiety disorder, panic attacks, borderline personality disorder, and substance abuse in adult survivors of trauma.

Children and adolescents exposed to trauma affected in many ways; it can affect their ability to regulate, identify, and express emotions, individual's core identity and ability to relate to others, develop a foreshortened sense of the future, disruption attachment relationships, aggressive behavior against self and others, and failure to achieve developmental competencies or milestones.

2.5.2 Posttraumatic stress disorder

PTSD had been defined as an acute, chronic, delayed, debilitating, and complex mental disorder. Theorists identified a critical feature of PTSD, which is the development of characteristic symptoms following exposure to an extreme traumatic stressor such as direct personal experience of an event involving direct or threatened death or severe injury.

PTSD in children and adolescents has attracted considerable clinical and research interest among theorists and researchers. Although the PTSD diagnosis addresses the symptoms of posttraumatic stress, it does not focus on causes in a patient’s early developmental history, nor does it offer a more complex and comprehensive view of psychosocial stressors and daily functioning that exert influence over all areas of life.

PTSD is associated with disturbances in a wide range of psychological processes including memory, attention, cognitive–affective reactions, beliefs, coping strategies, and social support. The person with PTSD symptoms mostly show fear and helplessness, sleep disturbances, hyper arousal and hypervigilance, persistently reliving the event through graphic and magnified horrific flashbacks and intrusive thoughts, and unsuccessful attempts to avoid being reminded of it.

Theorists have identified many effective therapeutic approaches and techniques have been used with trauma survivors who mostly develop PTSD symptoms. These therapeutic techniques include brief psychodynamic psychotherapy, cognitive behavioral therapy, eye movement desensitization and reprocessing, a stage-specific model, a self-trauma model, and a Stage-Oriented Treatment Model.

2.5.3 Resilience

Resilience had been defined as the ability to successfully cope with change or misfortune. It's the opposite of vulnerability, reflects the ability of individuals to maintain relatively stable mental function throughout the course of events.

Research of resilience focused on individual traits and disposition, such as an easy going temperament and higher intelligence which were found to be helpful, although not essential for resilience. These researches identified many factors related strongly to resilience, including gender, empathy with others, responsibility, internal locus of control, social maturity, achievement orientation, gentleness and nurturance, social perceptiveness, intelligence, high self-esteem and self-efficacy, with the sense of hope and personal control, make a successful coping.

There are many ways to be resilient, such as make connections, avoid seeing crises as insurmountable problems, accept that change is a part of living, move toward your goals, take decisive actions, look for opportunities for self-discovery, nurture a positive view of yourself, Keep things in perspective, maintain a hopeful outlook, and take care of yourself.

Part II: Literature review of trauma, posttraumatic stress disorder and resilience

In this part, the researcher represents previous researches which studied trauma, PTSD, and resilience.

2.6 Trauma

Trauma, often conceptualized as extreme stressors and individual psychological responses, is in reality much more complex. Trauma is embedded within cultural attitudes, behaviors, and systems that influence both stressors and outcomes. However, attention to trauma and its effects among health professionals often focuses on a narrow range of victims' psychological experiences and neglects these broader contexts and their impacts.

2.6.1 Nature and severity of traumatic events

Increasing evidence demonstrates that trauma, particularly repeated trauma and maltreatment, can have lifelong impact on multiple domains of functioning, including adaptive and interpersonal functioning, emotion regulation, cognition and memory, and neuroendocrine function (Lanius et al., 2010). Most youth who experience significant trauma display disturbances of mood, arousal, and behavior immediately, and although many recover, approximately one-third develop enduring symptoms of posttraumatic stress disorder (PTSD) (Cohen et al., 2010).

A study conducted in Gaza Strip by Thabet et al. (2014), that aimed to investigate types of traumatic events due to war on Gaza experienced by Palestinian adolescents in relation to PTSD and anxiety and coping strategies as mediating factor. The study sample consisted of 358 adolescents aged 15 to 18 years old age. The mean age was 16.7 years. The study showed that the traumatic experiences reported by the adolescents in order were: 90.8% watched mutilated bodies on TV, 88.5% heard shelling of the area by heavy artillery, 86.6% saw the signs of shelling on the ground, and 86.0% heard the sonic sounds of the jetfighters.

Abu Sultan (2012), study revealed watching mutilated bodies on TV was the highest traumatic experience (92.73%) of university students, then witnessing the shelling and destruction of another's home (47.37%) and witnessing firing by tanks and heavy artillery at neighbors homes (47.12%).

The main findings of Dimitry (2011) study were: children and adolescents living in these conflict zones are exposed to high levels of traumatic experiences. Number of conflict-related traumatic experiences correlates positively with prevalence of mental, behavioral and emotional problems.

An ethnographic study of the meanings of trauma for Palestinians in the Gaza Strip found that there are three distinct social representations of trauma (sadma [sudden blow], faji'ah [tragedy], and musiba [calamity]), as well as multiple local idioms of distress (Afana et al., 2010).

Another study of Thabet et al (2010), demonstrated the most events adolescents experienced were witnessing bombardments (85% to 96%) and media exposure (95%). Up to 17% of the adolescents experienced direct, physical exposure (7% personal injury).

Altawil et al. (2008), found in their study that every child and adolescent in Palestine had been exposed to at least three traumatic events. The most prevalent types of trauma exposure were as follows: 99% of them had suffered humiliation (either to themselves or a family member); 97% had been exposed to the sound of explosions/bombs; 85% had witnessed a martyr's funeral and 84% had witnessed shelling by tanks, artillery, or military planes.

In another study of a representative sample of 420 school children, results showed that 92% of them had experienced severely traumatizing events such as combat, bombing, shelling, or witnessing the death of a loved one (Elbert et al., 2009).

Elklit and Petersen (2008) studied a broad range of traumatic events and negative life events among adolescents using the same measures in different countries. Four different countries with various challenges for the adolescents were selected: Lithuania, Denmark, Iceland and The Faroe Islands as Nordic welfare States. Ninety percent of the adolescents in the four countries reported having directly experienced or having witnessed at least one event, and the five most recorded direct events were: death of someone close (47%), threat of being beaten (30%), humiliation or persecution by others/bullying (25%), near-drowning (21%), and traffic accidents (18%). The five least prevalent direct events were: physical abuse (5%), sexual abuse (4%), severe childhood neglect (4%), rape (3%), and

pregnancy/abortion (2%). The adolescents in the four countries had on average been exposed to 2.6 events.

Many studies have shown that more than two thirds of the general population is likely to be exposed to trauma in their lifespan and up to one fifth of Americans may experience traumatic events in the USA in any given year (Neria et al, 2008).

In an Icelandic national probability study of 206 9th-grade students with a mean age of 14.5 years, 74 percent of the girls and 79 percent of the boys were exposed to at least one traumatic event or life event. The most common events were the death of a family member, threat of violence, and traffic accidents (Bodvarsdottir & Elklit, 2007).

Child and adolescent exposure to a broad range of traumatic experiences has been examined in large epidemiological studies. Finkelhor et al. (2005), examined exposure to 34 forms of victimization experiences in a nationally representative sample of 2,030 children and youth ages 2 to 17 years. Findings showed widespread exposure to victimization incidents, with 71% exposed to one or more victimization incidents, with an average of 3 different kinds of victimization reported.

One study of Palestinian children aged from 12-16 years in east Jerusalem and various governorates in the West Bank showed that a substantial number of children experienced at least one lifetime trauma (54.7%) (Khamis, 2005). Another study of children living in the West Bank and Gaza Strip found that 48% of children had personally experienced or witnessed political violence, 93% of children reported feeling unsafe and vulnerable to attack (Arafat & Boothby, 2003).

Angond et al (2002) aimed in their study to examine the exposure to potentially traumatic events from middle childhood through adolescence, they found that one-quarter experienced at least one high magnitude event by age 16, 6%. One third experienced a low magnitude event.

For children and adolescents living in the Gaza Strip, events such as aerial bombardment and home demolition are among the most likely events to result in severe symptomatic reactions (Thabet et al., 2002).

According to Costello et al. (2002), 25.1% of youth report having undergone a significant trauma before age 16 years. These traumas include a wide range of terrifying or life-threatening experiences, including child maltreatment (including physical and sexual abuse and neglect), medical traumas, accidents, natural disasters, war, terrorism, refugee trauma, traumatic loss, severe bullying, and exposure to domestic and community violence.

In South African study, Ensink et al (1997) examined exposure to violence and symptoms of PTSD in a sample of adolescents from an urban township near Cape Town. Results indicated that 95% reported witnessing violent events, 56% had themselves experienced a violent event, and 22% met DSM-IV criteria for PTSD.

2.6.2 Traumatic events and socio-demographic variables

Many studies indicate that potentially traumatic experiences varies by basic sociodemographics (e.g., age, sex, race/ethnicity, socioeconomic status) (Turner et al., 2006). Demographic variables play a role in determining the ways in which children and adolescents react to violence.

A study that aimed to examine gender differences in traumatic exposure and associated posttraumatic stress disorder (PTSD) symptoms reported by a 266 male and female inmates. In the sample, 94.7% of the inmates had experienced at least one traumatic event identified in Trauma History Questionnaire – Modified. Male inmates reported higher rates of witnessing harm to others in childhood (22.4%) and adolescence (43.25) and female inmates, higher rates of interpersonal sexual trauma in childhood (31.2%), adolescence (35.3%), and adulthood (27.7%) (Komarovskaya et al., 2011). In contrast, Brodsky & Lally (2004) and Elklit (2002), concluded that the rates of exposure to traumatic events are similar for males and females. However, this may not be a consistent finding for all forms of trauma (Breslau et al., 2004).

About the age, there are many researches published from 2000 to 2011 indicate that adolescents are at greater risk of experiencing trauma than either adults or children (Nooner et al., 2012).

Bodvarsdottir & Elklit (2007), found that gender, mothers' education, and single-parenthood were associated with specific events. According to study of Breslau et al.

(1991), risk factors for exposure to traumatic events included low education, male sex, early conduct problems, extraversion, and family history of psychiatric disorder or substance problems.

It is also important to note that the parental or caregiver response to a traumatic event has significant implications for the child's functioning and outcome after the traumatic exposure. The more distressed and impaired the coping style of the parents, the higher the risk for negative outcomes in children and adolescents exposed to trauma.

Social support from parents, peers, and others has been shown to play a protective role both before and after a trauma (Collishaw et al., 2007; Lee et al., 2007), with a possible explanatory mechanism being that the presence of social support decreases the likelihood of exposure to repeated trauma (Finkelhor et al., 2007).

According to Williams et al (2007), most South Africans experience at least one traumatic event during their lives with the majority reporting multiple. Consistent variation in risk is evident for gender and marital status, but not other socio-demographic. Trauma is positively related to high distress, and findings also support a cumulative effect of trauma exposure. Individuals with the most traumas (6+) appear at five times greater risk of high distress.

2.7 Posttraumatic stress disorder

A large percentage of adolescents have been growing up in chronically political violent environments. Past evidence indicates that exposure, either direct or indirect, to war has a profound psychological impact on adolescents. Many studies have indicated that exposure to war trauma constitutes a risk factor for chronic mental health problems, mainly posttraumatic stress disorder, depression and anxiety (Amine et al., 2008; Thabet et al., 2004).

2.7.1 Prevalence of posttraumatic stress disorder

Longitudinal research has identified adolescence as a developmental period where youth are particularly susceptible to experiencing trauma and, in turn, developing PTSD (Breslau et al., 2004). Exposure to trauma is the major risk factor for depression and PTSD in war-

affected populations (Steel et al., 2009). According to Nooner et al (2012), the prevalence of PTSD among adolescents is about 3–57%.

The results of previous mentioned study, which is conducted by Thabet et al. (2014), showed that 11.8% of adolescents reported no PTSD, 24.2% reported less than two clusters of symptoms, and 34.31% reported symptoms meeting criteria for partial PTSD, while 29.8% reported symptoms meeting criteria for full PTSD.

Also a study of Dimitry (2011), that aimed to systematically review the literature on the mental health of children and adolescents living in areas of armed conflict in the Middle East, specifically Israel, Palestine, Lebanon and Iraq. Showed that the prevalence of PTSD in children and adolescents is estimated to be 5–8% in Israel, 23–70% in Palestine and 10–30% in Iraq (insufficient data for Lebanon).

A large-scale survey of 2,100 adolescents (14- to 17-yearolds) found that 35% of those in the West Bank and 36% of those in the Gaza Strip reported symptoms of PTSD (Abdeen et al., 2008).

The prevalence of PTSD has been found to vary between 35–75% in war-zones in Africa (Morgos et al., 2007), Asia (Catani et al., 2008) and Middle East (Abdeen et al., 2008; Thabet et al., 2009).

National Center for Post-Traumatic Stress Disorder (2009), showed that there are estimates indicate that nearly 30% of Vietnam veterans, 10% of Gulf War (Desert Storm) veterans, 6% to 11% of Afghanistan War (Operation Enduring Freedom [OEF]) veterans, and 12% to 20% of veterans of the Iraq War (Operation Iraqi Freedom [OIF]) have developed posttraumatic stress disorder (PTSD) as a result of their time on the battlefield.

A study of Khamis (2005), was aimed to assess the prevalence of PTSD among Palestinian school-age from 12 to 16 years. Participants were 1,000 children They were selected from governmental, private, and United Nations Relief Work Agency (UNRWA) schools in East Jerusalem and various governorates in the West Bank. Post-traumatic stress disorder (PTSD) was diagnosed in 34.1% of them, most of whom were refugees, males, and working.

In a sample of Rwandans living in four diverse communes eight years after the 1994 genocide in that country, Pham et al. (2004) reported a 24.8% prevalence rate of PTSD, with higher rates again found among women than men.

PTSD prevalence rates in less economically developed countries tend to be higher than in more developed countries. For example, among a geographically diverse sample of Mexican adults, lifetime PTSD prevalence was estimated to be 19% (Norris et al. 2003). In addition, among adult Israeli residents, Bleich et al. (2003) found that 9.4% met criteria for current PTSD, with higher rates among women (16.2%) than among men (2.4%). Finally, in a Palestinian sample, Punamaki et al. (2005) found PTSD prevalence rates of 21.5% and 13.2% for men and women, respectively.

Substantially higher rates of PTSD are observed in those countries that are non-Western and developing. Many of these estimates were derived following periods of war and political turmoil. An examination of large, fairly representative samples of men and women age 16 or older living in Algeria, Cambodia, Ethiopia, and Gaza, de Jong et al. (2001) found high rates of PTSD in each sample (37.4%, 28.4%, 15.8%, and 17.8%, respectively).

A study that examined the prevalence of exposure to violence and related symptoms among 104 adolescents from 4 secondary schools in the Cape Town metropole of South Africa found that approximately 24.1% experienced between 8 and 15 symptoms of PTSD, and 5.8% met the full criteria for PTSD after exposure to at least 1 type of violent trauma (Ward et al., 2001).

According to Kessler et al, (1995), PTSD is a reactive psychopathological response to a traumatic event. It occurs in approximately 7.8% of people suffering adversity in the US, although lower rates have been reported in Europe (e.g., 1.4% in Germany; see Breslau, 2009).

2.7.2 Posttraumatic stress disorder and socio-demographic variables

Early epidemiological studies found relationships between demographic variables and exposure to trauma and between demographics and the development of PTSD.

Gender is important factor that associated with vulnerability to develop PTSD. Epidemiological studies have revealed gender specific risk for posttraumatic stress disorder (PTSD) development, such that females are approximately twice as likely as males to develop PTSD following exposure to a traumatic event (Breslau et al., 1998; Kessler et al., 1995; Thabet et al., 2014). Also Komarovskaya et al (2011), concluded that women showed higher rates of PTSD (40.2%) when compared to men (12.5%).

Previous mentioned study of de Jong et al. (2001), found that in Algeria and Cambodia, and consistent with findings in the United States, women had higher rates of PTSD than did men (43.8% versus 32.2% and 34.2% versus 20.6%, respectively). In contrast, in Ethiopia and Gaza, women possessed similar or lower rates of PTSD in comparison with men (15.2% versus 16.6% and 13.5% versus 22.6%, respectively).

It should be noted that rates of PTSD development as a consequence of rape and other forms of sexual assault are greater for both genders than with other forms of trauma. In addition, the rates of rape are lower in males than in females, suggesting that further inquiry is warranted before drawing conclusions about differences in PTSD rates for males and females (Breslau et al., 2004). For other forms of trauma, investigators such as Breslau and colleagues (2004) found a similar risk of developing PTSD in the two genders. This finding may not be so clear, however, and may be attributed to looking at numbers based on the sole occurrence of PTSD (non-comorbid PTSD).

Age has been also shown to be a factor associated with the development of PTSD. Adolescence is a developmental period of heightened vulnerability to trauma and PTSD (Breslau et al., 2004; Khamis, 2005). Adolescence is a highly stressful period of development in which the individual is faced with numerous challenges. The investigations of Kilpatrick and Breslau mirror the finding of Van der Kolk (1985) that adolescents were at greater risk than adults for developing PTSD. Adolescence therefore can potentially represent a period of heightened vulnerability during which risk of experiencing trauma is particularly high, as compared to both childhood and adulthood, but the ability to adaptively cope with that trauma is particularly fragile.

Environmental factors can affect the development of PTSD. Theoretically, the development of PTSD requires exposure. Exposure to high-index stressors has been noted

to increase the risk of developing PTSD in youth (March, 1993). Kilpatrick and colleagues (1998) determined that individuals exposed to more high-index stressors were at greater peril of developing PTSD. Youth from the inner city who live in high-crime neighborhoods and experience community violence may represent a vulnerable population. (Fitzpatrick & Boldizar, 1992; Silva et al., 2000).

Social factors play an important role in developing PTSD. Both the Carlson group (2001) and Pine and Cohen (2002) emphasized that social support is an important factor to assess when working with children exposed to trauma. Pine and Cohen explain that the role of less than optimal familial and social support cannot be overestimated as a potential vulnerability factor for developing PTSD, highlighting that disruption of social and familial support plays an important role in the development of psychiatric disturbance.

Intra and extra-familial resources appear to serve a protective function against the effects of trauma, such that youth with fewer such resources are more likely to develop PTSD symptoms (Bal et al., 2005; Collishaw et al., 2007). Recovery from PTSD has also been empirically shown to benefit from parental or caregiver support and positive attitudes (Breslau et al., 1991), as a result of which parental or caregiver involvement is routinely incorporated into treatment.

Cognitive ability or intelligence is an important biological factor in the development of PTSD has been examined in various studies. In a large-scale study by Tiet and colleagues (1998), various stressors were examined for their ability to impact upon functioning. In this study, higher IQs facilitated the adjustment process during stress. Silva and colleagues (2000) also examined the relationship between verbal IQ and the development of PTSD. In their sample, higher verbal IQs represented the most powerful resilience factor.

2.8 Trauma and posttraumatic stress disorder

Numerous studies defined the severity of a traumatic event in a variety of creative ways and found a significant association with PTSD severity. Characteristics of the event itself, not surprisingly, predict the development and severity of PTSD. Research indicated that there is a correlation between previous and the number of traumatic experiences, and PTSD, with more exposure leading to an increase of symptoms of trauma (Smith et al., 2001). In particular, a strong association was found between children and adolescents who

were exposed to war stressors and high levels of PTSD symptoms and grief reactions (Papageorgiou et al., 2000).

It was found that experiencing more than one traumatic event yielded a higher risk for developing PTSD (Breslau et al., 1999a), especially in the situation of war (Ispanovic-Radojkovic, 1993). According to Seedat et al (2004), 14.5% exposed to one or more traumas fulfilled criteria for a full diagnosis of PTSD, and 10.3% fulfilled partial criteria for PTSD.

Research suggests that individuals who experience chronic trauma have lower rates of recovery from PTSD (Green, 1985). Furthermore, longer periods of trauma exposure have been associated with increased PTSD symptomatology (Weaver & Clum, 1995).

Many studies found a complex interaction between exposure to traumatic events, active participation, and beliefs between adolescents living through the Intifada in the Gaza Strip (Punamaki & Suleiman, 1990). However, Son (1995) found no relationship between a number of traumatic experiences and PTSD.

Punamaki, Qouta, and El-Sarraj (2001), examined the relation of exposure to terrorism, war stressors, and resilience among children subjected to ongoing violence, chaos, and disruption of normal living. They found that children exposed to terrorism experience loss, danger, and fear for their lives and can suffer from anxiety, emotional problems, and PTSD symptoms.

Some studies examine proxies for traumatic event severity and relate them to severity of PTSD. For example, among survivors of the Oklahoma City bombing, suffering physical injuries was strongly related to PTSD symptoms six months later (Tucker et al. 2000). In addition, in an Australian national sample, Rosenman (2002) found that experiencing combat and rape or molestation were events that were especially likely to increase one's odds of developing PTSD. Finally, in a sample of Mexican adults, Norris et al. (2003) found that exposure to violence in childhood was related to the chronicity of PTSD.

In addition, in a study examining the responses of adolescents (aged 12–16) to ongoing terrorist attacks in Israel, the most severe traumatic dissociation, grief, and PTSD symptoms were found among those who had directly witnessed an attack (Yahav, 2011).

2.9 Resilience

In the last 50 years, research on resilience has come from a variety of disciplines, using both quantitative and qualitative methods (Masten, 1999). Initial research arose from efforts to understand the etiology and development of psychopathology in children "at risk" due to factors such as poverty, inter-parental conflict, parental mental illness, or a combination of risk factors (Garmezy, 1974).

Increased understanding of the impact of trauma and the characteristics that promote resilience in individuals has recently become more critical given heightened tensions in the international political environment, which have included increased exposure to threats of terrorism and armed conflict.

Thabet et al. (2013), conducted a study that aimed to investigate the impact of siege on Palestinian morality and resilience. The study showed that mean resilience scores was 37.40. Personal competence mean was 12.35, trust on own instincts mean was 8.32, control mean was 7.66, positive acceptance mean was 4.34, and spiritual influences mean was 5.

A study about Lebanese adolescent experience of war, conducted by Tayara (2013), showed that strong correlations between the different types of war experiences and resilience. Bereavement, combat and displacement were found to negatively correlate with resiliency subscales, whereas witnessing violence was found to positively correlate with resiliency subscales.

In Gaza Strip, A study of Ghannam (2012), showed that the total mean of traumatic experiences was 9.40 (moderate experiences), and there was no relationship between trauma and the demographic characteristics as sex, age, residence, family size or parent's education. The study demonstrated that the total mean of resilience was 112.18, and for resilience subscales as follow: individual factor (Personal skills, peer component, and social skills) was 42.20, relationship with caregiver (physical and psychological) was

28.60, and contextual components that facilitate a sense of belonging (spiritual beliefs, culture, and educational items) mean was 41.38.

A review of resilience research reporting prevalence data noted that the proportions found to be resilient varied from 25 to 84% (Vanderbilt & Shaw, 2008). Another study is conducted to assess prevalence of resilience on the children who live under conditions of war and military violence, the results showed that 21% of children were classified as resilient, 23% as traumatized, 23% as vulnerable, and 33% as spared from both trauma and psychological disorders (El-Sarraj et al, 2011).

A recent collaborative effort among eight agencies conducting psychosocial research in the West Bank and Gaza Strip found relatively high levels of resilience in baseline measurements of children (Interagency, 2010).

Another review of the research on Gazan children, Quota et al. (2008) suggested that the percentage of the population that might be classified as resilient versus vulnerable at any given time may change as a function of external political circumstances. In addition, the authors suggested that, although military violence is associated with psychological distress, it is not associated with resilience, which may instead be predicted by familial and interpersonal factors.

One of the largest studies of resilience in at-risk children was the longitudinal study of a multiracial cohort of 698 infants born on the island of Kauai, Hawaii, in 1955. An analysis of the life-span developmental course of these high-risk individuals from childhood to adulthood resulted in the emergence of three types. The first factor was having at least average intelligence and dispositional attitudes, such as self-efficacy and self-esteem that elicited positive responses from others. The second factor was having affective ties within the extended family which provided support in times of stress. The third factor was having external support systems at school, work, or church which rewarded competence (Sharon, 2000).

2.9.1 Resilience and socio-demographic factors

Thabet and Abadsa (2013), aimed in their study to examine relationship between psychological problems in families' victims of community violence and resilience in the

Gaza Strip. A sample of 255 participants was selected, 120 were males (47.1%) and 135 were females (52.9%). The results showed that the participants mean psychological symptoms were 121.48. Females reported more psychological symptoms than males. Mean of resilience was 60.84, Males had more resilience than females, more committed, more able to control, and challenging than females. People living in north Gaza had less resilient and less challenging than people living in Gaza or Khan Younis.

The results of El-Sarraj et al (2011) study, which aimed to examine whether the role of resilience- fostering family and child-related factors differs in regard to (a) gender, (b) developmental stages (middle childhood, early adolescence, and adolescence), (c) age, (d) place of residence, and (e) family size revealed a rather identical distribution of the resilience categories. Results showed that 27% of boys and 19% of girls were resilient, and 38% of the girls and 28% of the boys were spared. Children from villages were less resilient (10.5%) than children from refugee camps, towns, or resettled areas (23.0%–27.5%). Children from refugee camps belonged more often to the traumatized group (33%) than other children (14%–22%), whereas children from villages and resettled areas were more often spared from both high trauma exposure and disorders.

One of the factors most consistently associated with positive outcomes is nurturant, responsive parenting. Parenting practices have been shown to be associated with children's positive social adjustment, including warmth, consistent discipline, responsiveness, structure, and monitoring (Masten & Reed, 2002**).** Few studies have examined the interaction of parenting with risk status, but there is some evidence that parenting may be more strongly associated with child outcomes in the context of high risk (Masten et al., 1999). Thabet et al. (2009) conducted a study in which they found perceived parental support to be a protective factor against PTSD symptoms.

Punamaki et al. (2001) identified active response to military violence, creativity, and harmonious parenting as factors that contribute to the resilience of Palestinian children.

A study that examined the factors associated with resilience and vulnerability in mental health in children living in Gaza Strip, showed that the factors associated with resilience were maternal rated good health, higher maternal level of education, and less child exposure to traumatic events. Factors associated with vulnerability were poor maternal

mental health, and male gender (Massad et al., 2009). Also research on Palestinian children and adolescents found that parental love and proper discipline increased a child's resilience by increasing their creativity and cognitive capacity (Ayalon, 1993; Punamaki, 1997).

In addition to specific parenting practices, the quality of the parent-child relationship has also been examined in relation to positive child outcomes. Theoretically, having a good relationship with a parent prepares the child to engage in healthy productive relationships with other people in the social environment. Ingoldsby et al (2001) found that having a good relationship with at least one parent was associated with less conflictual relationships with siblings, teachers, and peers. Researchers have found that the quality and closeness of the parent-child relationship relates to child outcomes across risk status (Emery & Forehand, 1996; Radke-Yarrow & Brown, 1993; Stouthamer-Loeber et al., 2002).

A study by Kassis et al (2013), examined family violence and resilience in a random sample of 5,149 middle school students with a mean age of 14.5 years from four EU-countries (Austria, Germany, Slovenia, and Spain). They found that more than 30% of respondents reported experiencing family violence. Results showed that structural characteristics like country, gender, socio-economic status and migration status were minimally predictive of violence and depression resilience at any level. Resilience supportive factors confirmed by this study are: higher emotional self-control, talking with parents or friends about violence, seeking help to avoid violence, and not endorsing aggression supportive beliefs.

Marital Quality is also important factor. According to Nichols & Schwartz (1998), the quality of the marital relationship may have important implications for child outcomes (Nichols & Schwartz, 1998). From reviewing the literature, much research has focused on how the quality of the marriage may affect parenting and the parent-child relationship, for example, by increasing the parent's psychosocial resources and ability to consistently deal with child behavior. Direct associations between marital quality and various child outcomes also have been demonstrated (Cummings et al,, 2004; Miller et al., 1993). Marital relationships characterized by low conflict or the use of constructive tactics to resolve conflict have been associated with low levels of child adjustment problems (Belsky et al., 1991). Marital quality also has been positively associated with attachment security (Belsky, 1996).

Whitbeck et al (2006) examined resilience among a sample of American Indian adolescents living on or near reservations in the upper Midwest defining resilience in the context of positive outcomes in the face of adversity, logistic regression was used to examine the predictors of pro-social outcomes among youth who lived in moderate to high adversity households. The analyses identified key risk and protective factors. A primary risk factor appeared to be perceived discrimination. Protective factors were from multiple contexts: family, community and culture. Having a warm and supportive mother, perceiving community support, and exhibiting higher levels of enculturation were each associated with increased likelihood of pro-social outcomes.

According to Kaufman (1990), children with high IQs may be more likely to possess effective information-processing and problem-solving skills, which enable them to contend with the stresses and challenges they encounter. Although significant interaction effects are relatively rare in the resilience literature, evidence suggests that IQ may be particularly important in protecting against maladaptive outcomes associated with a range of risk factors, including maternal psychopathology (Tiet et al., 2001), paternal criminal behavior (Kandel et al., 1988), and negative life events (Masten et al., 1999).

Another factor is emotion regulation, which referred to as processes that monitor, evaluate, and/or modify the intensity and duration of emotional reactions to accomplish one's goals (Thompson & Calkins, 1996). According to Masten & Coatsworth (1998), emotion regulation has been studied less frequently as a protective factor than IQ, but there is ample research to suggest that it is an important component of successful adaptation. Studies of resilience have found that factors associated with emotion regulation (e.g., self-help skills, ego control, and ego resiliency) are related to positive adjustment across risk status, and that such factors appear to be especially important in the context of adversity (Cicchetti & Rogosch, 1997).

2.10 Trauma, posttraumatic stress disorder, and resilience

Previous exposure to trauma or stress has a complicated relationship to resilience. A history of prior exposure to trauma is generally associated with the development of more severe PTSD symptoms after a new trauma (Fullerton et al., 2004).

Most of the research on posttraumatic stress disorder (PTSD) has focused on variables that confer risk factors for developing this disorder after a trauma. Far fewer studies have focused on variables that buffer risk or serve as resilience factors. There is a growing interest in determining and understanding factors that promote resilience to psychopathology (e.g. PTSD) in individuals after they experience a traumatic event.

In a recent study of Thabet et al (2015), that assessed the prevalence and mental health function of resilience in condition of military siege and violence in a Palestinian community sample. The participants were 386 Palestinian children and adolescents from Gaza. The results revealed a 25% prevalence of resilient children, and resilience was more common in well-educated families and children from geographical areas exposed to heavily Israeli shelling and destruction. There were generally no gender differences in the exposure to traumatic events, as all. Neither were there gender differences in the mean number of traumatic events related to Israeli military violence or Palestinian factional fighting. According to the DSM-IV criterion, 12.4% of the children and adolescents reported probable PTSD, and 22.37% filled the two criteria partial PTSD, and 26.7% the one criteria partial PTSD (re-experiencing or avoidance or hyper arousal). More than a third (38.4% of the children did not have PTSD. There were no significant differences between boys and girls in PTSD. Boys and girls did not differ in the levels of PTSD. Also only one marginal gender difference was found concerning resilience characteristics: girls reported more feelings of control than boys. The results revealed that 25.0% of the participants was classified as resilient indicating presence of high exposure to traumatic events and absence of PTSD and 22.2% as traumatized, i.e., presence of both high exposure to trauma and occurrence of PTSD. Of the children 12.7% were classified as vulnerable, and 40.1% were spared of both high trauma and PTSD.

Bensimon (2012), did a study about elaboration on the association between trauma, PTSD and posttraumatic growth, and the role of trait resilience. Results showed that trauma increased PTSD and growth levels, whereas resilience was associated negatively with PTSD.

A study of Yahav (2011) about the effect of exposure to war demonstrated that most Israeli, as well as Palestinian, children show impressive resilience. In times of crisis, they react with few severe PTSD symptoms or psychological or behavioral problems, and even those that are present are most often transient.

According to Fincham et al. (2009), high levels of exposure to community violence, perceived stress, and abuse and neglect may contribute to the development of PTSD symptoms in South African adolescents. However, high levels of resilience may buffer the negative effects of childhood abuse and neglect.

Another study that evaluated the relationship between spirituality, resilience, anger, health status, and PTSD symptom severity among 1200 adult trauma survivors in North Carolina found that higher levels of resilience were associated with lower levels of PTSD symptoms (Connor et al., 2003).

Sutker, Davis, Uddo, and Ditta (1995), found in their study of war-zone stress, personal resources, and PTSD in Persian Gulf War veterans. From a sample of 775 military veterans, 97 with diagnosed PTSD were compared to 484 who did not show pathological signs of distress. The results indicated that veterans with PTSD scored lower on Kobasa's (1979) measure of hardiness (i.e., commitment, control, challenge) and had less social support and family cohesion as well as avoidant coping styles with strong tendencies to self-blame.

There are several studies that have examined resilience in relation to war trauma, internment, civil violence, and terrorism. King et al. (1998) studied resilience associated with PTSD among Vietnam veterans in relation to hardiness, social support, and stressful life events. L. A. King et al. predicted that hardy war veterans would cope better with life stresses than less hardy veterans. They suggested that hardy veterans would utilize social supports in their environment to overcome a stress. They predicted that veterans exposed to extreme war stressors who had strong, current social support would display fewer PTSD symptoms than veterans with less support. They argued that when war stressors were measured at low levels, there would be a weak relationship between social support and the development of PTSD. The results indicated that male and female veterans who scored high on the hardiness dimensions of control, commitment, and challenge showed fewer

PTSD symptoms. Hardiness was associated with fewer PTSD symptoms and appears to help the individual establish relationships that aid coping with PTSD symptoms when present.

2.11 Comments on the literature review

2.11.1 Trauma

By reviewing the literature, we noticed that the most people who experience significant trauma display disturbances of mood, arousal, and behavior. Part of them develop psychopathology such as PTSD (Cohen et al., 2010; Lanius et al., 2010).

We noticed also that people live in war and conflicts areas (e.g. Palestine, Lebanon, Afghanistan, Algeria, and Ethiopia) are exposed to high levels of traumatic experiences. These traumatic experiences include: watched mutilated bodies on TV, heard shelling of the area by heavy artillery, saw the signs of shelling on the ground, and heard the sonic sounds of the jetfighters, experienced severely traumatizing events such as combat, bombing, or witnessing the death of a loved one … etc.

However, we noticed other traumatic experiences in non-conflicts and wars areas, include a wide range of terrifying or life-threatening experiences, including child maltreatment (physical and sexual abuse and neglect), medical traumas, accidents… etc.

All studies showed that the severity and the number of traumatic experiences will increase the severity and prevalence of mental, behavioral and emotional problems (Dimitry, 2011; Thabet et al., 2014; Elklit and Petersen, 2008).

We found that childhood and adolescence are serious periods of life to expose traumatic events (especially repeated and sever ones), these can have lifelong impact on multiple domains of their functioning, including adaptive and interpersonal functioning, emotion regulation, cognition and memory, and neuroendocrine function.

By reviewing the literature, we noticed that socio-demographic variables play an important role in determining the ways in which people react to traumatic events (e.g. age, sex, race/ethnicity, socioeconomic status).

There are other variables, which are play an important role in experiencing traumatic events, such as education, parental or caregiver support, Social support, and coping style of the parents.

Although all children and adolescents living in war zones are compelled to cope with the threat of violence, the type and severity of traumatic events varies from context to context. Barber (2008) reported that in comparison to Bosnian children, Palestinian children may be more likely to witness the humiliation of a family member, especially their fathers. Palestinian children, perhaps due to the long duration of the conflict, are relatively unsurprised by violent escalation and their own continuing political marginalization. Palestinian children may be particularly likely to experience violence at close proximity (Barber, 2008).

2.11.2 Posttraumatic stress disorder

By reviewing the literature, the researcher noticed that the exposure to war trauma constitutes a risk factor for chronic mental health problems, mainly PTSD. By reviewing several studies that are relevant to this study, we noticed that these studies are consistent with each other, whereas these results revealed the negative psychological effect on population who are living at war areas, with consistent prevalence and rates.

About the prevalence of PTSD, by reviewing literature and researches were published from 2000 up to now, and according to Nooner et al (2012), the prevalence of developing PTSD among adolescents is 3-57%, and all previous mentioned studies showed consistent results with each other. Higher rates of PTSD were found mostly in countries and areas that face conflicts and wars frequently.

We noticed that PTSD prevalence rates in less economically developed countries tend to be higher than in more developed countries. For example, among a geographically diverse sample of Mexican adults, lifetime PTSD prevalence was estimated to be 19% (Norris et al. 2003). In addition, among adult Israeli residents, Bleich et al. (2003) found that 9.4% met criteria for current PTSD, with higher rates among women (16.2%) than among men (2.4%). Finally, in a Palestinian sample, Punamaki et al. (2005) found PTSD prevalence rates of 21.5% and 13.2% for men and women, respectively.

About gender differences, we noticed that the epidemiological studies have revealed that females are mostly approximately twice as likely as males to develop PTSD following exposure to a traumatic event (Breslau et al., 1998; Kessler et al., 1995; Thabet et al, 2014). Incongruent result was in Khamis (2005) study, whereas most of PTSD diagnosed children were males. Also in de Jong et al. (2001) study, women possessed similar or lower rates of PTSD in comparison with men, in Ethiopia and Gaza, (15.2% versus 16.6% and 13.5% versus 22.6%, respectively). Same results in Breslau and colleagues (2004) study, they found a similar risk of developing PTSD in the two genders.

All of previous mentioned studies showed that children and adolescents are at greater risk of experiencing trauma and develop PTSD mainly and other psychological problems (Thabet et al., 2004, 2014; Breslau et al., 1998, 2004; Steel et al., 2009; Khamis, 2005). The investigations of Kilpatrick and Breslau mirror the finding of Van der Kolk (1985) that adolescents were at greater risk than adults for developing PTSD. Also Nooner et al (2012), demonstrated that adolescents are at greater risk of experiencing trauma than either adults or children.

We noticed that there are many resilience and vulnerability characteristics in the development of PTSD, such as biological, environmental, psychological/ developmental, and social variables.

2.11.3 Resilience

By reviewing the literature we noticed that the previous exposure to trauma or stress has a complicated relationship to resilience.

About resilience prevalence in research, Vanderbilt (2008) noted that the proportions found to be resilient varied from 25 to 84%. Congruent result by El-Sarraj et al (2011), in which 21% of children were classified as resilient in Gaza Strip. Another congruent study results showed that mean resilience scores was 37.40. Personal competence mean was 12.35, trust on own instincts mean was 8.32, control mean was 7.66, positive acceptance mean was 4.34, and spiritual influences mean was 5 (Thabet et al., 2013).

Reviewing the previous studies were conducted in Gaza Strip, showed that the people living in north Gaza had less resilient and less challenging than people living in Gaza or Khan Younis (Thabet and Abadsa, 2013). We noticed that children from villages were less resilient than children from refugee camps, towns, or resettled areas (El-Sarraj et al., 2011).

Majority of studies showed strong correlations between the different types of war experiences and resilience, also showed that total scores of resilience were correlated negatively with PTSD (Tayara, 2013; Thabet, 2013).

Reviewing the literature showed that most of studies were concluded that females reported more psychological symptoms than males, but males had more resilience than females, more able to control, and challenging than females (eg. Thabet and Abadsa, 2013; El-Sarraj et al., 2011).

There are number of factors, including child IQ, emotion regulation, temperament, parenting, low parental discord, effective schools, and safe neighborhoods, have been found to contribute to positive outcomes and resilience in the context of high risk.

2.11.4 Trauma, posttraumatic stress disorder, and resilience

By reviewing the literature, all of previous mentioned study were demonstrated a consistent and congruent results, where experience trauma increased PTSD levels, and resilience was associated negatively with PTSD. With these results we concluded that there are strong relationship in trauma, PTSD, and resilience.

Chapter (3)
Methodology

3.1 Introduction

This chapter illustrates the methodology used in conducting this study. It includes study design, study population, study setting, research sample, eligibility criteria, methods of data collection, entry and analysis, study instruments, scientific rigor (validity and reliability), ethical considerations, and limitations of the study.

3.2 Study design

The researcher used a descriptive analytic, cross sectional design of research to answer the study question about investigating PTSD and resilience in adolescents exposed to traumatic events due to 51 day war on Gaza. In cross sectional studies, the data is gathered to represent what is going on at only one point in time (Olsen, 2004).

3.3 Study population

The study population included all adolescents aged from 13-18 years old in the five governorates in Gaza Strip. The total population in Gaza strip is approximately 1.8 million people (PCBS, 2014). According to PCBS (2012b), the whole number of the (13-18 years) population represents about 17.5% of total population in Gaza Strip, which means that the study population number is about 315,000 adolescents aged from 13 to 18 years.

3.4 Study setting

This study included the five governorates of Gaza Strip. It was a community-based one; the participants were selected with help of ten Community Based Organizations (CBOs) from each governorate in Gaza Strip. These ten CBOs were chosen randomly. Annex 3 shows the distribution and the names of these CBOs.

3.5 Study sample

3.5.1 Sample calculation

By using sample size calculator software at confidence level 95% and confidence interval 5%, the recommended sample equals 384 adolescents. The researcher increased the number of sample to 420 to cover for possible non-respondents. The respondents were 408 adolescents (response rate 97.1%).

3.5.2 Sampling process

The researcher selected the study sample by using proportional convenient sampling, in which:

1. The researcher prepared a list of available CBOs from all areas in Gaza and divided them into five categories (According to five Governorates of Gaza Strip). Then one to four CBOs were selected randomly from each area by using simple random sampling (to get the sample with help of these selected CBOs).

2. The needed number of the sample from each governorate was calculated according to the density of the population in it (Proportional sample).

3. After the number of the sample determined from each area, the selected CBOs were contacted and informed about the purpose of the study and asked to call community to send the target group of adolescents to participate in the study. The researcher visited the selected CBOs several times to get the sample (Convenient sample).

3.5.3 Distribution of the sample

The whole number of study population was about 315,000 adolescents; the sample number was 408 (0.13%) adolescents of the total population; 209 (51.2 %) of the participants were boys and 199 (48.8%) were girls. According to PCBS, the percentage of adolescents aged from 13-18 years in North Gaza is about 17% of total population, 32% in Gaza, 14% in middle area, 23% in Khan Younis, and 11% in Rafah. Then the distribution of the sample was according to these percentages, in which 72 of the participant were from the North area, 132 were from Gaza, 60 were from the Middle area, 96 were from Khan Younis and 48 were from Rafah area. Figure 3.1 shows the distribution of sample in Gaza's governorates according to sex.

The range of age was 13-18 years, 67 (16.4%) of the study sample were 13 years old, 71(17.4%) were 14 years old, 66 (16.2%) were 15 years old, 69 (16.9%) were 16 years old, 66 (16.2%) were 17 years old and 69 (16.9%) were 18 years old. Figure 3.2 shows the distribution of sample according to their age.

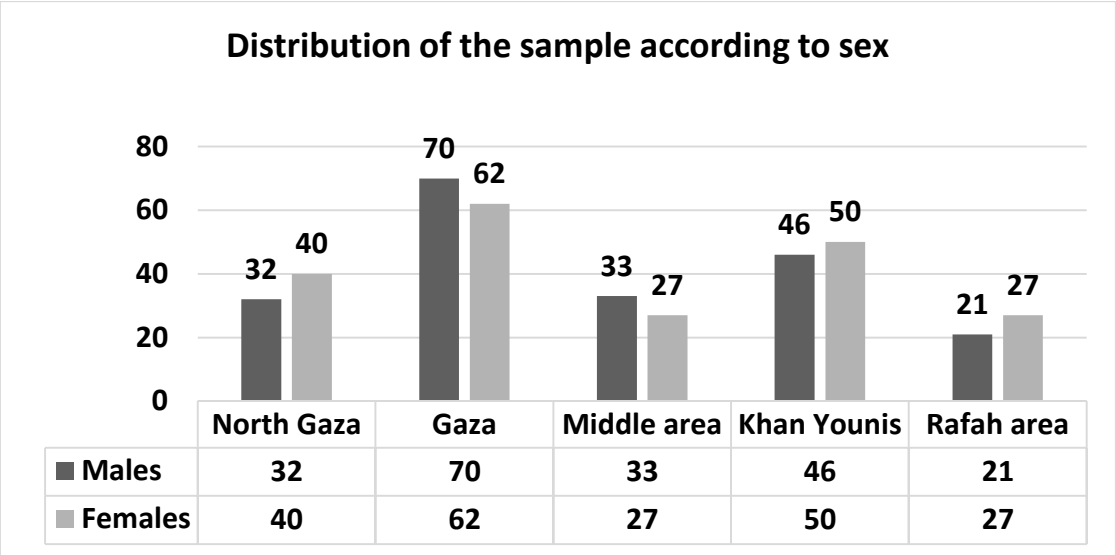

Figure 3.1: Distribution of the sample according to sex in each area.

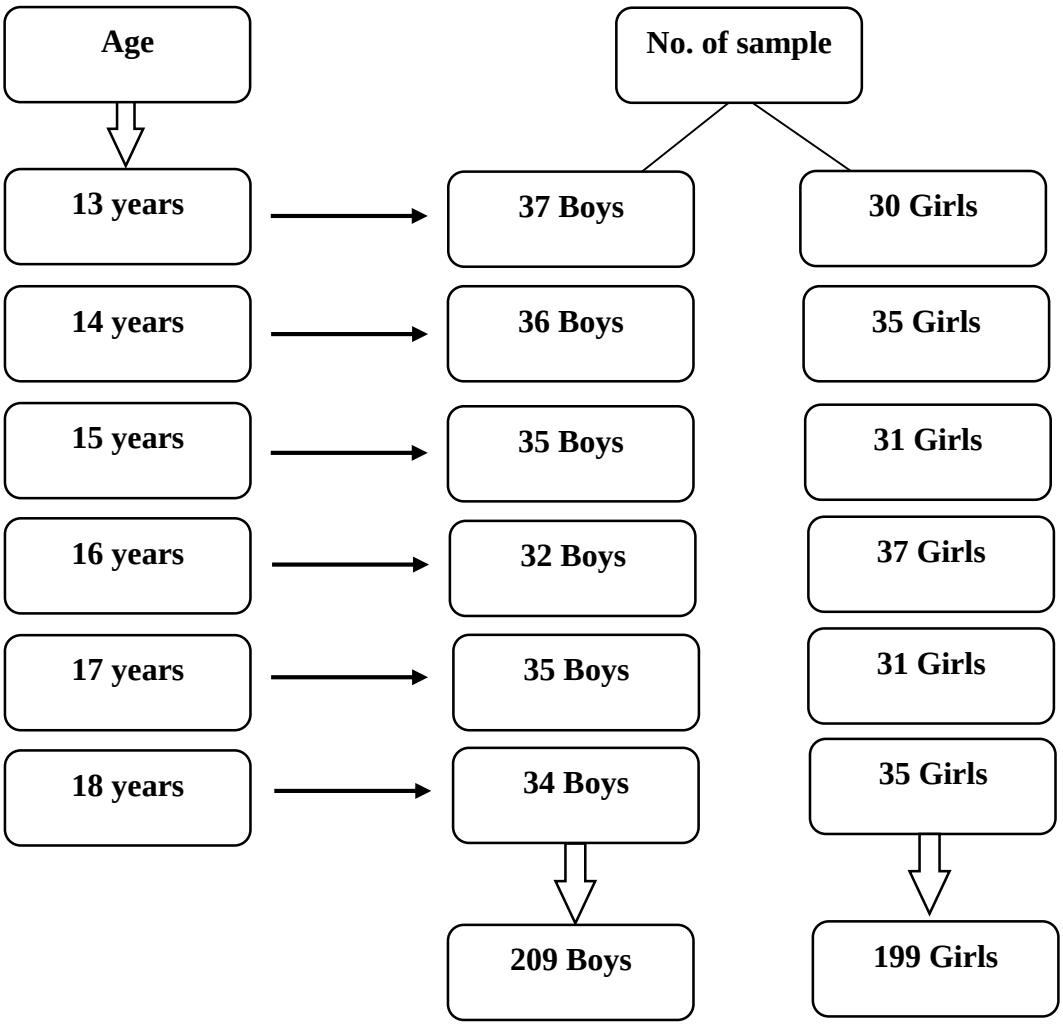

Figure 3.2 Distribution of the sample according to age.

3.6 Study period

The study was performed from January 2015 to May 2015 and that included preparing the proposal, writing chapter one and two, preparing the questionnaires, data collection, entry and analyses and finally writing chapters (three, four and five).

3.7 Eligibility criteria

3.7.1 Inclusion criteria

- All Gaza's adolescents aged from 13-18 years, from both gender, and who lived in 51 day war on Gaza Strip.

3.7.2 Exclusion criteria

- Adolescents who were outside Gaza strip during the 51 day war.
- Adolescents who diagnosed with mental disorder or disturbance.
- Adolescents who were diagnosed with mental illness and receive medical treatment.

3.8 Data collection procedure

After the researcher obtained the telephone numbers of the targeted CBOs and contacted each one and explained the aim of the study and procedures, and provided these CBOs with list of numbers of adolescents aged from 13-18 years. The researcher visited these CBOs and used implemented structured questionnaires to collect data directly from adolescents in these CBOs. The researcher with help of three trained field workers visited the CBOs and interviewed adolescents inside the CBOs after getting parental and adolescents consent to participate in the study and they have been provided with information and instructions about the study. The researcher clarified to them any ambiguous question.

3.9 Data entry and analysis

Data entry and analysis were carried out using a statistical software SPSS version 20. Frequency and percent were used to express quantitative data of types of traumatic experiences, post-traumatic stress disorder, and resilience of adolescents. For continuous variables means and standard deviations were reported. For differences between means of two groups parametric tests were used such as t-test to compare sex of adolescents and mean of trauma, PTSD, and resilience. While, ANOVA tests were used for measuring differences between more than two groups of continuous variables such place of residence and trauma,

PTSD, and resilience. The researcher used least significant difference (LSD) test after one-way ANOVA test, to explore further and compare the mean of one group with the mean of another. Pearson's correlation coefficient was used to test the association between traumatic experiences, PTSD, and resilience. The 0.05 alpha levels were accepted as a sign for statistical significance for all the statistical procedures.

3.10 Study instruments

The researcher used four instruments to implement his study, socio-demographic characteristic questionnaire, Gaza traumatic events checklist, PTSD Scale for DSM-IV, and resilience scale for adolescents.

3.10.1 Socio-demographic characteristic questionnaire

This questionnaire included sex, age, area, residence, type of residence, number of sibling, parents education, family income and parents work.

3.10.2 Gaza Traumatic Events Checklist (GTEC) (Thabet et al., 2008, 2009, 2014).

The checklist consisting of 28 items covering three domains of events typical for the of military escalation: (1) Witnessing personally acts of violence (e.g., killing of relatives, home demolition, bombardment, and injuries); (2) Having experiences of loss, injury and destruction in family and other close persons; and (3) Being personally the target of violence (e.g., being shot, injured, or beaten by the soldiers). In checklist respondent were asked whether they had been exposed to each of these events: (0) no (1) yes.

3.10.3 Posttraumatic stress disorder Scale for DSM-IV: (Arabic version, Thabet, 2008)

The items of the PTSD scale indices are keyed to DSM-IV criteria and can provide preliminary PTSD diagnostic information. Self-reports for children and adolescents exist, as well as a parent report of PTSD symptoms. The adolescent Version (for adolescent aged 13 years and older) contains a total of 22 questions, have also been administered in school classroom settings. Only 17 items were included in the total score because two items were not DSM-IV criteria and three items were repeated symptoms. The first sub scale reflects re-experiencing symptoms (5 items). The second sub scale reflects avoidance symptoms (7 items). The third sub scale reflects arousal symptoms (5 items). (0) never/rarely, (1) sometimes, and (3) much/often are used to rate PTSD symptoms.

3.10.4 Resilience Scale for Adolescents (Hjemdal et al, 2001, 2007; Thabet, 2014)

The scale is a 28-item self-report scale using positively phrased. Higher scores reflect higher degree of resilience. This scale was developed using confirmatory factor analysis and has shown adequate psychometric properties (total Chronbach alpha = 0.94) and initial promising validity (Hjemdal et al, 2001, 2007). Results suggest that the Resilience Scale for Adolescents has three sub scales reflecting the major categories of resilience. Furthermore, each sub scale has its own groupings of questions that serve as indicators of the construct's major categories. The first sub scale reflects an individual factor that includes personal skills (5 items), peer support (2 items), and social skills (4 items). The second sub scale deals with caregiving, as reflected in physical caregiving (2 items) as well as psychological caregiving (5 items). The third sub scale comprises contextual components that facilitate a sense of belonging in youth, components related to spirituality (3 items), culture (5 items), and education (2 items). (0) never/rarely, (1) sometimes, and (3) much/often are used to rate resilience factors.

3.11 Scientific rigor

3.11.1 Validity

It refers to how well a test measures what it is purported to measure. The content of scales and questionnaires used were revised, modified, and applied previously by many researchers on Gaza population (e.g. Thabet, 2008).

3.11.2 Reliability

Reliability refers to the consistency of a measure; it is a condition for validity. A test is considered reliable if we get the same result repeatedly. To measure the internal consistency of the instruments, the researcher conducted "Cronbach alpha coefficient". Cronbach's alpha reliability coefficient normally ranges between 0 and 1. However, there is actually no lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale. Split-half reliability was also done, in which all items were randomly divided, then measuring the same construct into two sets, and the scores for each half of the test were compared with one another. Table 3.1 shows the Cronbach alpha and Split-half reliability in the used scales.

Table 3.1 Cronbach alpha and Split-half reliability in the used scales.

Name of scale	No. of items	Cronbach alpha	Split-half
Gaza Traumatic Events Checklist	28	0.78	0.67
Posttraumatic stress disorder Scale	17	0.71	0.60
Resilience Scale for Adolescents	28	0.83	0.70

3.12 Ethical Consideration

1. An official approval was obtained from community mental health department at AL Quds University and Helsinki Committee.
2. Verbal consent was obtained from the each participant before completion of questionnaire and confidentiality will be ensured.

3.13 Limitations and challenges of the study

1. Difficulties in reaching the sample in one visit to CBOs, and the lack of many adolescents' commitment led to some difficulties to get the sample as soon as possible.
2. Frequent cuts of electricity and lack of transport fuel.

Chapter (4)

Results

4.1 Introduction

This chapter presents the results of the study as following: first, the socio-demographic characteristics of the sample. Secondly, the prevalence of trauma, PTSD, and resilience, and the differences between these variables according to the socio-demographic characteristics of the study sample (sex, age, place of residence, monthly income, and number of siblings). Finally, the relationships between trauma, PTSD and resilience will be presented.

4.2 Socio demographic characteristics of the sample

Table 4.1: Distribution of the sample according to socio-demographic factors

Item	No.	%
Sex		
Male	209	51.2
Female	199	48.8
Total	**408**	**100**
Age in years		
13	67	16.4
14	71	17.4
15	66	16.2
16	69	16.9
17	66	16.2
18	69	16.9
Total	**408**	**100**
Place of residence		
North Gaza	72	17.6
Gaza	132	32.4
Middle area	60	14.7
Khan Younis	96	23.5
Rafah area	48	11.8
Total	**408**	**100**
Type of residence		
Own	295	72.3
Rented	57	14
Camp	12	2.9
With family	44	10.8
Total	**408**	**100**

Number of siblings		
4 and less siblings	58	14.2
5-7 siblings	198	48.5
8 and more siblings	152	37.3
Total	**408**	**100**
Family monthly income		
Below 1200 NIS	301	73.8
1201-2000	49	12
2001-3000	34	8.3
More than 3000 NIS	24	5.9
Total	**408**	**100**
Paternal education		
Not educated	12	2.9
Preparatory	32	7.8
Elementary	68	16.8
Secondary	158	38.7
Diploma	29	7.1
University	97	23.8
Post graduate	12	2.9
Total	**408**	**100**
Maternal education		
Not educated	17	4.3
Preparatory	27	6.6
Elementary	71	17.4
Secondary	209	51.2
Diploma	27	6.6
University	54	13.2
Post graduate	3	0.7
Total	**408**	**100**
Paternal job		
Unemployed	214	52.5
Skilled worker	53	13
Civil employee and working	83	20.3
Civil employee not at work and getting salary	38	9.3
Merchant	20	4.9
Total	**408**	**100**
Maternal job		
House wife	373	91.4
skilled worker	9	2.2
Merchant	4	1.0
Civil employee and working	18	4.4
Civil employee not at work and getting salary	4	1.0
Total	**408**	**100**

Table 4.1 showed that the number of sample was 408 adolescents, the sample consisted of 209 boys (51.2 %) and 199 girls (48.8%). According to the selection criteria, the age range was 13-18 years. Table 4.2 shows that 16.4% of the study sample were 13 years old, 17.4% were 14 years old, 16.2% were 15 years old, 16.9% were 16 years old, 16.2% were 17 years old and 16.9% were 18 years old. The mean and standard deviation of the age was (mean =15.49 years), (SD = 1.71).

Regard place of residence, 17.6% of adolescents were from North Gaza, 32.4% live in Gaza area, 14.7% live in Middle area, 23.5% live in Khan Younis, and 11.8% live in Rafah area. For type of residence, 72.3% live in family own house, 14% live in rented houses, 2.9% live in camps, and 10.8% live with family.

Regard siblings, 14.2% of the participating had 4 or less siblings, 48.5% had 5-7 siblings, and 37.3% of had 8 or more siblings. Regard family monthly income, 73.8% of the families had a monthly income under 1200 NIS, 12% between 1201-2000 NIS, 8.3% had a monthly income 2001-3000 NIS, 5.9% had monthly income more than 3000 NIS.

Regard fathers education, 2.9% fathers were uneducated, 7.8% had preparatory school education, 16.8% had elementary education, 38.7% had secondary education, 7.1% had diploma education, 23.8% had a university degree, and 2.9% had a post graduate degree. But for mothers education, 4.3% of mothers were uneducated, 6.6% had preparatory education, 17.4% had elementary education, 51.2% had secondary education, 6.6 % had a diploma degree, 13.2% a university degree, 0.7% had a post graduate degree.

Regard fathers job, 52.5% of fathers were unemployed, 8.6% were simple workers, 4.4% were skilled workers, 20.3% were civil employee and working, 9.3% were civil employee not at work and getting salary, and 4.9% were merchants. Regard mothers job, 91.4% of mothers were housewives, 2.2% were simple workers, 1% were merchants, 4.4% were civil employee and working, and 1% were civil employee not at work and getting salary.

4.3 Frequencies of the study variables and differences in trauma, PTSD and resilience

4.3.1 Trauma

4.3.1.1 Frequency and severity of trauma due to 51 day war on Gaza

The study showed that the most common traumatic experiences reported by adolescents were: watching mutilated bodies in TV (93.1%), hearing shelling of the area by artillery (92.4%), hearing the loud voice of drones (90.7%), , forced to leave you home with family members due to shelling (67.6%), and Inhalation of bad smells due to bombardment (67.6%). While, the least common traumatic experiences were: Witnessing arrest of a close relative by the army (10.8%), witnessing arrest of a friend, and physical injury due to bombardment of your home (10.3%). (Table 4.2).

Table 4.2: Frequencies of traumatic experiences according to the 51 day war on Gaza strip

No.	Item	Yes		No	
		No.	%	No.	%
1	Watching mutilated bodies in TV	380	93.1	28	6.9
2	Hearing shelling of the area by artillery	377	92.4	31	7.6
3	Hearing the loud voice of Drones	370	90.7	38	9.3
4	Forced to leave you home with family members due to shelling	276	67.6	132	32.4
5	Inhalation of bad smells due to bombardment	276	67.6	132	32.4
6	Receiving pamphlets from Airplane to leave your home at the border and to move to the city centers	248	60.8	160	39.2
7	Threaten by telephone to leave the home for bombardment of home	216	52.9	192	47.1
8	Witnessing firing by tanks and heavy artillery at neighbours' homes	211	51.7	197	48.3
9	Witnessing demolition of big buildings	210	51.5	198	48.5
10	Deprivation from water or electricity during detention at home	160	39.2	248	60.8
11	Hearing killing of a close relative	153	37.5	255	62.5
12	Threaten by shooting	147	36	261	64
13	Witnessing shooting of a friend	135	33.1	273	66.9
14	Destroying of your personal belongings during incursion	133	32.6	275	67.4
15	Witnessing assassination of people by rockets	120	29.4	288	70.6
16	Hearing killing of a friend	109	26.7	299	73.3
17	Witnessing shooting of a close relative	93	22.8	315	77.2

18	Witnessing firing by tanks and heavy artillery at own home	92	22.5	316	77.5
19	Witnessing killing of a friend	86	21.1	322	78.9
20	Witnessing killing of a close relative	63	15.5	344	84.5
21	Threaten of killing of your closed relative in front of you	61	15	347	85
22	Threatened with death by being used as human shield by the army to move from one home to home	58	14.2	350	85.8
23	Personal threat if killing by the army	56	13.7	352	86.3
24	Being arrested during the land incursion	53	13	355	87
25	Shot by bullets, rocket, or bombs	49	12	359	88
26	Witnessing arrest of a close relative by the army	44	10.8	364	89.2
27	Witnessing arrest of a friend	42	10.3	366	89.7
28	Physical injury due to bombardment of your home	42	10.3	366	89.7

4.3.1.2 The severity of traumatic events

In order to find the severity of the traumatic experiences, total traumatic events were recorded in to mild trauma (0-5 events), moderate trauma (6-10 events) and severe trauma (above 10 events). The results showed that 10.6% reported mild traumatic events, 40.9% reported moderate traumatic events, and 48.5% reported severe traumatic events. (Table 4.3).

Table 4.3: Severity of traumatic events due to 51 day war on Gaza Strip

Traumatic events	**No.**	**%**
Mild traumatic events	43	10.6
Moderate traumatic events	167	40.9
Severe traumatic events	198	48.5
Total	**408**	**100.0**

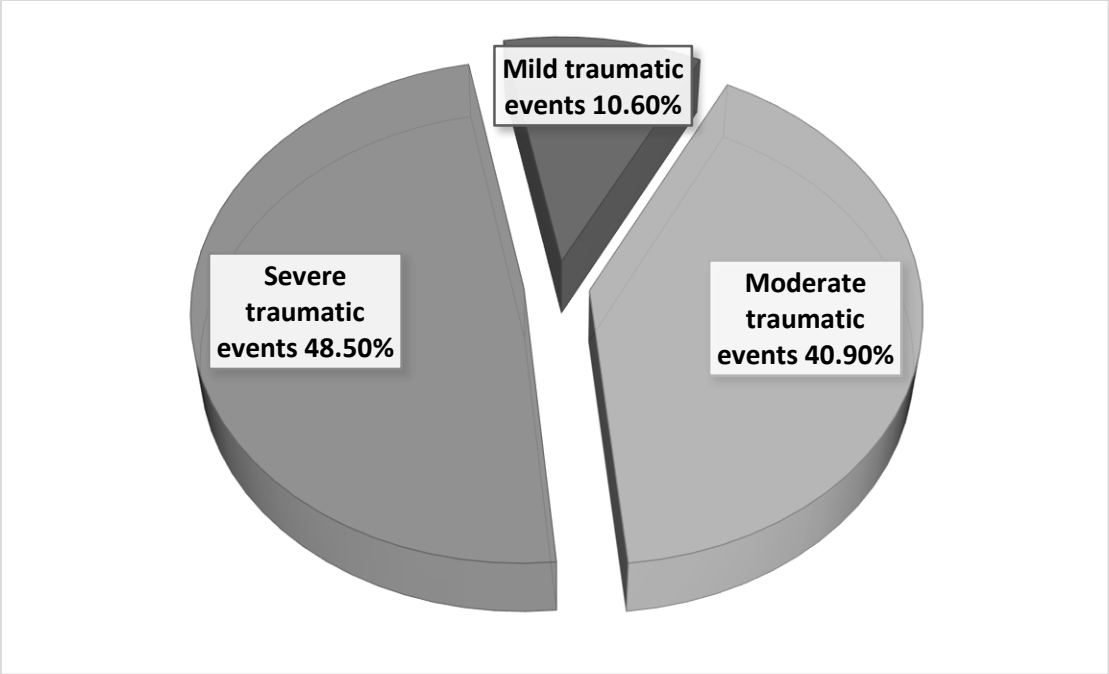

Figure 4.1 Severity of traumatic experiences due 51 day war on Gaza Strip

4.3.1.3 Means of total traumatic experiences

Table 4.4 shows that the mean of traumatic experience was 10.91 (SD = 4.80).

Table 4.4: Mean and standard deviation of the severity of traumatic experiences

Variables	No.	mean	SD
Total traumatic experiences.	408	10.91	4.80

4.3.1.4 Traumatic experiences according to socio-demographic factors

Table 4.5 shows that the mean of traumatic event in boys were 11.79 (SD =4.83) and 9.98 for girls (SD = 4.60). There were statistically significant differences toward boys (t= 3.87, p =0.001).

Table 4.5: t-test for traumatic experiences according to sex

Item	Sex	N	Mean	SD	T	P-value	Sign.
Total trauma	Male	209	11.79	4.83	3.871	0.0001	Sig.
	Female	199	9.98	4.60			

Table 4.6 demonstrates that the significant level was 0.28> (α=0.05), which means there were no statistically significant differences in traumatic experiences resulting from the war on Gaza according to age.

Table 4.6: One Way (ANOVA) for the average of trauma experiences according to age

Socio-demographic	Variance	Sum of Squares	df	Mean Square	F	P-value	Sign.
Age	Between Groups	144.809	5	28.962	1.261	0.28	Not Sig.
	Within Groups	9231.652	402	22.964			
	Total	9376.461	407				

Table 4.7 demonstrates that the significant level was 0.92 > (α=0.05), which means there were no statistically significant differences in traumatic experiences resulting from the war on Gaza according to place of residence.

Table 4.7: One Way (ANOVA) for the average of trauma experiences according to place of residence

Socio-demographic	Variance	Sum of Squares	df	Mean Square	F	P-value	Sign.
Place of residence	Between Groups	20.461	4	5.115	0.220	0.927	Not Sig.
	Within Groups	9356.000	403	23.216			
	Total	9376.461	407				

Table 4.8 demonstrates that the significant level was 0.090 > (α=0.05), which means there were no statistically significant differences in traumatic experiences resulting from the war on Gaza according to monthly income.

Table 4.8: One Way (ANOVA) for the average of trauma experiences according to monthly income

Socio-demographic	Variance	Sum of Squares	df	Mean Square	F	P-value	Sig.
Monthly income	Between Groups	149.315	3	49.772	2.179	0.090	Not Sig.
	Within Groups	9227.146	404	22.839			
	Total	9376.461	407				

Table 4.9demonstrates that the significant level was 0.127 > (α=0.05), which means there were no statistically significant differences in traumatic experiences resulting from the war on Gaza according to number of siblings.

Table 4.9: One Way (ANOVA) for the average of trauma experiences according to number of siblings

Socio-demographic	Variance	Sum of Squares	df	Mean Square	F	P-value	Sig.
Number of siblings	Between Groups	95.130	2	47.565	2.076	0.127	Not Sig.
	Within Groups	9281.331	405	22.917			
	Total	9376.461	407				

4.3.2 Posttraumatic stress disorder symptoms

4.3.2.1 Frequencies of posttraumatic stress disorder symptoms

Table 4.10 shows that the most common post traumatic reactions were: recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions (43.6%), exaggerated startle response (41.4%), acting or feeling as if the traumatic event were recurring (40.7%), efforts to avoid activities, places, or people that arouse recollections of the trauma (40.2%), and efforts to avoid thoughts, feelings, or conversations associated with the trauma (40%).

Table 4.10: Frequencies of posttraumatic stress disorder symptoms items

No.	Item	Never/ Rarely	Sometimes	Much/ often
1	Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions.	24.8	31.6	43.6
2	Recurrent distressing dreams of the event	44.1	27.7	28.2
3	Acting or feeling as if the traumatic event were recurring	32.8	26.5	40.7
4	Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event	37.7	29.2	33.1
5	Physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event	44.6	25.0	30.4
6	Efforts to avoid thoughts, feelings, or conversations associated with the trauma	34.6	25.5	40.0
7	Efforts to avoid activities, places, or people that arouse recollections of the trauma	37.3	22.5	40.2
8	Inability to recall an important aspect of the trauma	57.6	22.8	19.6
9	Markedly diminished interest or participation in significant activities	53.9	22.3	23.8
10	Feeling of detachment or estrangement from others	66.9	17.6	15.4
11	Restricted range of affect (e.g., unable to have loving feelings)	74.3	11.3	14.5
12	Sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)	59.8	16.7	23.5
13	Difficulty falling or staying asleep	50.0	22.1	27.9
14	Irritability or outbursts of anger	41.4	28.9	29.7
15	Difficulty in concentration	44.1	25.5	30.4
16	Hyper vigilance (On edge been easily distracted or had to stay)	40.9	25.2	33.8
17	Exaggerated startle response	36.8	21.8	41.4

4.3.2.2 Mean and standard deviation of the posttraumatic stress disorder symptoms

Table 4.11 shows that mean total scores of PTSD was 29.53 (SD =12.96), mean re-experiencing symptoms was 9.95 (SD =4.71) mean avoidance was 10.37 (SD= 5.48), and mean arousal was 9.21 (SD = 4.87).

Table 4.11: Means and Standard deviations of PTSD

Item	N	Mean	SD
Total PTSD	408	29.53	12.96
Reexperiencing	408	9.95	4.71
Avoidance	408	10.37	5.48
Aarousal	408	9.21	4.87

4.3.2.3 Prevalence of posttraumatic stress disorder

According to DSM-IV diagnosis of PTSD of summing of (one re-experiencing, 3 avoidance, and 2 arousal symptoms). Table 4.12 shows that 82 of adolescents (20.1%) showed no PTSD, 127 of adolescents (31.1%) showed at least one criteria of PTSD (B or C or D), 121 showed partial PTSD (29.7%), and 78 of adolescents showed full criteria of PTSD (19.1%).

Table 4.12: Prevalence of PTSD symptoms

PTSD	No.	%
No PTSD	82	20.1
One symptoms	127	31.1
Partial PTSD	121	29.7
Full PTSD	78	19.1
Total	**408**	**100.0**

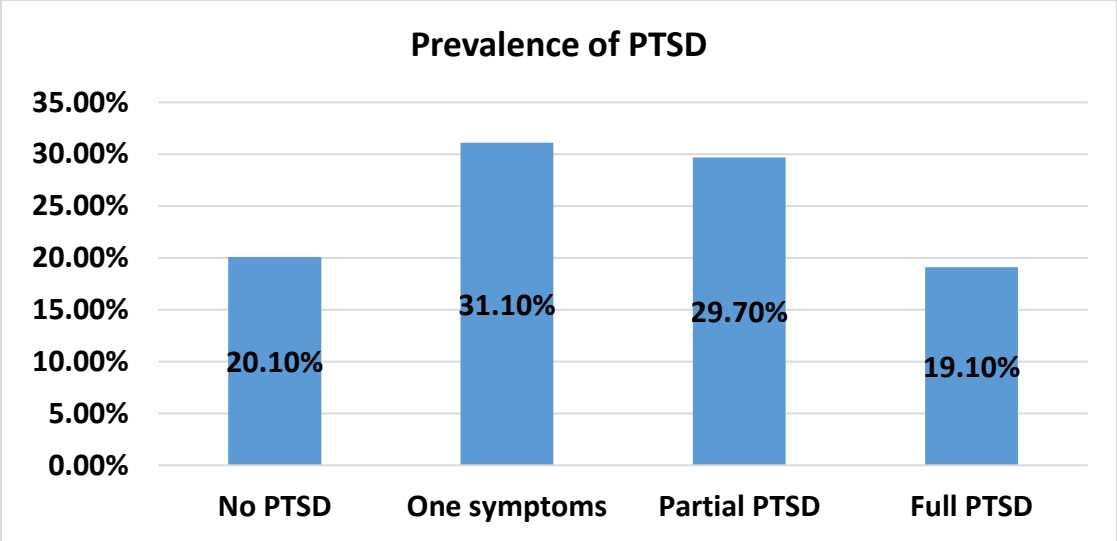

Figure 4.2 Prevalence of PTSD symptoms due 51 day war on Gaza Strip

4.3.2.4 Posttraumatic stress disorder symptoms according to socio- demographic factors

Table 4.13 shows that there were no statistically significant differences in total PTSD scores (Mean 28.82 girls vs. 30.20 boys) (t= 1.07, p 0. 29), and no significant for all subscales (re-experience symptoms, avoidance, and arousal).

Table 4.13: Means and Standard deviations of the PTSD and sub scales according to sex

Item	Sex	Mean	SD	Mean differences	T	P-value	Sign.
Total PTSD	Male	30.20	13.16	1.37	1.07	0.29	Not Sig.
	Female	28.82	12.75				
Re-experience	Male	10.04	4.89	0.19	0.42	0.68	
	Female	9.85	4.51				
Avoidance	Male	10.62	5.72	0.52	0.96	0.34	
	Female	10.10	5.21				
	Male	9.53	4.83				

Table 4.14 shows that there were no statistically significant differences in PTSD and subscales according to age group (13-18 years).

Table 4.14 One Way (ANOVA) for the average of PTSD symptoms of the study sample according to age

Socio-demographic	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Age	Total PTSD	Between Groups	624.258	5	124.852	0.741	0.593
		Within Groups	67773.446	402	168.591		
		Total	68397.703	407			
	Re-experience	Between Groups	66.291	5	13.258	0.596	0.703
		Within Groups	8945.629	402	22.253		
		Total	9011.919	407			
	Avoidance	Between Groups	179.247	5	35.849	1.197	0.310
		Within Groups	12035.606	402	29.939		
		Total	12214.853	407			
	Arousal	Between Groups	131.498	5	26.300	1.113	0.353
		Within Groups	9502.374	402	23.638		
		Total	9633.873	407			

Table 4.15 shows that there were statistically significant differences in total PTSD, avoidance, and arousal symptoms, and shows no statistically significant in re-experiencing symptoms according to place of residence.

Table 4.15: One Way (ANOVA) for the average of PTSD symptoms of the study sample according to place of residence

Socio-demographic	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Place of residence	Total PTSD	Between Groups	2517.801	4	629.450	3.850	0.004
		Within Groups	65879.903	403	163.474		
		Total	68397.703	407			
	Re-experiences	Between Groups	188.582	4	47.146	2.153	0.074
		Within Groups	8823.337	403	21.894		
		Total	9011.919	407			
	Avoidance	Between Groups	409.756	4	102.439	3.497	0.008
		Within Groups	11805.097	403	29.293		
		Total	12214.853	407			
	Arousal	Between Groups	330.535	4	82.634	3.580	0.007
		Within Groups	9303.337	403	23.085		
		Total	9633.873	407			

Table 4.16 shows that the highest mean value present at adolescents who shown total PTSD symptoms were from middle area mean = 33.43, then adolescents from Khan Younis mean=31.36, then adolescents from Rafah area mean= 30.44, then adolescents from Gaza mean= 28.08, and the last adolescents were from North Gaza mean= 25.88. Post hoc, LSD test showed that adolescents from middle area had the most total PTSD symptoms. Adolescents from Khan Younis had more total PTSD symptoms than adolescents from North Gaza and Gaza and there were no any other statistical differences between other areas.

Table 4.16: Means and Standard deviations of total PTSD symptoms according to place of residence

Item	Area	N	Mean	SD
Total PTSD	North Gaza	72	25.88	12.07
	Gaza	132	28.08	12.51
	Middle area	60	33.43	10.57
	Khan Younis	96	31.36	11.78
	Rafah area	48	30.44	18.04
	Total	408	29.53	12.96

Table 4.17 shows that the highest mean value present at adolescents who shown avoidance symptoms were from middle area mean = 11.68, then adolescents from Khan Younis mean=11.30, then adolescents from Rafah area mean= 10.98, then adolescents from Gaza mean= 9.58, and the last adolescents were from North Gaza mean= 9.07. Post hoc, LSD test showed that adolescents from middle area had most avoidance symptoms. Adolescents from Khan Younis had more avoidance symptoms than adolescents from North Gaza and Gaza. There were no any other statistical differences between other areas.

Table 4.17: Mean and Standard deviations of avoidance symptoms according to place of residence

Item	Area	N	Mean	SD
Avoidance	North gaza	72	9.07	5.25
	Gaza	132	9.58	5.26
	Middle area	60	11.68	3.99
	Khan Younis	96	11.30	4.89
	Rafah area	48	10.98	8.01
	Total	408	10.37	5.48

Table 4.18 shows that the highest mean value present at adolescents who shown arousal symptoms were from middle area mean = 10.46, then adolescents from Rafah area mean=9.83, then adolescents from Khan Younis mean= 9.69, then adolescents from Gaza mean= 8.93, and the last adolescents were from North Gaza mean= 7.61. Post hoc, LSD test showed that adolescents from middle area had most arousal symptoms. Adolescents from Rafah area and Khan Younis had more arousal symptoms than adolescents from North Gaza. There were no any other statistical differences between other areas.

Table 4.18: Mean and Standard deviations of arousal symptoms according to place of residence

Item	Area	N	Mean	SD
Arousal	North Gaza	72	7.61	4.62
	Gaza	132	8.93	4.63
	Middle area	60	10.46	4.17
	Khan Younis	96	9.69	4.72
	Rafah area	48	9.83	6.23
	Total	408	9.21	4.86

Table 4.19 shows that there were no statistically significant differences in total PSTD and subscales according to family monthly income.

Table 4.19: One Way (ANOVA) for the average of PTSD symptoms of the study sample according to family monthly income

Socio-demographic	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Monthly income	Total PTSD	Between Groups	403.068	3	134.356	.798	0.495
		Within Groups	67994.636	404	168.304		
		Total	68397.703	407			
	Re-experiences	Between Groups	58.785	3	19.595	.884	0.449
		Within Groups	8953.134	404	22.161		
		Total	9011.919	407			
	Avoidance	Between Groups	106.993	3	35.664	1.19	0.313
		Within Groups	12107.860	404	29.970		
		Total	12214.853	407			
	Arousal	Between Groups	56.830	3	18.943	.799	0.495
		Within Groups	9577.042	404	23.706		
		Total	9633.873	407			

Table 4.20 shows that there were no significant differences in total PSTD and subscales according to number of siblings.

Table 4.20: One Way (ANOVA) for the average of PTSD symptoms of the study sample according to number of siblings

Socio-demographic	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Number of siblings	Total PTSD	Between Groups	465.456	2	232.728	1.387	0.251
		Within Groups	67932.247	405	167.734		
		Total	68397.703	407			
	Re-experience	Between Groups	73.086	2	36.543	1.656	0.192
		Within Groups	8938.833	405	22.071		
		Total	9011.919	407			
	Avoidance	Between Groups	72.665	2	36.333	1.212	0.299
		Within Groups	12142.188	405	29.981		
		Total	12214.853	407			
	Arousal	Between Groups	23.845	2	11.923	.502	0.605
		Within Groups	9610.027	405	23.728		
		Total	9633.873	407			

4.3.3 Resilience

4.3.3.1 Frequency of resilience items

Table 4.21 shows that the most common resilience items were: Getting an education is important to me (90%), I am proud of my citizenship (88.2%), I feel safe when I am with my caregivers (88%), Spiritual (religious) beliefs are a source of strength for me (86.8%), I am proud of my family background (86.3%), and my caregivers stand by me during difficult times (81.9%).

Table 4.21: Frequencies of resilience items

No.	Item	Never/ Rarely	Sometimes	Much/ often
1	I cooperate with people around me	7.8	18.4	73.8
2	I aim to finish what I start	14.7	20.6	64.7
3	People think I am fun to be with	15.0	27.5	57.6
4	I solve problems without using drugs	25.2	7.8	66.9
5	I am aware of my own strengths	11.5	22.1	66.4
6	I feel supported by my friends	13.0	20.6	66.4
7	My friends stand by me during difficult times	12.3	18.9	68.9
8	I know how to behave in different social situations	13.0	22.3	64.7
9	I know where to go to get help	16.2	19.9	64.0
10	I have opportunities to develop job skills	18.9	21.8	59.3
11	I am given opportunities to become an adult	21.8	18.4	59.8
12	My caregivers watch me closely	32.6	15.4	52.0
13	My caregivers know a lot about me	18.6	12.0	69.4
14	I eat enough most days	16.4	18.9	64.7
15	I talk to my caregivers about how I feel	20.1	17.9	62.0
16	My caregivers stand by me during difficult times	7.1	11.0	81.9
17	I feel safe when I am with my caregivers	6.9	5.1	88.0
18	I enjoy my caregivers' cultural and family traditions	11.8	9.8	78.4
19	Spiritual (religious) beliefs are a source of strength for me	6.1	7.1	86.8
20	I participate in organized religious activities	12.5	21.8	65.7
21	I think it is important to serve my community	8.8	16.2	75.0
22	I am proud of my family background	7.8	5.9	86.3
23	I am proud of my citizenship	6.4	5.4	88.2
24	I enjoy my community's traditions	16.9	19.6	63.5
25	I am treated fairly in my community	26.0	24.3	49.8
26	I have people I look up to	19.1	15.4	65.4
27	Getting an education is important to me	5.1	4.9	90.0
28	I feel I belong at my school	11.0	8.6	80.4

4.3.3.2 Mean and standard deviation of resilience

Table 4.22 shows that the mean of total resilience was 82.15 (SD = 15.31), Personal skills mean was 14.01 (SD = 3.40), peer component mean was 5.68 (SD = 1.96), social skills mean was 10.75 (SD = 3.43), physical relationship with caregiver mean was 5.19 (SD = 2.22), psychological relationship with caregiver mean was 15.51 (SD =3.90), spiritual beliefs mean was 9.36 (SD = 2.27), culture mean was 14.87 (SD = 3.91), and educational items mean was 6.79 (SD = 1.78).

Table 4.22: Mean and Standard deviation of resilience of the study sample

Item	N	Mean	SD
Resilience total	408	82.15	15.31
Personal skills	408	14.01	3.40
Peer component	408	5.68	1.96
Social skills	408	10.75	3.43
Physical relationship with caregiver	408	5.19	2.22
Psychological relationship with caregiver	408	15.51	3.90
Spiritual beliefs	408	9.36	2.27
Culture	408	14.87	3.91
Educational items	408	6.79	1.78

4.3.3.3 Resilience according to socio-demographic factors

Table 4.23 shows that mean total resilience in boys was 83.16 and mean resilience in girls was 81.10. Mean personal skills for boys was 14.11 and 13.90 for girls, mean peer component for boys was 5.70 and 5.65 for girls, social skills for boys was 11.21 and 10.28 for girls, physical relationship with caregiver for boys was 5.29 and 5.09 for girls, psychological relationship with caregiver for boys was 15.70 and 15.30 for girls, spiritual (religious) beliefs for boys was 9.42 and 9.30 for girls, culture factor for boys was 14.96 and 14.78 for girls, and educational items for boys was 6.78 and 6.80 for girls. There were statically significant differences in social skills factors only in favor of boys (t = 2.75, P = 0.01).

Table 4.23: Means and Standard deviations of resilience subscales according to sex.

Item	Sex	N	Mean	SD	T	P-value
Resilience total	Male	209	83.16	14.43	1.36	0.17
	Female	199	81.10	16.16		
Personal skills	Male	209	14.11	3.16	0.62	0.53
	Female	199	13.90	3.65		
Peer component	Male	209	5.70	1.95	0.23	0.82
	Female	199	5.65	1.97		
Social skills	Male	209	11.21	3.47	2.75	0.01
	Female	199	10.28	3.34		
Physical relationship with caregiver	Male	209	5.29	2.21	0.92	0.36
	Female	199	5.09	2.24		
Psychological relationship with caregiver	Male	209	15.70	3.64	1.04	0.30
	Female	199	15.30	4.16		
Spiritual beliefs	Male	209	9.42	2.29	0.55	0.58
	Female	199	9.30	2.24		
Culture	Male	209	14.96	3.75	0.47	0.64
	Female	199	14.78	4.07		
Educational items	Male	209	6.78	1.79	-0.16	0.87
	Female	199	6.80	1.77		

Table 4.24 shows that there were no statistically significant differences in total resilience scores and sub scales according to age group of sample.

Table 4.24: One way (ANOVA) for the average of resilience of the study sample according to age

Socio-demographic	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Age	Resilience total	Between Groups	1464.460	5	292.892	1.253	.284
		Within Groups	93990.812	402	233.808		
		Total	95455.272	407			
	Personal skills	Between Groups	18.226	5	3.645	0.312	0.906
		Within Groups	4696.752	402	11.683		
		Total	4714.978	407			
	Peer component	Between Groups	20.171	5	4.034	1.054	0.386
		Within Groups	1539.123	402	3.829		
		Total	1559.294	407			
	Social skills	Between Groups	46.666	5	9.333	.789	0.558
		Within Groups	4753.331	402	11.824		
		Total	4799.998	407			
	Physical relationship with caregiver	Between Groups	35.568	5	7.114	1.447	0.207
		Within Groups	1976.900	402	4.918		
		Total	2012.468	407			
	Psychological relationship with caregiver	Between Groups	79.107	5	15.821	1.040	0.394
		Within Groups	6114.871	402	15.211		
		Total	6193.978	407			
	Spiritual beliefs	Between Groups	25.145	5	5.029	0.980	0.430
		Within Groups	2062.891	402	5.132		
		Total	2088.037	407			

	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Age	Culture	Between Groups	130.038	5	26.008	1.719	0.129
		Within Groups	6081.334	402	15.128		
		Total	6211.373	407			
	Educational items	Between Groups	31.219	5	6.244	1.994	0.079
		Within Groups	1258.653	402	3.131		
		Total	1289.873	407			

Table 4.25 shows statistically significant differences in personal skills, peer component, and psychological relationship with caregiver scores, and shows no significant differences in other sub scales of resilience according to place of residence of sample.

Table 4.25: One way (ANOVA) for the average of resilience of the study sample according to place of residence

Socio-demographic	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Place of residence	Resilience total	Between Groups	1999.312	4	499.828	2.155	0.073
		Within Groups	93455.960	403	231.901		
		Total	95455.272	407			
	Personal skills	Between Groups	140.605	4	35.151	3.097	0.016
		Within Groups	4574.373	403	11.351		
		Total	4714.978	407			
	Peer component	Between Groups	50.308	4	12.577	3.359	0.010
		Within Groups	1508.986	403	3.744		
		Total	1559.294	407			
	Social skills	Between Groups	95.144	4	23.786	2.037	0.088
		Within Groups	4704.854	403	11.675		
		Total	4799.998	407			

	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Place of residence	Physical relationship with caregiver	Between Groups	37.583	4	9.396	1.917	0.107
		Within Groups	1974.885	403	4.900		
		Total	2012.468	407			
	Psychological relationship with caregiver	Between Groups	156.627	4	39.157	2.614	0.035
		Within Groups	6037.351	403	14.981		
		Total	6193.978	407			
	Spiritual beliefs	Between Groups	8.485	4	2.121	0.411	0.801
		Within Groups	2079.551	403	5.160		
		Total	2088.037	407			
	Culture	Between Groups	75.507	4	18.877	1.240	0.293
		Within Groups	6135.865	403	15.225		
		Total	6211.373	407			
	Educational items	Between Groups	26.573	4	6.643	2.119	0.078
		Within Groups	1263.300	403	3.135		
		Total	1289.873	407			

Table 4.26 shows that the highest mean value present at adolescents who had personal skills were from North Gaza mean = 14.75, then adolescents from Middle area mean=14.41, then adolescents from Rafah area mean= 14.27, then adolescents from Khan Younis mean= 14.16, and the last adolescents were from Gaza mean= 13.20. Post hoc, LSD test showed that adolescents from North Gaza had most personal skills. Adolescents from Middle area had more personal skills than adolescents from Gaza and Khan Younis. There were no any other statistical differences between other areas.

Table 4.26: Means and Standard deviations of personal skills according to place of residence

Item	Area	N	Mean	SD
Personal skills	North Gaza	72	14.75	3.01
	Gaza	132	13.20	3.62
	Middle area	60	14.41	3.01
	Khan Younis	96	14.16	2.85
	Rafah area	48	14.27	4.37
	Total	408	14.00	3.40

Table 4.27 shows that the highest mean value present at adolescents who had peer component were from North Gaza mean = 6.20, then adolescents from Rafah area mean=6.16, then adolescents from Khan Younis mean= 5.60, then adolescents from Middle area mean= 5.55, and the last adolescents were from Gaza mean= 5.31. Post hoc, LSD test showed that adolescents from North Gaza had most peer component. Adolescents from Rafah area had more peer component than adolescents from Gaza. There were no any other statistical differences between other areas.

Table 4.27: Mean and Standard deviations of peer component according to place of residence

Item	Area	N	Mean	SD
Peer component	North Gaza	72	6.20	1.57
	Gaza	132	5.31	1.99
	Middle area	60	5.55	1.95
	Khan Younis	96	5.60	1.97
	Rafah area	48	6.16	2.15
	Total	408	5.67	1.95

Table 4.28 shows that the highest mean value present at adolescents who had psychological relationship with caregiver were from North Gaza mean = 16.45 , then adolescents from Middle area mean=16.31, then adolescents from Rafah area mean= 15.25, then adolescents from Khan Younis mean= 15.12 , and the last adolescents were from Gaza mean= 14.99. Post hoc, LSD test showed that adolescents from North Gaza had most psychological relationship with caregiver. Adolescents from Middle area had more psychological relationship with caregiver than adolescents from Gaza. There were no any other statistical differences between other areas.

Table 4.28: Mean and Standard deviations of psychological relationship with caregiver according to place of residence

Item	Area	N	Mean	SD
Psychological relationship with caregiver	North Gaza	72	16.45	3.52
	Gaza	132	14.99	3.92
	Middle area	60	16.31	4.01
	Khan Younis	96	15.12	3.27
	Rafah area	48	15.25	4.98
	Total	408	15.50	3.90

Table 4.29 shows statistically significant differences in personal skills and social skills, and shows no statistically significant differences in other sub scales of resilience according to monthly income.

Table 4.29: One way (ANOVA) for the average of resilience of the study sample according to monthly income

Socio-demographic	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Monthly income	Resilience total	Between Groups	1087.283	3	362.428	1.552	0.201
		Within Groups	94367.99	404	233.584		
		Total	95455.27	407			

	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Monthly income	Personal skills	Between Groups	127.273	3	42.424	3.736	0.011
		Within Groups	4587.704	404	11.356		
		Total	4714.978	407			
	Peer component	Between Groups	11.566	3	3.855	1.006	0.39
		Within Groups	1547.728	404	3.831		
		Total	1559.294	407			
	Social skills	Between Groups	99.111	3	33.037	2.839	0.038
		Within Groups	4700.887	404	11.636		
		Total	4799.998	407			
	Physical relationship with caregiver	Between Groups	7.313	3	2.438	0.491	0.689
		Within Groups	2005.155	404	4.963		
		Total	2012.468	407			
	Psychological relationship with caregiver	Between Groups	47.637	3	15.879	1.044	0.373
		Within Groups	6146.341	404	15.214		
		Total	6193.978	407			
	Spiritual beliefs	Between Groups	13.079	3	4.36	0.849	0.468
		Within Groups	2074.958	404	5.136		
		Total	2088.037	407			
	Culture	Between Groups	60.111	3	20.037	1.316	0.269
		Within Groups	6151.262	404	15.226		
		Total	6211.373	407			
	Educational items	Between Groups	2.976	3	0.992	0.311	0.817
		Within Groups	1286.897	404	3.185		
		Total	1289.873	407			

Table 4.30 shows that the highest mean value present at adolescents had personal skills were from families with monthly income from 2001 to 3000 NIS mean = 15.79, then adolescents from families with monthly income more than 3000 NIS mean = 14.42, then adolescents from families with monthly income below 1200 NIS mean = 13.82, and finally adolescents from families with monthly income from 1201 to 2000 NIS mean = 13.71. Post hoc, LSD test showed that adolescents from families with income 2001-3000 NIS had more personal skills than adolescents from families with income 1201-2000 NIS or below 1200 NIS. There were no any other statistical differences between other groups.

Table 4.30: Mean and Standard deviations of personal skills according to monthly income

Item	Monthly income	Mean	SD
Personal skills	Below 1200 NIS	13.82	3.49
	1201-2000	13.71	2.99
	2001-3000	15.79	2.67
	More than 3000 NIS	14.42	3.46

Table 4.31 shows that the highest mean value present at adolescents had social skills were from families with monthly income more than 3000 NIS mean = 12.54, then adolescents from families with monthly income from 2001 to 3000 NIS mean = 11.24, then adolescents from families with monthly income from 1201 to 2000 NIS mean = 10.86, and finally adolescents from families with monthly income from below 1200 NIS mean = 10.54. Post hoc, LSD test showed that adolescents from families with income more than 3000 NIS had more social skills than adolescents from families with income 1201-2000 NIS or below 1200 NIS. There were no any other statistical differences between other groups.

Table 4.31: Mean and Standard deviations of social skills according to monthly income

Item	Monthly income	Mean	SD
Social skills	Below 1200 NIS	10.54	3.54
	1201-2000	10.86	3.18
	2001-3000	11.24	2.91
	More than 3000 NIS	12.54	2.75

Table 4.32 shows statistically significant differences in peer component, social skills, and psychological relationship with caregiver, and shows no statistically significant differences in other sub scales of resilience according to number of siblings.

Table 4.32: One way (ANOVA) for the average of resilience of the study sample according to number of sibling.

Socio-demographic	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Number of siblings	Resilience total	Between Groups	959.513	2	479.756	2.056	0.129
		Within Groups	94495.759	405	233.323		
		Total	95455.272	407			
	Personal skills	Between Groups	21.198	2	10.599	0.915	0.402
		Within Groups	4693.780	405	11.590		
		Total	4714.978	407			
	Peer component	Between Groups	23.458	2	11.729	3.093	0.046
		Within Groups	1535.837	405	3.792		
		Total	1559.294	407			
	Social skills	Between Groups	67.157	2	33.579	2.873	0.05
		Within Groups	4732.840	405	11.686		
		Total	4799.998	407			
	Physical relationship with caregiver	Between Groups	15.162	2	7.581	1.537	0.216
		Within Groups	1997.306	405	4.932		
		Total	2012.468	407			
	Psychological relationship with caregiver	Between Groups	120.341	2	60.170	4.012	0.019
		Within Groups	6073.637	405	14.997		
		Total	6193.978	407			

	Item	Variance	Sum of Squares	df	Mean Square	F	P-value
Number of siblings	Spiritual beliefs	Between Groups	11.258	2	5.629	1.098	0.335
		Within Groups	2076.778	405	5.128		
		Total	2088.037	407			
	Culture	Between Groups	12.271	2	6.136	0.401	0.670
		Within Groups	6199.101	405	15.306		
		Total	6211.373	407			
	Educational items	Between Groups	9.675	2	4.838	1.530	0.218
		Within Groups	1280.197	405	3.161		
		Total	1289.873	407			

Table 4.33 shows that the highest mean value present at adolescents had peer component were of those have 4 and less siblings mean = 6.26, then adolescents who have 8 and more siblings mean = 5.63, and finally adolescents who have 5 to 7 siblings mean = 5.55. Post hoc, LSD test showed that adolescents with 4 or less siblings had more peer component than adolescents have 5-7 or more than 8 siblings.

Table 4.33: Mean and Standard deviations of peer component according to number of siblings

Item	Number of siblings	Mean	SD
Peer component	4 and less	6.26	1.63
	5 – 7 siblings	5.55	2.03
	8 and more	5.63	1.95

Table 4.34 shows that the highest mean value present at adolescents had social skills were of those have 4 and less siblings mean = 11.72, then adolescents who have 5 to 7 siblings mean = 10.68, and finally adolescents who have 8 and siblings mean = 10.48. Post hoc, LSD test showed that adolescents with 4 or less siblings had more social skills than adolescents have 5-7 or more than 8 siblings.

Table 4.34: Mean and Standard deviations of social skills according to number of siblings

Item	Number of siblings	Mean	SD
Social skills	4 and less	11.72	2.95
	5 -7 siblings	10.68	3.42
	8 and more	10.48	3.58

Table 4.35 shows that the highest mean value present at adolescents had psychological relationship with caregiver were of those have 5 to 7 siblings mean = 16.04, then adolescents who have 4 and less siblings mean = 15.41, and finally adolescents who have 8 and siblings mean = 14.86. Post hoc, LSD test showed that adolescents with 5-7 siblings had more psychological relationship with caregiver than adolescents have more than 8 siblings. With no statistically significant differences with the last group of adolescents who have 5-7 siblings.

Table 4.35: Mean and Standard deviations of psychological relationship with caregiver according to number of siblings

Item	Number of siblings	Mean	SD
Psychological relationship with caregiver	4 and less	15.41	4.46
	5 -7 siblings	16.04	3.44
	8 and more	14.86	4.16

4.3.4 Relationship between posttraumatic stress disorder and total trauma

Pearson correlation test was done to find the association between PTSD and trauma. The results showed that there was significant correlation between total traumatic events reported by adolescents and total PTSD (r = 0.418), re-experiencing (r = 0.399), avoidance (r = 0.366), and arousal (r = 0.315). This means that experiences that are more traumatic lead to post traumatic stress disorder. (Table 4.36).

Table 4.36: Pearson Correlations between trauma and PTSD

Item	Pearson Correlation	Total trauma	Total PTSD	Re-experiences	Avoidance	Arousal
total trauma	Pearson Correlation	1	0.418**	0.399**	0.366**	0.315**
	Sig. (2-tailed)		0.001	0.001	.001	0.001
	N	408	408	408	408	408
Total PTSD	Pearson Correlation	0.418**	1	0.844**	0.861**	0.878**
	Sig. (2-tailed)	0.001		0.001	0.001	0.001
	N	408	408	408	408	408
Re-experiences	Pearson Correlation	0.399**	0.844**	1	0.558**	0.653**
	Sig. (2-tailed)	0.001	0.001		0.001	0.001
	N	408	408	408	408	408
Avoidance	Pearson Correlation	0.366**	0.861**	0.558**	1	0.629**
	Sig. (2-tailed)	0.001	0.001	0.001		0.001
	N	408	408	408	408	408
Arousal	Pearson Correlation	0.315**	0.878**	0.653**	0.629**	1
	Sig. (2-tailed)	0.001	0.001	0.001	0.001	
	N	408	408	408	408	408

4.3.5 Relationships between traumatic events, PTSD symptoms, and total resilience of adolescents

The association between traumatic events, PTSD symptoms, and total resilience was investigated. Total number of experienced traumatic events was negatively associated with personal skills (r = - 0.119) and peer component (r = - 0.099). While PTSD was negatively associated with total resilience (r = - 0.122), personal skills (r = - 0.136), social skills (r = - 0.125) and psychological relationship with caregiver (r = -0.134). (Table 4.37).

Table 4.37: Relationships between traumatic events, PTSD symptoms, and resilience of adolescents

Item	Total trauma	Total PTSD
Resilience total	-0.06	-0.122-*
Personal skills	-0.119-*	-0.136-**
Peer component	-0.099-*	-0.08
Social skills	-0.01	-0.125-*
Physical relationship with caregiver	0.02	0.05
Psychological relationship with caregiver	-0.09	-0.134-**
Spiritual beliefs	0.02	0.05

*P =0.05 **P= 0.01 ***P=0.001

Chapter (5)

Discussion

5.1 Introduction

This chapter presents a discussion of the results of the study as presented in chapter four, these findings are discussed in line of literature review that is important to clarify them in comparison of other studies conducted by other researchers. The chapter also presents recommendations regarding to trauma, PTSD, and resilience among adolescents in Gaza strip, also to provide decision makers recommendation to put plans to care about this category.

5.2 Discussion

5.2.1 Trauma

5.2.1.1 The prevalence and severity of traumatic experiences

The study found that the highest traumatic events were: watching mutilated bodies in TV (93.1%), hearing shelling of the area by artillery (92.4%), hearing the loud voice of drones (90.4%), forced to leave you home with family members due to shelling (67.6%), and Inhalation of bad smells due to bombardment (67.6%). While, the least common traumatic experiences were: witnessing arrest of a close relative by the army (10.8%), witnessing arrest of a friend, and physical injury due to bombardment of your home (10.3%).

Our study is consistent with Abu Sultan (2012) study that revealed watching mutilated bodies on TV was the highest traumatic experience (92.73%). It is also consistent with Thabet et al (2014) study that showed that the traumatic experiences reported by the adolescents in order were: 90.8% watched mutilated bodies on TV, 88.5% heard shelling of the area by heavy artillery, 86.6% saw the signs of shelling on the ground, and 86.0% heard the sonic sounds of the jetfighters.

Many studies tried to find out the most traumatic events the individual may experience; Thabet et al (2010) study demonstrated the most events adolescents experienced were witnessing bombardments (85% to 96%) and media exposure (95%). Up to 17% of the adolescents experienced direct, physical exposure (7% personal injury).

Altawil et al. (2008) found in their study that the most prevalent types of trauma exposure were as follows: 99% of them had suffered humiliation (either to themselves or a family member); 97% had been exposed to the sound of explosions/bombs; 85% had witnessed a martyr's funeral and 84% had witnessed shelling by tanks, artillery, or military planes.

Elklit and Petersen (2008) found that 90% of the adolescents reported having directly experienced or having witnessed at least one event, and the five most recorded direct events were: death of someone close (47%), threat of being beaten (30%), humiliation or persecution by others/bullying (25%), near-drowning (21%), and traffic accidents (18%). The five least prevalent direct events were: physical abuse (5%), sexual abuse (4%), severe childhood neglect (4%), rape (3%), and pregnancy/abortion (2%).

The researcher agrees with these studies about the diversity of traumatic events and attributes that to the nature and characteristics of surrounding environment. We noticed that watching mutilated bodies on TV was the highest traumatic events among adolescents in this study and in many other studies, this indicates the adolescents' attention-grabbing to follow the war events even through TV.

This study found that 10.6% of adolescents reported mild traumatic events, 40.9% reported moderate traumatic events, and 48.5% reported severe traumatic event. The result found that 48.5% of the study sample experienced at least 11 traumatic events.

Many studies were conducted in Palestine such as Thabet et al (2014) study showed that, the studied Palestinian children reported from 2 to 30 traumatic events with a mean of total traumatic events 13.3. Altawil et al (2008) demonstrated in their study that every Palestinian child had been exposed to at least three traumatic events (chronic trauma) between 2000 and 2005. A study of Palestinian children aged from 12-16 years in east Jerusalem and various governorates in the West Bank showed that a substantial number of children experienced at least one lifetime trauma 54.7% (Khamis, 2005). Also a study of children living in the West Bank and Gaza Strip found that 48% of children had personally experienced or witnessed political violence, 93% of children reported feeling unsafe and vulnerable to attack (Arafat & Boothby, 2003).

Finkelhor et al. (2005) findings showed widespread exposure to victimization incidents, with 71% exposed to one or more victimization incidents, with an average of 3 different kinds of victimization reported. Bodvarsdottir & Elklit (2007) study showed that 74 % of the girls and 79 % of the boys were exposed to at least one traumatic event or life event. The most common events were the death of a family member, threat of violence, and traffic accidents.

Elklit and Petersen (2008) study in four different countries Lithuania, Denmark, Iceland and The Faroe Islands as Nordic welfare States. Found that 90% of the adolescents in the four countries reported having directly experienced or having witnessed at least one event. The adolescents in the four countries had on average been exposed to 2.6 events.

Neria et al (2008) study shown that more than two thirds of the general population is likely to be exposed to trauma in their lifespan and up to one fifth of Americans may experience traumatic events in the USA in any given year.

The researcher agrees with studies of (Thabet et al., 2014; Khamis, 2005; Altawil et al., 2008; Arafat & Boothby, 2003), which were conducted in Palestine, and demonstrated that all sectors of Palestine (especially Gaza Strip) were exposed to the Israeli attacks and violence, which increased the possibility to experience more traumatic events and increase these severity.

In addition, the researcher agrees with all previous studies about severity of traumatic events and its prevalence. The researcher attributes these differences in severity and prevalence of traumatic events to the nature and severity of events (conflict or war and its place).

The study found that the total mean of traumatic experiences was 10.91 (sever experiences). This is consistent with Thabet et al (2014) study in which the Palestinian children exposed to mean of 13.34 events due to Israeli aggression. It is also the study El- Buhasisi (2010) in which mean of traumatic events of his study sample was 13.3, that means the sample experienced severe trauma.

The study of Thabet et al (2010) about of traumatic events experienced by the adolescents found the mean number 9.9; that means the sample of the study experienced moderate trauma. Another study of the same author in (2008) found that the mean 7.7 that means the sample of the study experienced moderate trauma. In addition, Ghannam (2012) study that showed that the total mean of traumatic experiences was 9.40 (moderate experiences).

The researcher disagrees with these studies and attributes these findings to severity and duration of war, and the period that the researchers were conducted their studies. Many reports showed that this war was the most sever and longest one in Gaza Strip, which may explains the current study finding about sever experiences of traumatic events.

5.2.1.2 The traumatic experiences and socio-demographic factors

The study found that there were statistically significant differences toward boys. Boys statistically significantly reported severe traumatic events than girls. This is consistent with Komarovskaya et al (2011) study in which Male inmates reported higher rates of witnessing harm to others. It is also consistent with Thabet et al (2014) study, which showed that there were significant differences in traumatic events due to Gaza War according to sex in favor of boys. In addition, the researcher agrees with Bodvarsdottir & Elklit (2007) study that showed a higher rate of exposure to traumatic events in boys than girls.

The researcher disagrees with Brodsky & Lally (2004) and Elklit (2002); they concluded that the rates of exposure to traumatic events are similar for males and females.

The results found that there were no statistically significant differences in traumatic experiences resulting from the war on Gaza according to age, place of residence, family monthly income, and number of siblings. Ghannam (2012) study showed no relationship between trauma and the demographic characteristics as sex, age, residence, which shows inconsistent findings with current study in age variable, but consistent with other demographic variables.

The researcher attributes these no statistically significance differences to severity of this war, which all sectors of Gaza were exposed to the Israeli attacks and destruction. All areas of Gaza and its population were experienced many types of traumatic events, without differentiating between any variable.

5.2.2 Posttraumatic stress disorder

The study found that the most common post traumatic reactions in adolescents were: recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions (43.6%), exaggerated startle response (41.4%), acting or feeling as if the traumatic event were recurring (40.7%), efforts to avoid activities, places, or people that arouse recollections of the trauma (40.2%), and efforts to avoid thoughts, feelings, or conversations associated with the trauma (40%).

The people live in Gaza had been undergone many conflicts and wars in the last many years, and the majority of those people were affected due to these conflicts (by loss relative member(s), or have wounded member in the family, or have the home destructed, and many of traumatic events especially in 51 day war). That may explains why the most post traumatic reactions was recurrent and intrusive distressing recollections of the event, including "images, thoughts, or perceptions". It reflects a cumulative feelings and traumas in them after recurrent conflicts in last many years.

5.2.2.1 The prevalence of posttraumatic stress disorder

The study showed that 20.1% of the sample showed no PTSD, 31.1% showed at least one criteria of PTSD, 29.7% showed partial PTSD, and 19.1% showed full criteria of PTSD.

Thabet et al. (2014) showed that 11.8% of adolescents reported no PTSD, 24.2% reported less than two clusters of symptoms, and 34.31% reported symptoms meeting criteria for partial PTSD, while 29.8% reported symptoms meeting criteria for full PTSD. Abdeen et al (2008) found that 35% of those in the West Bank and 36% of those in the Gaza Strip reported symptoms of PTSD. Khamis (2005) showed that Post-traumatic stress disorder (PTSD) was diagnosed in 34.1% Palestinian sample.

Also Punamaki et al. (2005) study of a Palestinian sample, found PTSD prevalence rates of 21.5% and 13.2% for men and women, respectively. de Jong et al. (2001) study of men and women age 16 or older living in Algeria, Cambodia, Ethiopia, and Gaza, found high rates of PTSD in each sample (37.4%, 28.4%, 15.8%, and 17.8%, respectively).

The researcher agrees with all previous mentioned studies that showed existence of PTSD symptoms in conflict and war areas. Most of these studies were conducted in Palestine and they found PTSD symptoms among Palestinian people, especially those live in Gaza Strip. We noticed some differences of PTSD prevalence and severity, the researcher attributes these differences to nature of conflicts and the period they were conduct a studies.

But if we look at Kessler et al, (1995) study we will notice that PTSD occurs in approximately 7.8% of people in the US, and lower rates have been reported in Europe (e.g., 1.4% in Germany). May these lower rates of PTSD in such countries related to lower rate of conflicts and wars. However, the existence of PTSD symptoms in such countries may be attributed to existence of other types of traumatic events such as (sexual abuse, rape, community violence...) which are also can develop PTSD among these countries populations.

5.2.2.2 Posttraumatic stress disorder and socio-demographic factors

The study found that there were no statistically significant differences in total PTSD scores and all subscales according to socio-demographic factors as (sex, age, family monthly income, and number of siblings). This is consistent with Thabet et al (2015) study that showed no statistically significant differences between boys and girls in PTSD symptoms.

Our study is inconsistent with Bleich et al. (2003) study that found a higher rates of PTSD among women than among men. Also in Palestinian sample, Punamaki et al. (2005) found a higher PTSD prevalence among men than women. It is also inconsistent with de Jong et al. (2001) findings in Algeria and Cambodia that women had higher

rates of PTSD than did men, also in Ethiopia and Gaza, women possessed similar or lower rates of PTSD in comparison with men.

The researcher disagrees with Breslau et al (1998), Kessler et al (1995), Bleich et al. (2003), Punamaki et al. (2005), Thabet et al (2014), and Komarovskaya et al (2011), they concluded that women showed higher rates of PTSD when compared to men.

However, there were statistically significant differences in total PTSD, avoidance, and arousal symptoms according to place of residence in favor of adolescents who live in the middle area, and no statistically significant in re-experiencing symptoms.

5.2.3 Resilience

5.2.3.1 The aspects of resilience

The study found that the most common resilience items were: Getting an education is important to me (90%), I am proud of my citizenship (88.2%), I feel safe when I am with my caregivers (88%), Spiritual (religious) beliefs are a source of strength for me (86.8%), I am proud of my family background (86.3%), and my caregivers stand by me during difficult times (81.9%).

Sarwar et al (2010) study found that boys are more resilient than girls at the secondary level in Pakistan, but there was no statistically significant correlation found between academic resilience and academic achievement of secondary school students.

Thabet et al (2015) study showed that children reported a different resilience, the most common items were **:** I had my values and principles and I keep it, and I initiate doing things to help my family. His study revealed that 25% prevalence of resilient children, and resilience was more common in well-educated families. But Maymon et al (2009) found the resilient children did not typically come from families with high socioeconomic or educational status.

El-Sarraj et al (2011) study showed that 21% of children were classified as resilient, 23% as traumatized, 23% as vulnerable, and 33% as spared from both trauma and psychological disorders.

The researcher noticed that getting an education by adolescents was the highest aspect of resilience among them. The researcher attributes this to the nature of adolescents' characteristics that they challenge difficult situations after war and overcome the traumatic events effect. This is also their ambitions toward achieving something.

5.2.3.2 Resilience and socio- demographic factors

The study found no statistically significant differences in total resilience scores and sub scales according to age group of sample. However, it found that there were statistically significant differences only in social skills factors according to sex in favour of boys. This is consistent with El-Sarraj et al (2011) and Thabet and Abadsa (2013) study that showed that boys were more resilient, more committed, more able to control, and challenging than girls.

The researcher agrees with Ghannam (2012) study, which showed that there were no statistically significance differences in the total resilience and subscales according to the age, and disagrees with her in relation of resilience factors to sex variable, in which her study showed no statistically significance differences in the total resilience and subscales according to sex.

The results demonstrated that there were statistically significant differences in personal skills, peer component, and psychological relationship with caregiver scores according to place of residence in favor of adolescents live in the North Gaza. This is inconsistent with Thabet and Abadsa (2013) study, which showed that people living in north Gaza had less resilient and less challenging than people living in Gaza or Khan Younis.

The researcher disagrees with Ghannam (2012) and Punama (2011) study that found no statistically significant differences in resilience according to residence place.

The results demonstrated that there were statistically significant differences in personal skills and social skills, with no significant differences in other sub scales of resilience according to family monthly income. The statistically significant differences in personal skills was in favor of families with monthly income from 2001 to 3000 NIS, while in social skills was in favor of families with monthly income more than 3000 NIS.

The results demonstrated that there were statistically significant differences in peer component, social skills, and psychological relationship with caregiver, with no significant differences in other sub scales of resilience according to number of siblings. The statistically significant differences in peer component, social skills was in favor of those have 4 and less siblings, while in psychological relationship with caregiver was in favor of those have 5 to 7 siblings. This is consistent with Ghannam (2012) study which found that there were statistically significance differences in the existence of the resilience according to number of siblings.

5.2.4 Traumatic events and posttraumatic stress disorder

The results showed that there was significant correlation between total traumatic events total PTSD among the adolescents of the study sample.

Many studies tried to find out relationship between exposure to traumatic events and PTSD development. Yahav (2011) found PTSD symptoms were found among those who had directly witnessed an attack. Seedat et al (2004) found that 14.5% exposed to one or more traumas fulfilled criteria for a full diagnosis of PTSD, and 10.3% fulfilled partial criteria for PTSD. Norris et al. (2003) found that exposure to violence in childhood was related to the chronicity of PTSD.

Rosenman (2002) found that experiencing combat and rape or molestation were events that were especially likely to increase one's odds of developing PTSD. Punamaki, et al (2001) found that children exposed to terrorism experience loss, danger, and fear for their lives and can suffer from anxiety, emotional problems, and PTSD symptoms. Smith et al (2001) indicated that there is a correlation between previous and the number of traumatic experiences, and PTSD, with more exposure leading to an increase of symptoms of trauma. Papageorgiou et al (2000) found a strong association between children and adolescents who were exposed to war stressors and high levels of PTSD symptoms and grief reactions

The researcher agrees with all of these studies that demonstrated the correlation between the existence of posttraumatic symptoms and traumatic events. However, inconsistent with Son (1995) found no relationship between a number of traumatic experiences and PTSD.

5.2.5 Relationships between traumatic events, PTSD symptoms, and total resilience of adolescents

The results showed that the total number of experienced traumatic events was negatively associated with personal skills and peer component. While PTSD was negatively associated with total resilience, personal skills, social skills, and psychological relationship with caregiver.

Thabet et al (2015) showed that total scores of resilience were correlated negatively with total PTSD, arousal, and avoidance. Commitment was correlated negatively with arousal, children with better resilience had less PTSD, avoidance, and arousal symptoms and children with commitment had less arousal symptoms. Total scores of resilience were correlated negatively with total mental health.

Bensimon (2012) found that the trauma increased PTSD levels, whereas resilience was associated negatively with PTSD. Connor et al (2003).found that higher levels of resilience were associated with lower levels of PTSD symptoms.

Our study is consistent with these studies that demonstrated the correlation between exposed to trauma, PTSD symptoms, and resilience factors. Exposed to trauma increase the possibility to develop PTSD, and the resilience associated negatively with PTSD (higher rates of PTSD associated with lower rates of resilience).

5.3 Recommendations

5.3.1 Trauma

According to the results, there was a high prevalence of traumatic experiences, which affect the adolescents badly, so the researcher recommends:

1. Restriction of TV programs that display a violence and war reports through cooperation with the ministry of information.
2. Restriction of TV use especially mutilated bodies through the parents.
3. Purposefully selected programs by parents or caretakers are good for children and adolescents.
4. It is necessary to provide a therapeutic interventions and protective interventions for adolescents exposed traumatic events.

5.3.2 Posttraumatic stress disorder

According to the results, there was a prevalence of PTSD symptoms, which may threatening the adolescents' life and future or develop other problems, so the researcher recommends:

1. To establish supportive and therapeutic programs that encouraged affected adolescents to share their feelings and thoughts, and to provide the appropriate therapy to them (by cooperation with ministry of education and ministry of health).
2. Train good mental health workers by ministry of health to focus on mental health services that can help affected adolescents.
3. Follow a good plan of therapeutic interventions especially for those with sever PTSD symptoms such as (psychodynamic and cognitive behavioral interventions).

5.3.3 Resilience

Resilience according to this study was negatively related with traumatic experiences and negatively with PTSD symptoms. The study showed that "Getting an education is important to me" was the highest resilience factor among adolescents in Gaza. The researcher put many recommendations to foster resilience

1. The researcher recommends to increase attention from parents and caretakers to the importance of education among adolescents (as a resilience factor) and how it improve the educational process in Gaza's schools. (by cooperation with ministry of information and ministry of education).
2. Provide the population in Gaza with knowledge about protective processes associated with resilient mental health outcomes especially children and adolescents affected by conflicts and wars.
3. Promotion teachers and caretaker's awareness about the ways to foster resilience among students.
4. Conduct more studies concern with the resilience factors and ways to foster and increase resilience among people live in Gaza.

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Annexes

Annex 1

Helsinki Committee for ethical approval

المجلس الفلسطيني للبحث الصحي

Palestinian Health Research Council

تعزيز النظام الصحي الفلسطيني من خلال مأسسة استخدام المعلومات البحثية في صنع القرار

Developing the Palestinian health system through institutionalizing the use of information in decision making

Helsinki Committee
For Ethical Approval

Date: 06\04\2015 **Number:** PHRC/HC/25/15

Name: Issa M. Al-Ibwaini الاسم:

We would like to inform you that the committee had discussed the proposal of your study about: نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:-

Post-Traumatic Stress Disorder and Resilience in Palestinian Adolescents in Gaza Strip 2014

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/25/15 in its meeting on 06/04/2015 و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

Signature

Member **Chairman** **Member**

Genral Conditions:-
1. Valid for 2 years from the date of approval.
2. It is necessary to notify the committee of any change in the approved study protocol.
3. The committee appreciates receiving a copy of your final research when completed.

Specific Conditions:-

The subject was approved following the World Medical Association Declaration of Helsinki-Ethical principles for medical research involving human subjects, adopted by the 18th World Medical Association General Assembly, Helsinki, Finland, June 1964 and amended by the 59th WMA General Assembly, Seoul, Korea, October 2008.

E-Mail:pal.phrc@gmail.com

Gaza - Palestine غزة - فلسطين
شارع النصر - مفترق العيون

Annex 2

DSM-IV Diagnostic criteria for posttraumatic stress disorder

A. The person experiences a traumatic event in which both of the following were present:
    1. The person experienced or witnessed or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others;
    2. The person's response involved intense fear, helplessness, or horror.

B. The traumatic event is persistently re-experienced in any of the following ways:
    1. Recurrent and intrusive distressing recollections of the event, including images, thoughts or perceptions;
    2. Recurrent distressing dreams of the event;
    3. Acting or feeling as if the traumatic event were recurring (eg reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those on wakening or when intoxicated);
    4. Intense psychological distress at exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event;
    5. Physiological reactivity on exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event.

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma) as indicated by at least three of:
    1. Efforts to avoid thoughts, feelings or conversations associated with the trauma;
    2. Efforts to avoid activities, places or people that arouse recollections of this trauma;
    3. Inability to recall an important aspect of the trauma;
    4. Markedly diminished interest or participation in significant activities;
    5. Feeling of detachment or estrangement from others;
    6. Restricted range of affect (eg unable to have loving feelings);
    7. Sense of a foreshortened future (eg does not expect to have a career, marriage, children or a normal life span).

D. Persistent symptoms of increased arousal (not present before the trauma) as indicated by at least two of the following:
    1. Difficulty falling or staying asleep;
    2. Irritability or outbursts of anger;
    3. Difficulty concentrating;
    4. Hypervigilance;
    5. Exaggerated startle response.
E. The symptoms on Criteria B, C and D last for more than one month.
F. The disturbance causes clinically significant distress or impairment in social, occupational or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than 3 months.

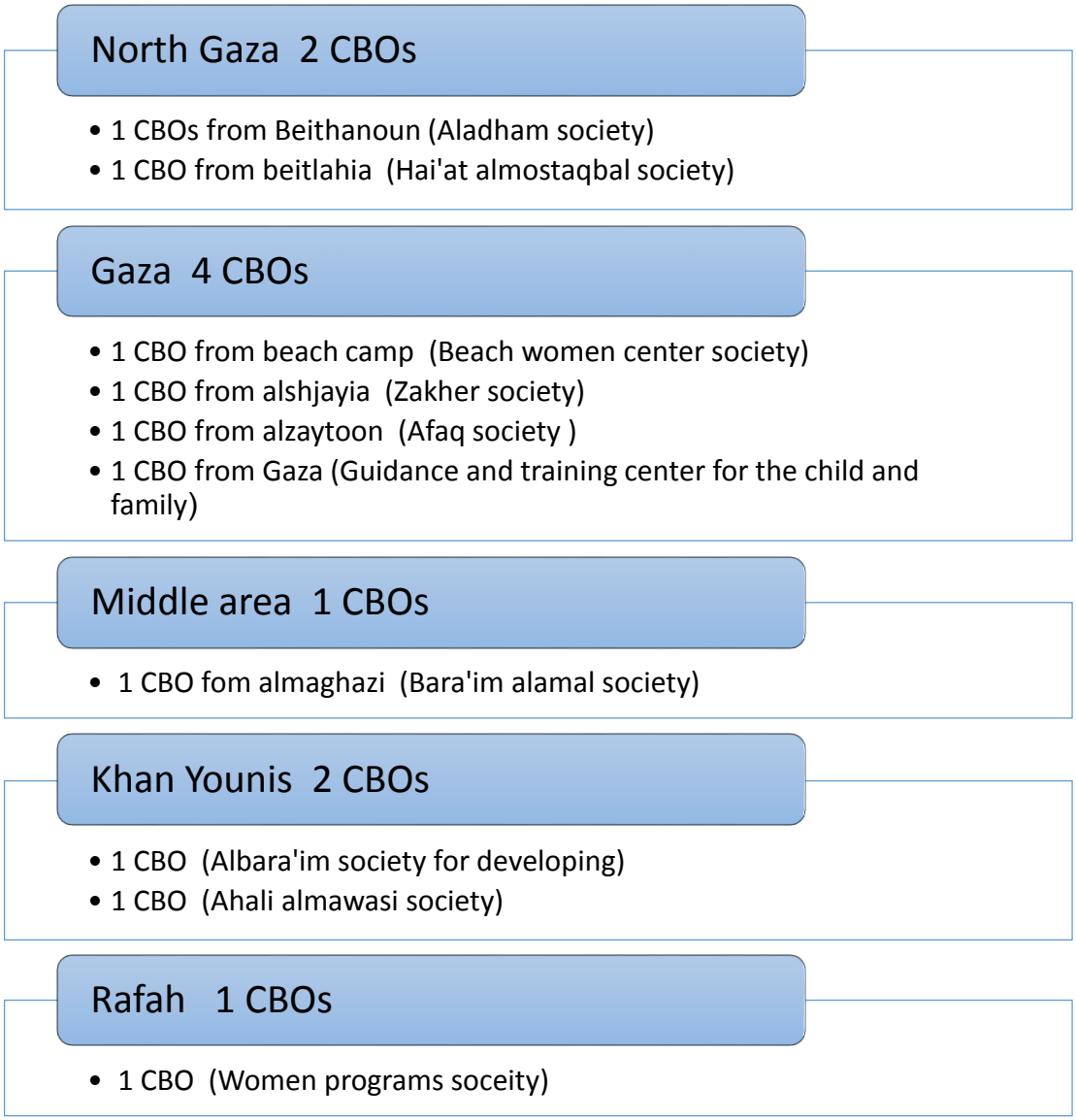
Chronic: if duration of symptoms is 3 months or more.

Specify if:

With delayed onset: if onset of symptoms is at least 6 months after the event.

Annex 3

Distribution and names of the Community Based Organizations



Annex 4

Participation invitation

Dear participant:

This study aims to investigate posttraumatic stress disorder and resilience among Palestinian adolescents in the Gaza Strip after 51 day of war- as a requirement to obtain a master degree in community mental health at Al-Quds University- Palestine.

The researcher thanks you for your participation and collaboration in this study that we hope reduce the psychological problems and improve resilience factors and mental health among adolescents in Gaza Strip.

The researcher would like to emphasize that information will remain confidential and for the purpose of scientific research that does not necessary to mention your name. You have the right to refuse participate in this study.

Thank you for participation

Issa Al-Ibwaini

Annex 5

First: Socio-demographic data

Age … ❒Male ❒Female

Type of residence ❒Own ❒Rented ❒Camp ❒With family

Place of residence ❒North Gaza ❒Gaza ❒Middle area ❒Khan Younis ❒Rafah area

Number of siblings … ❒4 or less ❒5-7 ❒8 and more

Family monthly income ❒Less than 1200 NIS ❒1201-2000 NIS ❒2001-3000 NIS ❒ More than 3000 NIS

Father's job ❒Unemployed ❒Skilled worker ❒Civil employee and working ❒Civil employee not at work and getting salary ❒Merchant ❒Other…

Father education ❒Not educated ❒Preparatory ❒Elementary ❒Secondary ❒Diploma ❒University ❒Post graduate

Mother's job ❒House wife ❒Skilled worker ❒Merchant ❒Civil employee and working ❒Civil employee not at work and getting salary

Mother's education ❒Not educated ❒Preparatory ❒Elementary ❒Secondary ❒Diploma ❒University ❒Post graduate

Name (selective): ……. **Signature**:…….. **Date**:……

Annex 6

Gaza Traumatic Events Checklist

No.	Item	Yes	No
1	Watching mutilated bodies in TV		
2	Hearing shelling of the area by artillery		
3	Hearing the loud voice of Drones		
4	Forced to leave you home with family members due to shelling		
5	Inhalation of bad smells due to bombardment		
6	Receiving pamphlets from Airplane to leave your home at the border and to move to the city centers		
7	Threaten by telephone to leave the home for bombardment of home		
8	Witnessing firing by tanks and heavy artillery at neighbours' homes		
9	Witnessing demolition of big buildings		
10	Deprivation from water or electricity during detention at home		
11	Hearing killing of a close relative		
12	Threaten by shooting		
13	Witnessing shooting of a friend		
14	Destroying of your personal belongings during incursion		
15	Witnessing assassination of people by rockets		
16	Hearing killing of a friend		
17	Witnessing shooting of a close relative		
18	Witnessing firing by tanks and heavy artillery at own home		
19	Witnessing killing of a friend		
20	Witnessing killing of a close relative		
21	Threaten of killing of your closed relative in front of you		
22	Threatened with death by being used as human shield by the army to move from one home to home		
23	Personal threat if killing by the army		
24	Being arrested during the land incursion		
25	Shot by bullets, rocket, or bombs		
26	Witnessing arrest of a close relative by the army		
27	Witnessing arrest of a friend		
28	Physical injury due to bombardment of your home		

Annex 7

PTSD Scale

No.	Item	Never/ Rarely	Sometimes	Much/ often
1	Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions.			
2	Recurrent distressing dreams of the event			
3	Acting or feeling as if the traumatic event were recurring			
4	Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event			
5	Physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event			
6	Efforts to avoid thoughts, feelings, or conversations associated with the trauma			
7	Efforts to avoid activities, places, or people that arouse recollections of the trauma			
8	Inability to recall an important aspect of the trauma			
9	Markedly diminished interest or participation in significant activities			
10	Feeling of detachment or estrangement from others			
11	Restricted range of affect (e.g., unable to have loving feelings)			
12	Sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)			
13	Difficulty falling or staying asleep			
14	Irritability or outbursts of anger			
15	Difficulty in concentration			
16	Hyper vigilance (On edge been easily distracted or had to stay)			
17	Exaggerated startle response			

Annex 8

Resilience Scale for Adolescents

No.	Item	Never/ Rarely	Sometimes	Much/ often
1	I cooperate with people around me			
2	I aim to finish what I start			
3	People think I am fun to be with			
4	I solve problems without using drugs			
5	I am aware of my own strengths			
6	I feel supported by my friends			
7	My friends stand by me during difficult times			
8	I know how to behave in different social situations			
9	I know where to go to get help			
10	I have opportunities to develop job skills			
11	I am given opportunities to become an adult			
12	My caregivers watch me closely			
13	My caregivers know a lot about me			
14	I eat enough most days			
15	I talk to my caregivers about how I feel			
16	My caregivers stand by me during difficult times			
17	I feel safe when I am with my caregivers			
18	I enjoy my caregivers' cultural and family traditions			
19	Spiritual (religious) beliefs are a source of strength for me			
20	I participate in organized religious activities			
21	I think it is important to serve my community			
22	I am proud of my family background			
23	I am proud of my citizenship			
24	I enjoy my community's traditions			
25	I am treated fairly in my community			
26	I have people I look up to			
27	Getting an education is important to me			
28	I feel I belong at my school			

Annex 9

دعــوة

أخي المشارك/ أختي المشاركة:

أنا الطالب/ عيسى محمود العبويني - أدرس بكلية الصحة العامة جامعة القدس – أبو ديس، أقوم بإعداد بحث بعنوان " **كرب ما بعد الصدمة و الصلادة النفسية لدى المراهقين في قطاع غزة "** باعتباره متطلب التخرج و الحصول على درجة الماجستير.

تهدف هذه الدراسة: لتحديد العلاقة بين التعرض لحرب 2014 و كرب ما بعد الصدمة و الصلادة النفسية لدى المراهقين في قطاع غزة و كذلك تحديد نسبة كرب ما بعد الصدمة و كذلك الصلادة النفسية و أنواعها كنتيجة للتعرض للحرب، و من ثم الخروج بتوصيات تساعد في تخفيف العبء النفسي و تحسين الصحة العقلية لدى هؤلاء المراهقين.

و شكرا لك على مشاركتك في هذه الدراسة بالإجابة عن هذه الأسئلة

مشاركتك تطوعية يمكنك رفض الإجابة على أي سؤال و أرغب أن أؤكد لك أن المعلومات التي تذكرها/ يها ستكون مصدر ثقة و سرية و ستستخدم فقط لغرض البحث العلمي و بدون ذكر الأسماء و لذا أرجو أن تكون الإجابة دقيقة.

و شكرا لك/ي على حسن تعاونك

الباحث / عيسى العبويني

Annex 10

أولا: البيانات الديموغرافية الأولية

العمر ..... الجنس ❐ ذكر ❐ أنثي

نوع السكن: ❐ ملك ❐ إيجار ❐ معسكر ❐ مع العائلة عدد غرف المنزل .....

العنوان: ❐ شمال غزة ❐ غزة ❐ المنطقة الوسطى ❐ خانيونس ❐ رفح

عدد الأخوة : ..... ❐ 4 وأقل ❐ من 5-7 ❐ 8 وأكثر

دخل الأسرة الشهري: ❐ أقل من 1200 شيكل ❐ من 1201-2000 شيكل ❐ من 2001-3000 شيكل ❐ أكثر من 3000 شيكل

عمل الأب: ❐ لا يعمل ❐ عامل صنايعي ❐ يعمل و يتقاضى مرتب ❐ لا يعمل و يتقاضى مرتب ❐ تاجر ❐أخرى حدد .....

عدد سنوات تعليم الأب: .....

المؤهل التعليمي للأب: ❐ لم يتعلم ❐ ابتدائي ❐ إعدادي ❐ ثانوي❐ دبلوم ❐ جامعي ❐ دراسات عليا

عمل الأم : ❐ ربة بيت ❐ عاملة ❐ تاجرة ❐ تعمل و تتقاضى راتب ❐ لا تعمل و تتقاضى راتب ❐أخرى حدد .....

عدد سنوات تعليم الأم: .....

المؤهل التعليمي للأم: ❐ لم تتعلم ❐ ابتدائي ❐ إعدادي ❐ ثانوي❐ دبلوم ❐ جامعي ❐ دراسات عليا

الاسم (اختياري) ..... التوقيع ..... التاريخ .....

Annex 11

ثانيا: مقياس الخبرات الصادمة الناتجة عن الحرب علي غزة-2014

اعداد أ.د. عبد العزيز ثابت

عزيزي/تي:

أمامك مجموعة من البنود التي توضح أنواع الخبرات الصادمة (الأحداث المؤلمة) التي قد يتعرض لها أي إنسان في الظروف الصعبة مثل الحروب، الاحتلال، الكوارث الطبيعية والتي قد تشمل بعض ما تعرضت له خلال الحرب علي غزة-2014. نرجو أن تضع علامة صح في الخانة الصحيحة.

م	البند	نعم	لا
1	سماعك لاستشهاد صديق أو جارلك أثناء الحرب		
2	سماعك لاستشهاد أب أو أخ أو أخت أو قريب لك أثناء الحرب		
3	سماعك لأصوات القصف على المناطق المختلفة من قطاع غزة		
4	سماعك لصوت الزنانة باستمرار		
5	مشاهدة استشهاد صديق لك أمامك		
6	مشاهدة استشهاد أب أو أخ أو أخت أو قريب لك أمامك		
7	مشاهدة إصابة صديق لك أمامك بالشظايا أو الرصاص		
8	مشاهدة إصابة أب أو أخ أو أخت أو قريب لك أمامك بالشظايا أو الرصاص		
9	مشاهدة بيتكم و هو يهدم ، و يدمر من القصف أو الجرافات		
10	مشاهدة بيت جيرانكم و هو يهدم ، و يدمر من القصف أو الجرافات		
11	مشاهدة أب/أخ/أخت/ أم/قريب لك وهو يعتقل أمامك		
12	مشاهدة صديق وهو يعتقل أمامك من قبل الجيش		
13	مشاهدة صور الجرحى و الأشلاء والشهداء في التلفزيون		
14	مشاهدة الأبراج السكنية العالية و هي تقصف امام عينك و تسوى بالأرض		
15	مشاهدة عمليات الاغتيالات من قبل الجيش لأشخاص في الشارع		
16	تعرضك للإصابة الجسدية نتيجة للحرب و فقدانك أحد أطرافك		
17	تعرضك للإصابة بشظية قنبلة أو صاروخ أو الرصاص أثناء الحرب		
18	تعرضك للاحتجاز في البيت و للحرمان من الماء و الأكل و الكهرباء		
19	تعرضك لإطلاق النار بقصد التخويف		
20	تعرض إغراضك الشخصية في المنزل للتدمير و التكسير والنهب من الجيش		
21	تهديدك للتهديد شخصياً بالقتل		
22	تهديدك للتهديد بقتل أحد أفراد الأسرة أمام عينيك		
23	تعرضك للخطر الشديد باستخدامك كدرع بشري للقبض على جارلكم		
24	تعرضك لترك المنزل مع عائلتك وأقاربك و النزوح لمناطق أخرى		
25	تعرضك للاعتقال من الجيش أثناء الاجتياح		
26	تعرضك لاستشاق غازات كريهه ناتجة عن القصف		
27	تعرضك للتهديد بالتليفون لترك المنزل بغرض قصفه		
28	تعرضك أو أحد أفراد أسرتك للتهديد بترك البيت في المناطق الحدودية و التوجه لوسط المدينة عن طريق منشورات من الطائرات		

Annex 12

ثالثا: مقياس كرب ما بعد الصدمة للمراهقين

اعداد أ.د. عبد العزيز ثابت

عزيزتي/

الأسـئلة التالية تتعلق بالاعراض الناتجة عن الخبرة الصـادمة التي تعرضـت لها خلال الحرب في صـيف 2014 على غزة كل سؤال يصف التغيرات التي حدثت في صحتك و مشاعرك خلال الفترة السابقة من فضلك أجب علي كل الأسئلة بوضع إشارة (√)

م	البند	أبدا	أحيانا	غالبا
1	هل تعاودك صور و أحداث و ذكريات بما تعرضت له أثناء الحرب.			
2	هل تحلم أحلام مزعجة تذكرك بالحرب			
3	هل ينتابك شعور بأن ما تعرضت له في فترة الحرب سوف يحدث الآن مرة أخرى (أو تلعب بأشياء تذكرك بالحرب)			
4	هل تصاب بحالة من الضيق الشديد عند التعرض لأي موقف صعب خارجي أو داخلي من نفسك يذكرك بما تعرضت له أثناء الحرب			
5	هل تصاب بحالة من القلق والعصبية والتوتر (على شكل سرعة في ضربات القلب رعشة في اليدين، عرق غزير) عند تعرضك لأي موقف خارجي صعب أو داخلي من نفسك يذكرك بما تعرضت له أثناء الحرب			
6	هل تتجنب الأفكار، والأحاديث، والإحساسات التي تذكرك بالخبرات الصادمة التي تعرضت لها إثناء الحرب			
7	هل تتجنب الأشخاص و الأماكن ، والمواقف التي تذكرك بالخبرات الصادمة التي تعرضت لها إثناء الحرب			
8	أصبحت غير قادر على تذكر أشياء مهمة تتعلق بفترة الحرب و ما تعرضت له من مواقف صادمة			
9	منذ تعرضت للصدمة هل قل بشكل واضح اهتمامك بالمشاركة في النشاطات الاجتماعية، والمدرسية، و المشاركات السياسية المختلفة			
10	هل تشعر بالغربة و الانفصال عمن حولك وأنه ليس لك بهم أي صلة			
11	هل أنت عاجز على حب الآخرين من حولك			
12	هل تشعر بأنه ليس لديك مستقبل مثل أن تكمل تعليمك وتتزوج وتعيش حياة طويلة			
13	هل تشكو من صعوبة في النوم أو البقاء نائما			
14	هل تشعر بالتوتر وتنتابك نوبات من الغضب الشديد			
15	هل لديك صعوبات في التركيز أثناء تأدية واجباتك المدرسية			
16	هل تشعر بأنك دائما متيقظ ومتوقع للأسوأ وفي حالة انتظار دائم لما سيحدث			
17	هل تجفل و تتفزز بشكل غير طبيعي لسماعك أقل صوت مزعج			

Annex 13

رابعا: مقياس الصلادة النفسية

اعداد أ.د. عبد العزيز ثابت

عزيزي/تي : أمامك عدد من العبارات التى تمثل رؤيتك في مواجهة عدد من المواقف ، والمطلوب منك: ان تقرا كل عبارة بعناية ثم تضع علامة (√) في احدى الخانات المقابلة للعبارة، نأمل ألا تترك عبارة واحدة دون أن تجيب عليها مع ملاحظة انه لا توجد عبارة صحيحة واخرى خاطئة تعتبر صحيحة عندما تعبر عن حقيقة ما تشعر به تجاه المعنى الذى تتضمنه العبارة.

م	البند	أبدا	احيانا	غالبا
1	أتعاون مع ممن هم حولي			
2	أنهي ما بدأت عمله			
3	الناس يعتقدون بأنني مرح			
4	أحل مشاكلي بدون تناول أدوية او كحول			
5	أعرف مصادر قوتي الذاتية			
6	أشعر بالدعم بواسطة أصدقائي			
7	أصدقائي يقفوا إلي جانبي وقت الضيق			
8	أعرف كيف أتصرف في المواقف الاجتماعية المختلفة			
9	أعرف إلي أين اتجه للحصول علي المساعدة			
10	لدي الفرص لتطوير مهاراتي الوظيفية			
11	أعطيت الفرصة المًناسبة كي اكبر و أصبح رجلا			
12	أهلي يراقبونني باستمرار			
13	أهلي يعرفي كل شيء عني			
14	أكل كفاية معظم اليوم			
15	أتكلم مع أهلي فيما أحس به			
16	أهلي يقفوا معي في الأوقات الصعبة			
17	أشعر بالأمان في وجود أهلي			
18	أستمتع بعادات أهلي و تقاليدهم			
19	الإيمان و الوازع الديني هي مصدر القوة لدي			
20	أشارك في النشاطات الدينية المنظمة			
21	أعتقد بأنه من المهم أن أخدم من هم حولي			
22	أنا فخور بانتماءاتي و خلفيتي العائلية			
23	أفتخر بمواطنتي			
24	أستمتع بعادات مجتمعي			
25	يتم معاملتي بالعدل في مجتمعي			
26	لدي أشخاص أعتني بهم			
27	الحصول على التعليم مهم بالنسبة لي			
28	أشعر بالانتماء لمدرستي			

Annex 14

Palestine Map

PCBS (2014)

ملخص باللغة العربية

عنوان الرسالة: اضطراب ما بعد الصدمة و الصلادة النفسية لدى اليافعين الفلسطينيين في قطاع غزة

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إشراف: د. عبد العزيز ثابت

هدفت هذه الدراسة للكشف عن العلاقة ما بين كرب ما بعد الصدمة و الصلادة النفسية لدى المراهقين في قطاع غزة.

تم استخدام البحث الوصفي التحليلي لعرض البيانات الخاصة بمجتمع العينة. استخدم الباحث الأربعة مقاييس التالية: مقياس المعلومات الديموغرافية، قائمة الخبرات الصادمة للحرب على غزة ، مقياس كرب ما بعد الصدمة للمراهقين، و مقياس الصلادة النفسية للمراهقين.

تكونت عينة الدراسة من 408 من المراهقين (209 من الذكور و 199 من الإناث) من محافظات قطاع غزة حيث تراوحت أعمار الفئة المستهدفة ما بين 13 إلى 18 عاما.

وجدت الدراسة أن المتوسط الكلي للخبرات الصادمة كان (10.91، خبرات شديدة)، و كان هناك علاقة بين الخبرات الصادمة و الجنس لصالح المراهقين الذكور، و لم تكن هناك علاقة بين الخبرات الصادمة و الخصائص الديموغرافية الأخرى مثل (العمر، السكن ،دخل الأسرة، عدد الاخوة).

أظهرت الدراسة أن متوسط كرب ما بعد الصدمة 29.52، و متوسط أعراض التجنب 10.37، و متوسط أعراض التدخل 9.95 ، و متوسط أعراض الإثارة 9.21. كما و أظهرت الدراسة أن نسبة 20.1 من العينة لم تظهر أي أعراض كرب ما بعد الصدمة، فيما أظهر 30.1 من العينة عرضا واحد من أعراض كرب ما بعد الصدمة، و نسبة 27.7 من العينة أظهرت كرب ما بعد الصدمة بشكل جزئي، و نسبة 19.1 انطبق عليهم التشخيص الكلي لكرب ما بعد الصدمة.

كما و كانت هناك دلالة احصائية لوجود كرب ما بعد الصدمة وأعراض التجنب و أعراض الإثارة تُعزى لمكان السكن لصالح المراهقين الذين يسكنون في المنطقة الوسطى من قطاع غزة، فيما لم تظهر النتائج أي دلالة إحصائية لأعراض التدخل مع مكان السكن. و لم تكن هناك أي دلالة إحصائية لوجود كرب ما بعد الصدمة مع المتغيرات الديموغرافية الأخرى.

أظهرت الدراسة أن المتوسط الحسابي للصلادة النفسية 82.15 ، كما بينت ان المتوسطات الحسابية للمقاييس الفرعية للصلادة النفسية كانت كالتالي : المهارات الشخصية 14.01 ، دعم الأصدقاء 5.68، المهارات الاجتماعية 10.75، العلاقة الجسدية مع مقدم الرعاية 5.19، العلاقة النفسية مع مقدم الرعاية 15.51، الاعتقادات الروحانية 9.36، الثقافة 14.87، التعليم 6.79.

وجدت الدراسة أن هناك دلالة إحصائية لوجود المهارات الاجتماعية مع الجنس، لصالح المراهقين الذكور.
كما و وجدت الدراسة أن هناك دلالة إحصائية لوجود المهارات الشخصية و دعم الأصدقاء و العلاقة النفسية مع مقدم الرعاية تُعزى لمكان الإقامة لصالح المراهقين الذين يسكنون في المنطقة الشمالية من قطاع غزة.

وجدت الدراسة أيضا أن هناك دلالة إحصائية في المهارات الشخصية و الاجتماعية تعزى لدخل الأسرة الشهري. حيث كانت الدلالة الإحصائية في المهارات الشخصية لصالح المراهقين من الأسر التي دخلها الشهري من 2001 إلى 3000 شيكل شهريا. و كانت الدلالة الإحصائية في المهارات الاجتماعية لصالح المراهقين من الأسر التي دخلها الشهري أكثر من 3000 شيكل شهريا.

أظهرت الدراسة أن هناك دلالة إحصائية في دعم الأصدقاء و المهارات الاجتماعية و العلاقة النفسية مع مقدم الرعاية تعزى لعدد الأخوة. حيث كانت الدلالة الإحصائية في دعم الأصدقاء و المهارات الاجتماعية لصالح المراهقين ممن لديهم أربعة أخوة أو أقل. و كانت الدلالة الإحصائية في العلاقة النفسية مع مقدم الرعاية لصالح المراهقين ممن لديهم 5 إلى 7 من الأخوة.

بينت الدراسة وجود علاقة ذات دلالة إحصائية إيجابية بين الخبرات الصادمة و كرب ما بعد الصدمة عند قيمة احتمالية 0.001، كما أظهرت الدراسة أن هناك علاقة سلبية ما بين الخبرات الصادمة و المهارات الشخصية و دعم الأصدقاء. و كان هناك علاقة سلبية ما بين كرب ما بعد الصدمة و الصلادة النفسية و بعض المقاييس الفرعية للصلادة (المهارات الشخصية، و المهارات الاجتماعية، و العلاقة النفسية مع مقدم الرعاية لصالح).