EFFECTS OF TRAUMA-FOCUSED GRIEF INTERVENTIONS AMONG PARENTALLY BEREAVED CHILDREN

by

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(Under the direction of M. Elizabeth Vonk)

ABSTRACT

In this study, the presence of traumatic grief symptoms and posttraumatic stress disorder symptoms in parentally bereaved children is examined. The presence of these symptoms in two groups of children is compared: those who have lost a parent to a sudden and/or violent death and those who have lost a parent to an expected death. Also examined is the effectiveness of short-term treatment using trauma-focused grief interventions in reducing traumatic grief and posttraumatic grief symptoms in parentally bereaved children. The study is important because thousands of children lose their parents each year, yet there is a dearth of documentation of proven effective treatment modalities for these children. In addition, the presence of traumatic grief and posttraumatic stress disorder symptoms among children who have experienced an expected death has not previously been studied.

This study tested the hypothesis that the presence of traumatic grief and posttraumatic stress disorder symptoms, occur equally frequently in children who have lost a parent to a sudden and/or violent death, as well as, in children who have lost a parent to an expected death. In addition, the current study used a quasi-experimental non-equivalent comparison group design to test the hypothesis that attending a weekend bereavement camp would show a decrease in

traumatic grief and posttraumatic stress disorder symptoms as measured by the EGI (Layne, Savjak, Saltzman, & Pynoos, 2001) and UCLA PTSD Index (Steinberg, Brymer, Decker, & Pynoos, 2004) respectively. Children in the immediate treatment group, were tested before treatment (*n*=46) (T1), two weeks after treatment (*n*=41) (T2) and four weeks after treatment (*n*=30) (T3). Children in the delayed treatment group were tested two weeks before delayed treatment (*n*=53) (T1), immediately before delayed treatment (*n*=45) (T2) and two weeks after treatment (*n*=42) (T3).

Data analyses indicated that the presence of traumatic grief and posttraumatic stress disorder symptoms was similar for children who had lost a parent to a sudden and/or violent death, as well as, for children who had lost a parent to an expected death. The data analyses further indicated that the symptomatology for the immediate and delayed treatment groups was similar at T1. There was a statistically significant decrease in traumatic grief symptoms from T1 to T2 for the immediate treatment group as compared to the delayed treatment group. There was not a statistically significant decrease in posttraumatic stress disorder symptoms from T1 to T2 for the immediate treatment group though there was a decrease in the immediate treatment group and an increase in the delayed treatment group. There was a statistically significant decrease in both traumatic grief and posttraumatic stress disorder symptoms from T1 to T3 for the immediate treatment group and the delayed treatment group alike.

The data give support to the hypothesis that children who lose a parent suffer from traumatic grief and posttraumatic stress disorder symptoms regardless of the manner of death. The data also give support to the effectiveness of a short-term treatment program using trauma-focused grief interventions. The results are discussed in relation to previous research findings.

Also discussed are the implications for the treatment program, theory, practice and future research.

INDEX WORDS: Bereavement, Program evaluation, Children and grief, Short-term bereavement program, Bereavement camp, Posttraumatic stress disorder and bereaved children, Bereaved children, Childhood traumatic grief, Traumatic grief

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# DEDICATION

To my parents who loved me unconditionally and were great supporters of academic endeavors; to my husband John, my daughters Christina and Rebecca and my bonus children Liza, Carl and JohnB who by their mere presence have enriched my life beyond imagination; and to my BFF Karen, who thinks I am smart, which gave me the idea I could do this.

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# CHAPTER 1

## INTRODUCTION

Grief is the cost of attachment (e.g. Parkes, 1975 p. 249) severed by death. As attachment is universal (Bowlby, 1973) so is grief. If the grief involves the loss of a parental figure, a child's development may be compromised (Webb, 2004). Unfortunately for children in the United States, this is not an uncommon experience. It is estimated that more than 2 million children and adolescents in America have lost a parent to death (SSA, 2003). Other estimates show that between 5% and 15% of all children under the age of fifteen will experience the death of one parent (Elchert, 1998). Neither of these figures includes other significant losses such as the loss of a grandparent, sibling, or other close relative. The loss of a parent in childhood is an overwhelming event (Worden, Davies, & McCown, 1999) and may interfere with development (Kaffman & Elizur, 1979), create anxious and withdrawn behaviors (Felner, Stolberg, & Cowen, 1975) and cause depressive disorders (Lloyd, 1980).

Indeed, a parental death can have serious consequences. The Harvard Child Bereavement Study (Worden & Silverman, 1996) reported that a significantly large group of children show serious problems at one year (19%) and at two years (21%) after the death of a parent. In fact, approximately 50% of children who lose a parent are noticeably impaired in their everyday functioning during the first year of bereavement (D. Black, 1978). Bereaved children ages 3-6, show elevated levels of depression, anxiety and problematic behavior (Kranzler, Shaffer, & Wasserman, 1990), as do parentally bereaved elementary school children (Felner, Stolberg, & Cowen, 1975). Though all children who lose a parent may be profoundly affected, teenagers are

at special risk because they may engage in dangerous behavior such as drug and alcohol abuse, promiscuity, impulsive-compulsive behaviors and reckless driving (Naierman, 1997).

Unresolved grief in a child can have serious long-term consequences such as marital breakdown, adult depression and other psychiatric problems (Florian & Mikulincer, 1997). Yet, there are no conclusive outcome studies on successful treatment for children who have lost a parent. Some studies show that children benefit from bereavement support groups (Goldberg & Leyden, 1998; Samide & Stockton, 2002) or that self-concept improves and grief scores decrease over time (Graham, 1999). However, other studies show that children's depression scores remain the same after treatment (Schilling, Koh, Abramovitz, & Gilbert, 1992) and that treatment does not improve depression, reduce acting out behavior or raise self-esteem (Huss & Ritchie, 1999). Nor has treatment been shown to affect emotional grief adjustment, anxiety levels or classroom behavior problems (Adams, 1996; Wilson, 1995). Few controlled outcome studies on treatment of childhood bereavement can be found in the literature, and those that can be found show mixed results (Sandler et al., 2003; Sandler, West, Baca, & Pillow, 1992).

Grief outcome studies in children, for the most part, are based on traditional grief theory. With their mixed results it has become apparent to many researchers that the tenets of grief theory may not fully describe what happens at the time of a child's loss, especially if the loss is violent (Amick-McMullan, Kilpatrick, & Resnick, 1991; Sprang & McNeil, 1998). Therefore, in the 1980's and 1990's researchers began looking at how the loss of a parent to violent death affects children. Parental suicide, for example, may lead to extreme shock (Knieper, 1999) and in an attempt to answer the question of "why", the child may assume the responsibility for the death, which in turn leads to extreme feelings of guilt. In addition, children bereaved by parental suicide exhibit clinically significant symptoms of anxiety, aggression and withdrawal (Shepherd

& Barraclough, 1976). They also display great anger and shame (Cerel, Fristad, Weller, & Weller, 1999). This shame, or stigma, may isolate a child who after a parent's suicide is in tremendous need of support (Kaffman, Elizur, & Pfeffer, 1996). Children bereaved by suicide may also exhibit higher suicidal ideation and develop a mixed attachment or a complex hatred toward the dead parent. Suicide of a parent is obviously a serious mental health risk to children, and affects approximately 7,000 – 12,000 children a year in the United States (Hoyert, 2005; Pfeffer, Jiang, Kakuma, Hwang, & Metsch, 2002; Small & Small, 1984). It is likely, however, that this number is a conservative estimate, as many suicides may be reported as accidents.

Other forms of sudden, violent deaths, such as terrorist attacks, school shootings, homicide and drunk driving, create accelerated pain (Selekman, Busch, & Kimble, 2001). Such a loss may raise questions of personal safety in a child, and create confusion about justice and fairness. A senseless act can cause terror in surviving children, who may question their own safety. Children who have experienced the homicide of a parent are often overlooked in the criminal and legal proceedings that may follow (Clements & Burgess, 2002), and their grieving process is often ignored. Indeed, the area of violent loss and its effect on children appears to be an underreported area of study and caught the attention of Pynoos and his colleagues (e.g. E. S. Eth & R. S. Pynoos, 1985; E. S. Eth & R. S. Pynoos, 1985; Eth & Pynoos, 1994; Nader, Pynoos, Fairbanks, & Frederick, 1990; Nader, Pynoos, Fairbanks, al-Ajeel, & al-Asfour, 1993; R. S. Pynoos, 1992, 1994; R. S. Pynoos et al., 1987; Saltzman, Pynoos, Steinberg, Aisenberg, & Layne, 2001; Saltzman, Steinberg, Layne, Aisenberg, & Pynoos, 2001). Pynoos and his colleagues were interested in how trauma symptoms interact with grief symptoms and studied this interaction in children who had experienced a parent's death by homicide (R. S. Pynoos, 1992; R. S. Pynoos & Eth, 1984), community violence (Murphy, Pynoos, James, & Osofsky,

1997; R. S. Pynoos & Nader, 1988), sniper attack (Nader, Pynoos, Fairbanks, & Frederick, 1990; R. S. Pynoos, Nader, Frederick, & Gonda, 1987), and natural disaster (R. S. Pynoos et al., 1993). Other researchers also examined the affects of a parent's death by homicide and suicide on children (Dora Black, 1998; Pfeffer, Jiang, Kakuma, Hwang, & Metsch, 2002; Pfeffer, Karus, Siegel, & Jiang, 2000).

In the late 1990's a debate ensued over traumatic and complicated grief. Researchers and theorists seem to agree upon what constitutes uncomplicated grief: "Typical grieving process through which children and adults adjust to the death of a loved one" (APA, 2000) is indicated by symptoms of sleep and appetite disturbances, difficulty concentrating, lack of interest in otherwise joyful activities and sadness (APA, 1994). There is no agreement on what constitutes complicated and traumatic grief. Some suggest the difference is in the degree of attachment to the deceased (Prigerson, Shear, & Jacobs, 1999) while others suggest it is related to the manner of death (Malkinson, Rubin, & Witztum, 2000).

On September 11, 2001 close to three thousand people lost their lives in the attacks on the World Trade Centers in New York and the Pentagon in Washington, D.C., and in the plane crash in Pennsylvania. Thousands of children were bereaved. It became clear to the mental health field that not enough was known about trauma and grief symptoms in children and the interactions of the two phenomena. What Pynoos and his colleagues began, is now being studied by Cohen and Brown and their colleagues (Brown & Goodman, 2005; Brown, Pearlman, & Goodman, 2004; Judith Cohen, Goodman, Brown, & A., 2004; Judith Cohen & Litz, 2004; Judith Cohen & Mannarino, 2004). A new term has been coined, Childhood Traumatic Grief (CTG), and includes the following in its current definition: (a) the grief is caused by a death that is either objectively or subjectively perceived to be traumatic; (b) the child has significant

posttraumatic stress disorder (PTSD) symptoms, including loss and change reminders that segue into trauma reminders that bring forth avoidance and numbing strategies; and (c) the PTSD symptoms prevent the child from completing the tasks of bereavement (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002). According to the theoretical understanding of CTG the pain of the child's grief cannot be processed unless the trauma symptoms are dealt with.

Outcome studies of PTSD and CTG have been done recently with children who have experienced the loss of a father in the September 11 terrorist attack (Brown, Pearlman, & Goodman, 2004) and other children who have experienced a loss to a variety of sudden and/or violent causes (Judith Cohen, Mannarino, & Knudsen, 2004). The treatment that was studied included a combination of cognitive behavioral interventions and grief tasks. The results indicate positive outcomes.

The definition of CTG states that, "Children who are suffering from the pathological grief reaction known as CTG objectively or *subjectively* (italics added by this researcher) perceive the death as traumatic and are overwhelmed by the trauma response…" (Brown & Goodman, 2005, p. 249). Still, until now, no research of the interaction of trauma and grief in children who have experienced the loss of a parent to other than objectively traumatic causes can be found in the literature. Outcome studies examining CTG in children bereaved to prolonged illness appear to be non-existent. Yet many grief experts seem to believe that the loss of a parent by any means during childhood is a traumatic event (e.g. D. Black, 1978; Krueger, 1983; Worden, 1996). Kaffman et al. (1996) write: "…, the death of a parent at an early age is a serious traumatic event…"(p. 591). Webb (1993) says that helping a child after the suicide of a parent is "analogous to providing temporary shelter following the total destruction of home and community in a violent earthquake: We do what we can to pick up the pieces but life will never

be the same" (p. 152). Knowing how traumatic a suicide can be for a child, it may be surprising to find out that in a controlled longitudinal study comparing children of suicide victims to children whose parents died from other causes, both groups showed similar rates of posttraumatic stress symptoms and suicidal behavior (Cerel, Fristad, Weller, & Weller, 1999). An exploratory study examining PTSD symptoms in children who participated in a bereavement camp (McClatchey & Vonk, 2005) provides further support for this view. It seems likely, therefore, that any loss of a parent can be traumatic. A childhood trauma can show manifestations that include "a diagnosis of conduct disorder, borderline personality, major affective disorder, attention deficit hyperactivity, phobic disorder, dissociative disorder, obsessive-compulsive disorder, panic disorder, adjustment disorder, and even such conditions, as yet unofficial in the nomenclature, as precursors of multiple personality or acute dissociative disorder" (Terr, 1991, p. 10). It should be apparent that the nonexistence of research on CTG among children bereaved in other ways than to sudden and/or violent death is a serious problem. Attention to finding effective treatments for children bereaved in any manner is important.

In addition, the few outcome studies, though uncontrolled, which have shown promising results for childhood traumatic grief (Brown, Pearlman, & Goodman, 2004; Judith Cohen, Mannarino, & Knudsen, 2004) present lengthy interventions (approximately 16 weeks). Cost and time factors would, therefore, make a short term intervention appealing. However, no known effective short term treatment modalities have been studied.

### *Statement of the Problem*

This study examined the prevalence of posttraumatic stress disorder and childhood traumatic grief symptoms in children who had experienced the death of a parent to a prolonged or long illness. A comparison was made between those children who had lost a parent to

prolonged illness and those who had lost a parent to a sudden and/or violent death. The extent to which the levels of PTSD and CTG differed and, the effectiveness of a short-term treatment based on grief and trauma theories were examined.

The study was quasi-experimental in design with a non-equivalent comparison group. Children were administered the UCLA PTSD Index for Children (Steinberg, Brymer, Decker, & Pynoos, 2004) and the Extended Grief Inventory (EGI) (Layne, Savjak, Saltzman, & Pynoos, 2001) before and after attending a weekend camp that incorporated a treatment modality involving both the tasks of grieving, based on grief theory; and aspects of treatment for posttraumatic stress disorder. Another group of children who were waitlisted to attend camp, were administered the UCLA PTSD Index for Children and the Extended Grief Inventory at the same points in time as the experimental group. This second group was later able to participate in the same weekend treatment. A multiple regression model was the statistical test of significance for comparisons between the pre-tests and post-tests as well as between groups. Treatment versus no treatment, sudden/violent death versus expected death, and time since death were the independent variables; PTSD and CTG symptoms were the dependent variables. The regression model was used to examine the relationship between type of death and PTSD and CTG symptoms in the children, as well as, the effectiveness of the weekend treatment modality. The inferential statistic of chi-square was used to evaluate any differences in the demographic data between the treatment and comparison groups. A series of independent samples t-test was used to compare the means of the pre-tests on the two dependent variables by camp groups.

### *Significance of this Study*

There are several limitations in the area of research on children and grief in the literature that need to be addressed, especially in view of the fact that one in every five children will lose

one of his or her parents to death before the age of 15 (Elchert, 1998). This study began to address some of these limitations and to add to the current knowledge base about children and grief by going outside the traditional perspective of examining only grief symptoms in children who have lost a parent. The study explored the two variables of post traumatic stress disorder (PTSD) and childhood traumatic grief (CTG) symptoms in children bereaved by either sudden and/or violent death or by a loss due to an expected illness. The study also explored a new treatment approach to parental loss to address the lack of successful treatment outcome studies. The results of this study provide far reaching implications not only for theory, research and education but also for social work practice with bereaved children and their families.

*Implications for Social Work Practitioners*

Social workers in schools, hospices, hospitals and community mental health centers all come in contact with bereaved children and their families. It is important that clinical social workers stay informed about the latest research on children and grief so that they may help in the bereavement process. Interventions need to be based on techniques that have been confirmed to be effective. To provide interventions based on current research is one of the profession's ethical standards (NASW, 1997).

This study showed that many children bereaved of a parent by a prolonged illness suffered from childhood traumatic grief and the implications are far reaching. The assessment process and current interventions must be examined and old treatment modalities must expand their focus from grief alone to address the variable of traumatic stress as well. Trauma and recovery interventions must be developed to help prevent long-term emotional consequences in parentally bereaved children. In addition, current treatment suggestions are time consuming. The short-term (one weekend) intervention modality examined in this study produced positive

results and could easily be replicated and produced in other areas of the country as a cost-effective intervention. The current study substantiated that PTSD symptoms are common among parentally bereaved children. It showed the proposed treatment to be effective and social work clinicians need to advocate for replications of this study to either verify or dispute its successful outcome.

*Implications for Social Work Educators*

This study provides bereavement educators with information about the occurrence of PTSD symptoms and their interaction with grief symptoms among parentally bereaved children whether bereaved by events traditionally labeled traumatic or by expected deaths. The study showed that CTG and PTSD symptoms were prevalent in bereaved children. Therefore, social work education should incorporate information about trauma and trauma treatment in its grief curriculum.

*Implications for Theorists*

Grief theory has been extensively criticized during the past fifteen years, yet it is still being taught to many grief therapists as the only basis for grief interventions. Other theories have begun to be applied to grief in an attempt to explain the grief phenomenon, though at this time no specific replacement has been found. Trauma theory has recently been applied as an addition to grief theory. This study explored the interplay of grief and trauma symptoms in children who had experienced the loss of a parent either to a prolonged illness or to something sudden and/or violent to see if the type of death would determine the presence of these symptoms and their possible interactions. This study showed that expected death after a prolonged illness did indeed create trauma symptoms in many bereaved children. Theorists should apply this knowledge to adequately describe what happens in a child at the time of the loss of a parent.

*Implications for Researchers*

Various studies show that parentally bereaved children are at risk for mental health problems and a number of them are receiving various services to address their grief. It is, therefore, important that adults who care for bereaved children know the efficacy of such programs. Current studies on grief interventions are mostly conducted with small numbers of subjects, are correlational, and do not include various ethnic groups. In addition, the few outcome studies that can be found in the literature are mostly uncontrolled with varied results using time-consuming interventions. These limitations threaten the internal validity of these studies and hinder the generalizability of the results. This study addressed some of the shortcomings in the literature by looking at a new intervention – trauma focused grief therapy provided over a weekend – using a quasi-experimental approach with a sample of 100 children. It also added to the knowledge about death and dying by looking at the presence of trauma symptoms in parentally bereaved children regardless of the manner in which the loss occurs. Based on the outcome of this study, it is hoped that the results will lead to further research questions and serve as a springboard for replications to verify the positive outcomes of the intervention used in this study and/or for future research to find other effective treatments.

## *Definition of Terms*

There are some terms used in this study that will be defined here to make certain that everyone reading this study will have the same understanding of them.

*Bereavement*

The objective experience of having a loved one die.

*Grief*

The emotional, physiological, cognitive and behavioral reactions to the death of someone significant.

*Mourning*

The cultural practices and expressions of grief.

*Bereaved children*

Children under the age of eighteen who have lost a parent or a primary caregiver to death, either after a prolonged illness or to a sudden and/or violent death.

*Prolonged illness*

Any illness that has lasted for a month or longer.

*Long illness*

Same as prolonged illness.

*Sudden death*

A death that has occurred within a month of the onset of the cause of death.

*Violent death*

Any death attributed to violent means, such as e.g. accident, fire, gunshot, hanging, drowning, natural disaster, and terrorist act.

*Weekend camp*

A stay at cabins in a camp setting from Friday afternoon to Sunday afternoon.

*Posttraumatic Stress Disorder (PTSD)*

"…experienced, witnessed, or been 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" and "the person's response involved intense fear, helplessness, or horror. PTSD involves

intrusive thoughts and/or dreams of the event, relentless avoidance of stimuli that are associated with the trauma as well as the symptoms of increased arousal" (APA, 2000).

*Childhood Traumatic Grief (CTG*)

A situation in which trauma symptoms intrude on the child's ability to express his or her grief symptoms. The cause of death can be either what is objectively described as a traumatic death, or death caused by what is subjectively interpreted by the child as a traumatic experience (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002).

### *Limitations and Delimitations of the Study*

There are some limitations and delimitations of this study that will be pointed out here to assist the reader in drawing conclusions about the interpretations made in this study.

1. This study utilized a purposeful sample and not a simple random sample (SRS). Therefore, the results of the study cannot be generalized to other populations of parentally bereaved children. The assumptions of independence, normality, linearity, and homogeneity were tested and not violated.
2. The instruments used in this study are new and still under development. Validity and reliability have been ascertained for children experiencing mass trauma and sudden and/or violent losses, but not for children who have experienced the loss of a parent due to a prolonged illness. Internal consistency reliability for the sample of this study was calculated and provided to the reader.
3. The testing occurred over a period of several weeks and extended into the summer months. The summer is traditionally a time when school age children may be difficult to reach, and therefore, some respondents were not available for post-testing.

4. Due to financial and logistical restraints, participants were recruited from one metropolitan area only.
5. Due to financial restraints, the number of bereaved children admitted to each camp was a maximum of 55.
6. The study did not attempt to diagnose PTSD or CTG in the participating children. Only symptoms of these phenomena were obtained. A proper diagnosis of both PTSD and CTG would entail structured interviews. Time and cost limitations prevented such interviews from being conducted for this study.

### *Organization of the Study*

This chapter has introduced the study with a brief review of the literature relevant to the major variables of the study, statement of the problem, significance of the study to social workers and social work educators, theorists and researchers, definition of key terms, and finally the limitations and delimitations of this study. The next chapter, chapter 2, will provide an overview of current grief theory, its application to grief in children and an examination of outcome studies based on grief theory. It will also provide an extensive literature review of PTSD and CTG in children. Next, a review of the benefits of a camp setting as the backdrop for therapeutic interventions will be given. The chapter will conclude with a proposed conceptual model, research questions and the hypotheses that were tested.

Chapter three will describe the methodology and the planned procedures for data collection and analysis of the study. The findings of the study and the analysis of these findings will be presented in chapter four. The last chapter, chapter five, will present a summary of the results of the study as well as conclusions drawn from the study. This last chapter will also

contain a discussion of the findings, implications for practice and recommendations for future research.

# CHAPTER 2

## LITERATURE REVIEW

When reviewing the literature on children and grief, it is apparent that outcome studies show varying and generally discouraging results (e.g. Huss & Ritchie, 1999; Samide & Stockton, 2002; Schilling, Koh, Abramovitz, & Gilbert, 1992). Interventions based on grief theory, which in turn is originally based on attachment theory, have not proven effective. Hence researchers have come to the conclusion that factors other than the attachment to the deceased may play a significant role in the successful treatment and integration of grief. One such factor is thought to be the mode of death, as theorists have found that children who lose a parent to a sudden and/or violent death may develop trauma symptoms (e.g. Dora Black, 1998; Dora Black & Kaplan, 1988; R. S. Pynoos & Eth, 1984). Other researchers have speculated that the mode of death may be an irrelevant variable, and the subjective view of the death may be the primary influence in the development of trauma symptoms in parentally bereaved children (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002). Still other theorists state that the death of a parent under any circumstances is a traumatic event for children (Dora Black, 1998; Worden, 1996). Yet, no outcome studies have been conducted to examine the effect of trauma treatment for children bereaved by what may be considered "natural" means, such as a prolonged illness. This curiosity provides the fundamental interest in this study, i.e. an examination of grief and trauma symptoms in children and the interaction between the two, not only in children who have experienced a sudden and/or violent loss, but also in children who have experienced the death of a parent after a prolonged illness. The literature review will focus on examining the variables of

grief and trauma and their interaction in the population of this study, parentally bereaved children. Since children's grief theory is derived from the traditional grief theory of adults, which in turn originates in attachment theory, the chapter begins with a broad overview of traditional grief theory followed by the specific tenets of grief theory for children. Included in this section are a critical review of children's grief theory and a review of outcome studies of children treated according to the traditional doctrines of grief theory.

Since traditional grief theory does not appear to fully explain what happens to a child at the time of a loss, other variables have begun to be examined. This study will focus on one such variable: how trauma symptoms manifest in children. This overview will then segue into the main interest of this study: how trauma symptoms may affect the grief work of children. A review of the literature looking at the interaction of grief and trauma symptoms after a sudden and/or violent death will follow. Next, a newly minted concept, childhood traumatic grief (CTG) will be reviewed. Included in this section will be the current debate about differences between traumatic and complicated grief as well as similarities and differences between uncomplicated grief, PTSD and CTG. This section is followed by a review of outcome studies of childhood traumatic grief interventions for children who have experienced a sudden and/or violent death. The chapter continues with a discussion of issues raised regarding grief and trauma in children, especially how trauma may affect the grief work of children who have experienced a loss due to an expected, prolonged illness. A conceptual model for this study is then proposed, and the chapter concludes with research questions and hypotheses.

## *Grief Theory*

### *Brief History*

Grief theory originates with Freud who posited three basic assumptions about grief: (a) Grief is a normal reaction to loss, (b) A grieving person constantly confronts the reality of his/her loss, and (c) grieving is hard work (Freud, 1957). Indeed, bereavement is a process that takes from several months to several years, and the only "cure" is to grieve (Worden, 1991). Freud viewed grief as similar to chemical reactions: humans become attached by investing psychical energy (libido) in loved ones by our nerve cells gaining arousal through energetic bonds. Freud stated that the purpose of mourning is to "detach the survivor's hopes and memories from the dead" (Freud, 1957). This detachment involves a process of de-investing libido/psychical energy, or of "breaking the bonds."

Freud's disciple, Bowlby (1980), explained in his book "Loss: Sadness and Depression" that the most powerful human emotions come to existence during the formation, maintenance, disruption and renewal of attachment relationships. The formation of attachment occurs as a person falls in love and is maintained through loving relationships. Attachment behavior serves to keep an individual close to a differentiated and preferred person. During such behavior, a bond develops. The first such bond is made between a child and his or her parent and later between adults. This bond is in no way pathological and the goal of attachment behavior is to keep the bond with the attachment figure. A child's experiences with his caregivers during infancy, childhood and adolescence will influence how later attachment behavior develops. It is within this attachment framework that Bowlby speaks to the notion of loss.

Bowlby (1980) introduced four grief stages: (a) shock/numbing, (b) searching and yearning for the deceased and reminders of him or her, (c) disorganization where coping

mechanisms collapse, and (d) reorganization where new ways of coping with the new reality form. Bowlby sees bereavement as a progressive and adaptive process while grief is seen as a painful, crucial, necessary and unavoidable adaptation to a loss (Freud, 1957; Parkes, 1975). Though there is no normal way of grieving, Kubler-Ross (1969) first introduced the five stages of grief: denial, anger, bargaining, depression, and acceptance. The stage theory has been criticized, but Kubler-Ross continues to be seen by many as the earliest authority on grief and her work as a benchmark for others to measure.

Other grief theorists followed, and many of them agree that an initial shock or denial occurs, followed by a desire to hold on, and that letting go or separation, as well as acceptance are necessary. These theorists also agree that grieving is an adjustment process (e.g. Pollock, 1970; Sanders, 1989; Schneider, 1984). In addition, the assumption of modern grief theory states that children, through their behavior, become attached to their parents during infancy, childhood and adolescence, and that the experience of losing your parent is emotionally and physiologically stressful.

*Children's Grief Theory and its Shortcomings*

In the 1980's and 1990's theorists began work on children and grief (Wolfelt, 1996; Worden, 1996; Worden, Davies, & McCown, 1999; Worden & Silverman, 1996). Building on grief theory for adults, Worden (1991) described four major stages of grief for children: (a) shock/denial, (b) disorientation, (c) reorganization, and (d) moving on. To come through the grief experience and to move on in life, the individual must successfully complete four tasks of grieving that correspond to the various stages (Worden, 1991): (a) accept that the death has occurred, (b) express feelings surrounding the loss, (c) adjust to an environment in which the deceased is missing, and (d) let go and invest in future relationships or things. Worden explicitly

stated that the bereaved has to take action and do something about the loss. Therefore, he preferred the word "tasks" rather than "phases". Worden applied the tasks of mourning to children, but noted that the cognitive, emotional and social development of the child has to be taken into consideration. Fox (1988) also introduced four psychological tasks of childhood/adolescent grief: understanding, reacting, commemorating and going on. Wolfelt (1996) later added two more tasks for a successful grief resolution in children: to find meaning in the deceased's death and to attach to another caring adult. The bereaved child may search for meaning of the death several years after the death (Lehman, 1987; Schwartzberg & Janoff-Bulman, 1991). There is also a distinction to be found between finding meaning or making sense of the loss and finding benefit in the experience Those who attempt to find meaning in the loss fare less well than those who can find a benefit in the experience of the loss (Davis, 1998).

Worden's (1991) tasks for grieving have several implications for bereaved children. While children demonstrate grief behavior in some ways similar to adults – they cry, have trouble with sleep, think about their lost loved one and talk to the deceased (Silverman, 2000) - children also manifest their grief in idiosyncratic ways (Christ, 2000; Willis, 2002). The child's cognitive, emotional, and social development has to be taken into account. The child's phase of development influences the understanding of the death, which in turn influences how well he/she can adapt to grief (Silverman, 2000).

Very young children, six years and under, do not comprehend the finality of death and believe death to be reversible (Worden, 1996). Therefore, the very first grief task, accepting that death has occurred (Worden, 1991), or understanding (Fox, 1988), would be impossible for very young children to master. In order to accept the reality that death has occurred, it is important for children to "tell their stories" over and over again (Staley, 2000). Young children, however,

rely heavily on the parent to guide, support, and validate the narrative process. Losing a parent creates a void with no one to tell the story to. In addition to such a void created by a parent's death, the surviving parent may be emotionally unavailable due to his or her own grief (Leder, 1992). A surviving parent who has been left with increased parenting demands, may become irritable and angry (Nader, 1997a) and not be available to hear a child's expression of feelings. So the surviving parent's grief may create a problem in negotiating the first task, since a child needs to be told over and over again what happened – hearing the story repeated helps them to accept the reality of the death (Worden, 1996). Should the child not receive such repeated information, he or she may make up stories to make sense of the situation.

Children as old as nine or ten may internalize and personify death, seeing death as a being that comes to get people (Grollman, 1995; Webb, 2002) This personification may intensify children's fears if proper information is not provided or received. Magical thinking, in which the child assumes responsibility for the death of a loved one (Christ, 2000) is a common occurrence among children and teenagers alike. This magical thinking may also prohibit the first grief task of understanding death. However, though magical thinking is often seen as a hindrance to understanding death, it may also be restorative and necessary when facing the death of a loved one. Rynearson (2001) states: "Imaginative stories of reunion, rescue, reversal are purposeful myths that restore us from our immersion in violent dying". Adolescents may have problems negotiating the first task of coming to terms with death as they rely primarily on peers for sharing stories and emotional support. The teenager, feeling a need to tell the story to friends, may find him or herself isolated and lonely, as teenagers may have a hard time supporting a peer through a tragedy, not knowing how to react to their own uneasiness with and lack of knowledge about death (Lohnes & Kalter, 1994).

Children should be encouraged to verbalize or demonstrate how they feel (Selekman, Busch, & Kimble, 2001), but the task of working through the pain of grief (Worden, 1991), also known as reacting (Fox, 1988), through expression of feelings may be problematic for grieving children. Most children do not know how to identify feelings (Salloum & Vincent, 1999). They may also try to avoid their feelings of grief to feel more in control, or to protect loved ones whom the child feels may become upset by a show of feelings (Christ, 2000). The lack of ability to identify feelings and avoidance of expressing feelings, can lead to problems of acting out or, the opposite, withdrawal and social isolation. Also, magical thinking may make it hard for children to share and express feelings because of tremendous guilt. In addition, a child who lacks a surviving parent who can grieve and express feelings appropriately, may become frightened by his or her own feelings, and this fear will hinder the resolution of the second task of affect expression. Furthermore, the proposition that the bereaved child needs to express his or her anger has recently been questioned because adults who down-play their negative emotions function better (W. Stroebe & Stroebe, 1987) and have less somatic complaints (Capps & Bonanno, 2000).

The third task of adjusting to an environment without the deceased loved one may also be difficult for children with poor coping mechanisms. It is especially problematic when the child loses a parent, often a mother, who is the emotional and physical nurturer (Bronfenbrenner, 1986).

If a child is not capable of accepting or understanding the death, or is not able to express feelings surrounding the loss, it may be difficult to move on with life, as this last task of the grieving process presupposes that the previous tasks have been successfully accomplished or completed. The fourth task of letting go, however, has also been criticized. The notion of

having to let go dates back to Freud (1957) who described the last stage of the grieving process as a detachment of the libido from the lost object and called the holding on to the lost object as a pathological variety of grief. Bowlby, one of Freud's disciples and the "father" of attachment theory (1980) disagreed, and was the first theorist in modern times to call attention to the significance of keeping an ongoing bond with the lost one, even though he stated that the relationship had to undergo a transformation. Others have agreed with Bowlby (e.g. Klas, Silverman, & Nickman, 1996; Shuchter & Zisook, 1993) and studies have shown that children may keep a relationship with their dead parent and find comfort in such an arrangement (Ross, 2000). Though modern grief theory may not look favorably upon ongoing relationships with the deceased, it is worth noting that 19th century Western European societies saw grief as lasting a life time, and love as superficial if the bereaved did go on:

| | |
|---|---|
| "In every moaning wind I<br>hear thee say<br>sweet words of consolation…<br>I live, I talk with thee where'er I stray…"<br>(William Barnes) | "The grave my little cottage is<br>where 'keeping house' for thee<br>I make my parlor orderly<br>and lay the marble tea"<br>(Emily Dickinson) |

*Interventions with Grieving Children*

Most research on children and grief has been based on traditional grief literature with interventions consisting of support groups that include some or all of the tasks of grieving (Wolfelt, 1996; Worden, 1996). Outcome studies are few. Most studies of support groups for children and adolescents are descriptive. Those that do attempt to measure effectiveness have had varied results. An examination and summarization of these studies, going from least rigorous methodology to fully experimental studies, follows.

Ethnographic evaluation results from bereavement groups in schools appear to be positive. Parents and teachers report improved functioning in the children and the children

report feeling less alone (Goldberg & Leyden, 1998). Samide and Stockton's (2002) informal survey of school counselors found that school counselors found grief groups fruitful and important.

However, a pre-experimental design study by Schilling et al. (1992) with 38 bereaved inner-city children showed most of the children stayed depressed throughout the study. On the other hand, the researchers suggest that children may have developed a more mature concept of death as a result of the intervention. Another study in the United Kingdom (Neary & Brandon, 1998) used play and other activities based on child development, attachment and grief theories. The intervention was designed to help bereaved girls, ages 9-11, who had lost a father, to express feelings. This study showed positive results from group interventions with children. Evans (1997), using a qualitative methodology, found that a group intervention for parentally bereaved children helped to normalize the children's experience, gave the children permission to grieve, and was helpful in teaching the children and their families about the grieving process.

An exploratory mixed methods study of the effectiveness of group intervention with a purposive sample of 57 bereaved children ages 6-12, showed that self-concept scores improved and grief scores decreased over time (Graham, 1999). These changes were not found in a wait-list comparison group.

A literature review uncovered six experimental studies on the effectiveness of counseling groups for bereaved children. Four of the studies involved counseling for the children only; two involved family based interventions. Huss & Ritchie (1999) found no statistically significant differences in the treatment and control groups in bereavement groups for children on depression, acting out behavior and self-esteem. Adams (1996) evaluated the effectiveness of a bereavement counseling group in eleven Florida elementary schools with children in

kindergarten through fifth grades. The interventions included artwork, bibliotherapy, role-playing and a memorial service. The study showed no significant differences between the treatment and control groups on emotional grief adjustment, anxiety levels, and classroom behavior problems.

Wilson (1995) found similar results in her study of children ages 4 -12 who had lost a significant other to death. There was a significant difference for the combined groups across time on ten of the fourteen subscales of the Louisville Behavior Checklist. This finding suggests that both the control and experimental groups showed fewer symptoms in relation to grieving at posttest and follow-up. However, the study showed no significant differences between experimental and control groups in reduction in anxiety or behavioral problems. In contrast, Tonkins & Lambert (1996) found a significant decrease in symptomatology in a study of children ages 7 – 11 years of age who had lost a parent or sibling.

Sandler et al. (Sandler et al., 2003; Sandler, West, Baca, & Pillow, 1992) performed two experimental studies involving The Family Bereavement Program in Phoenix, Arizona, where both the family members and the parentally bereaved children participated. The first study showed that the program led caregivers to state that their relationships with their children had increased in warmth. The parents also reported increased satisfaction with their social support as well as decreased conduct disorder and depression problems in older children. The second study was an extension of the former with an improvement in design. Group sessions were held separately for caregivers, children and adolescents, as well as conjointly. This study did not show the program to have an immediate impact on child mental health, but showed some impact at 11-month follow-up for girls. Notably, the effects of the program on coping and negative thoughts about stressful events were found only for girls at 11-month follow

up. The program did find improved parenting for those who had the lowest scores on positive parenting at the beginning of the intervention.

Four studies were found on bereavement camps for children. One was purely descriptive (Stokes & Crossley, 1995). Two were qualitative studies of bereavement camps for children who had lost a sibling (Creed, Ruffin, & Ward, 2001) and youth who had lost a family member (Barrett, 2004). One of these studies relied on satisfaction surveys with open-ended questions to rate camp and its activities (Creed, Ruffin, & Ward, 2001). The other used semi-structured interviews and archival data (Barrett, 2004). Feedback appeared for the most part to be positive. The fourth study (Loy, 2000) used both qualitative and quantitative measures with mixed results. For a summary table of treatment studies based on grief theory for bereaved children see Table 1.

It has been suggested that traditional grief theory does not adequately explain what happens within a child after the death of a parent. Some researchers have tried to modify or redesign current grief theory (e.g. Malkinson, Rubin, & Witztum, 2000; M. S. Stroebe & Schut, 1999). Others have turned to other existing theories, especially after a loss due to a violent death (Amick-McMullan, Kilpatrick, & Resnick, 1991; Sprang & McNeil, 1998). These theories examine cognitive schema, attachment energies, and/or social functioning (Bonanno & Kaltman, 1999). One theory in particular is beginning to make its way into the grief arena: trauma theory.

Trauma has been described from various perspectives, such as psychodynamic (Freud, 1957; Kardiner, 1941); learning theory (e.g. Fairbank & Brown, 1987; Mowrer, 1960); biological (e.g. Bessel A. Van der Kolk & Saporta, 1991) and cognitive (e.g. Foa & Rothbaum, 1998; Horowitz, 1986). Most grief experts agree that sudden and/or violent deaths create trauma symptoms in children. Thus they are beginning to examine grief, trauma and the interaction

Table 1

*Summary of Interventions with Bereaved Children*

| Author | Design | Sample | Age Group | Variables | Intervention | Outcome |
|---|---|---|---|---|---|---|
| Goldberg (1998) | Ethnographic | 8 | 6-7 | Isolation | Educational | Improved |
| Schilling et al. (1992) | Pre-exp. | 38 | 6-12 | Depression<br>Concept of death | Support group/ psycho-dynamic | Unchanged<br>Improved |
| Neary & Brandon (1998) | Qualitative | | 9-11 | Expression of feelings | Support group/ attachment/grief tasks | Improved |
| Evans (1997) | Qualitative | 8 | Clinicians | Normalization,<br>Permission to Grieve<br>Remembrance<br>Maintaining ties | Support groups/ education/grief tasks | Improved<br>Improved<br>Improved<br>Improved |
| Graham (1999) | Mixed methods/ wait-list comparison group | 57 | 6-12 | Self-concept<br>Grief scores | Support group | Improved<br>Improved |
| Huss & Ritchie (1999) | Experimental, Solomon four | 17 | 10-12 | Depression<br>Self-esteem<br>Acting out be-havior | Support group | Unchanged<br>Unchanged<br>Unchanged |

Table 1 (continued)

*Summary of Interventions with Bereaved Children*

| Author | Design | Sample | Age Group | Variables | Intervention | Outcome |
|---|---|---|---|---|---|---|
| Adams (1996) | Repeated measures/ control group | 11 schools | 5-10 | Grief adjustment<br>Anxiety<br>Behavior problems | Support group/ artwork/biblio-therapy/memorial service | Unchanged<br>Unchanged<br>Unchanged |
| Wilson (1995) | Repeated measures/ control group | | 4-12 | Grief symptoms<br>Anxiety<br>Behavioral problems | Support group | Improved<br>Unchanged<br>Unchanged |
| Tonkins & Lambert (1996) | Waitlist control group | 16 | 7-11 | Depression<br>Behavioral problems | Support group | Improved<br>Improved |
| Sandler et al. (1992) | Control group | 72 families | 7-27 | Conduct disorder<br>Depression | Support group/PG | Improved in *older children only*<br>Improved in *older children only* |
| Sandler et al. (2002) | Control group (244 children) | 156 families | 8-16 | Coping<br>Negative thought about stress | Support group/PG | Improved *for girls only at 11 month follow up*<br>Improved *for girls only at 11 month follow up* |

Table 1 (continued)

*Summary of Interventions with Bereaved Children*

| Author | Design | Sample | Age Group | Variables | Intervention | Outcome |
|---|---|---|---|---|---|---|
| | | | | Internalizing<br>Externalizing<br>Self esteem | | Unchanged<br>Unchanged<br>Unchanged |
| Stokes & Crossley (1995) | Descriptive | | | | Grief camp | |
| Creed et al. (2001) | Satisfaction surveys | 19 | 6-15 | Grief tasks/ Education | Grief camp | Positive comments |
| Barrett, 2004 | Qualitative - Semi-struct-ured interviews; Archival data | | | | Grief camp | |
| Loy, 2000 | Mixed methods – Surveys; Treatment control, Post-measure only | 61 | 10-17 | Grief/ Depression<br>Normalization (Qual)<br>Self-esteem (Qual)<br>Behavior (Qual) | Grief camp | Difficulty measuring<br>Improved<br>Improved<br>Improved |

* Parent Group

between the two, particularly with children who have experienced an objectively viewed traumatic death. To better understand what trauma symptoms look like in general and in children especially, a description of post traumatic stress disorder (PTSD) and symptoms follow. This description precedes an explanation of interventions for traumatic events. The section concludes with a review of the literature of interventions used for the treatment of posttraumatic stress disorder in children.

## *Trauma and Posttraumatic Stress Disorder*

### *Background Information*

The trauma perspective has begun to be applied to grief and loss, particularly related to violent deaths (Kaltman & Bonanno, 1999; Zisook, Chentsova-Dutton, & Schuchter, 1998). The definition of trauma according to The Oxford English Dictionary (1989, p. 441) is "a wound or external body injury in general; also the condition caused by this." Trauma is thus an injury, and many bereaved people would agree that loss is an injury in internal or psychosocial terms. Terr (1990, p. 8) writes: "Psychic trauma occurs when a sudden, unexpected, overwhelming intense emotional blow or a series of blows assaults the person from outside. Traumatic events are external, but they quickly become incorporated into the mind" and "the trauma begins with events outside the child. Once the events take place, a number of internal changes occur in the child." (Terr, 1991, p. 11). Van der Kolk (1989, p. 393) agrees, saying: "Traumatization occurs when both internal and external resources are inadequate to cope with external threat."

Violent deaths in particular are associated with trauma symptoms or Posttraumatic Stress Disorder (PTSD). PTSD has been portrayed in the literature for more than a century, but has been called by different names (Foa, Steketee, & Rothbaum, 1989). Some of the names include "nervous shock" (Page, 1885), "traumatophobia" (Rado, 1942) and "battle fatigue syndrome" or

"shell shock" (Myers, 1940). Posttraumatic stress disorder was first identified as a specific diagnostic category in the third edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", DSM III (APA, 1980). The original diagnosis only required a "…recognizable stressor that would evoke significant symptoms of stress in almost anyone". DSM-III-R (1987) specified a stressor "…outside the range of normal experience and that would be markedly distressing to almost anyone". To meet the diagnostic criteria for PTSD today, the person has to have:

> …experienced, witnessed, or been 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" and "the person's response involved intense fear, helplessness, or horror. PTSD involves intrusive thoughts and/or dreams of the event, relentless avoidance of stimuli that are associated with the trauma as well as the symptoms of increased arousal (APA, 2000).

Symptoms are clustered in three categories: intrusive thoughts about the event, emotional numbing or avoidance of any reminders of the event, and physiological arousal. To meet the diagnostic criteria for PTSD, a person has to have at least one re-experiencing symptom, three avoidance symptoms and two symptoms of hyper-arousal. Symptoms must have persisted for at least one month (APA, 1994). PTSD is acute if duration of symptoms is less than three months, and chronic if symptoms persist more than six months. PTSD affects approximately 8% of the general population at any given time (APA, 2000). Some researchers have claimed that psychological agony after a disaster is passing and negligible (Garmezy & Rutter, 1988) while others have found the effects to be more enduring (Green, Lindy, Grace, & Leonard, 1992; Yule, Perrin, & Smith, 1999).

Trauma responses include behavioral as well as physiological responses. The behavioral responses, such as numbing or dissociation, may have been helpful as coping mechanisms at the time of the traumatic event. However, if the response is not effective, the responses may instead become coupled with feelings of personal helplessness when confronted with a further threat (Foa & Rothbaum, 1998). The person may then perceive him or herself as "totally inept" (Foa & Rothbaum, 1998, p. 81). This perception helps explain why children often develop magical thinking, i.e. the belief that they are somehow responsible after a traumatic death of a loved one (Christ, 2000).

Several theorists have sought to explain how traumatic responses develop after a stressful event, most of them using a cognitive approach (e.g. Brewin, Dalgleish, & Joseph, 1996; Dalgleish & Yule, 1999; Ehlers & Clark, 2000; Horowitz, 1976, 1986; Janoff-Bulman, 1989). The theory that gives perhaps the best explanation of trauma and its development is that of Foa & Rothbaum (1998). Their theory, the reprocessing and fear structure theory, is the theory upon which the current study bases most of its understanding of PTSD among bereaved children. Briefly, this theory posits that there are three fundamental parts for the development of PTSD: (1) memory records of the trauma and other events, (2) schemas (or representations) of the self and the world and (3) the range of post-trauma reactions of self and others. The interactions of these parts determine the type and extent of the trauma symptoms. Figure 1 provides a schematic diagram of the tenets of Foa and Rothbaum's reprocessing and fear structure theory (1998).

*PTSD Symptoms and Children*

Studies on posttraumatic stress disorder in children and adolescents began appearing in the literature in the 1980's through the pioneering work of Pynoos and his colleagues (R. S.

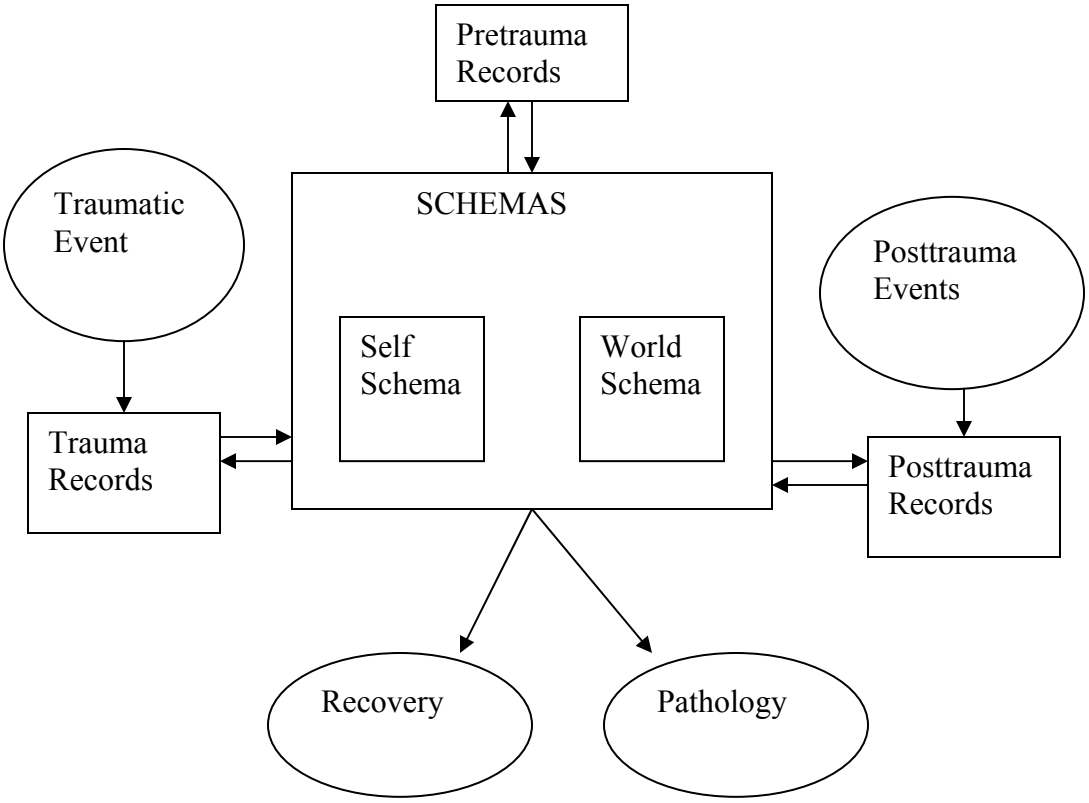


*Figure 1.* Schematic diagram of the reprocessing and fear structure theory. Ovals depict external events; rectangles depict representations in memory (Foa, E. B., Rothbaum, B. O. (1998). Treating the trauma of rape: Cognitive behavioral therapy for PTSD (p. 78). New York: Guilford Press).

Pynoos & Eth, 1984, 1985; R. S. Pynoos et al., 1987; R. S. Pynoos & Nader, 1988; R. S. Pynoos, Nader, Frederick, & Gonda, 1987) and Terr (1991). Today estimates of the prevalence of PTSD in children and adolescents vary between 30% and 60% in survivors of traumatic events (Vernberg & Vogel, 1993; Yule et al., 2000; Yule, Perrin, & Smith, 1999). Approximately 90% of sexually abused children and approximately 77% of children who experience a school shooting develop PTSD (R. S. Pynoos et al., 1987). An estimated 25%–30% of children who survive road traffic accidents display PTSD (Yule, 1999). Practically all

children who witness the sexual assault or murder of a parent develop PTSD (Judith Cohen, 1998). The lifetime rate of PTSD in adolescents has been estimated to be between 6 and 7% (Giaconia, 1995). It is also important to note that some children are good at avoidance, and may not report symptoms of re-experiencing and hyperarousal that may make them feel uncomfortable and that are distressing (Judith Cohen, 1998). Many traumatized children are, therefore, not diagnosed with PTSD due to under-reporting.

*Avoidance/Numbing*. Avoidance/numbing symptoms are ways by which the traumatized person lessens activation of his or her fear network (Foa & Rothbaum, 1998). Avoidance minimizes the occurrence of re-experiencing the trauma. This minimization of fear can become problematic for a child whose surviving parent also exhibits increased avoidance. The child may find expressing his or her own feelings of fear difficult, or may be afraid of upsetting the surviving parent (Rollins, 1997). Expressing feelings is important for the grief treatment process. Excessive avoidance is considered pathological (Foa & Rothbaum, 1998), and can be due to either a marked structural coherence or from deficits in communication mechanisms to process fear-relevant information. The latter explanation may be particularly true of children who are not developmentally able to process information and whose intelligence is dominated by perception, or what the child sees (Piaget, 1969). Avoidance in children who experience post traumatic stress disorder symptoms can be clinically observed in constrained affect, regression of developmental skills, constraint in play, and withdrawal from social situations (Scheeringa, Zeanah, Drell, & Larrieu, 1995). It may also be exhibited through a belief that one will not live long enough to become an adult (APA, 1994).

*Hyperarousal.* Hyperarousal is the result of low-level activation of the fear network (Foa & Rothbaum, 1998). Trauma memories have many stimulus-danger associations. New

unrelated fears, or generalized danger perception, are explained by meaning assigned to stimuli other than those associated with the original trauma. Such meaning assignment may explain how some children develop unrelated fears, such as separation anxiety and fear of the dark, after a trauma (Yule, 2001). However, this hypothesis has not yet been tested or accepted. Arousal in children may take the form of night terrors, night waking, difficulties concentrating, or an increase in exaggerated startle responses (Yule, 2001).

*Re-experiencing*. Re-experiencing symptoms may result when components of the fear network are activated by some external stimulus which may include stimuli not directly associated with the trauma (Foa & Kozak, 1986). Increased re-experiencing may create problems for a child as it may lead the surviving parent to overprotect the child, confirming to the child that the world is unsafe (Rollins, 1997). Children may exhibit re-experiencing through nightmares about threats to self, through disorganized and agitated behaviors that are symbolic of the trauma, or through anguish when presented with reminders of the traumatic event (Scheeringa, Zeanah, Drell, & Larrieu, 1995).

*PSTD symptoms and age*. PTSD symptoms appear differently among varying age groups (Scheeringa, Zeanah, Drell, & Larrieu, 1995). It is often difficult to assess posttraumatic stress in very young children since they have few verbal skills to be able to describe their thoughts and feelings. This is the age group, however, that is more likely to show fears of strangers, experience separation anxiety, or display posttraumatic play in which they repeat themes of the traumatic event (Nader, 1997a). This age group may also express post traumatic stress symptoms by showing regression of developmental skills.

Elementary school-aged children are prone to show “time skew” and “omen formation”. Time skew is a phenomenon in which the child, when relating the traumatic event, gets the facts

out of time order. Terr (1991) believes that this confusion may be the result of an increased amount of neurotransmitters discharged at the time of a traumatic event. Foa & Rothbaum (1998) pose another explanation. Information processing, i. e. the victim's perception, attention, and memory about the traumatic event at the time of the trauma, is disturbed and biased by the intense emotions felt during the trauma event. The disturbance and bias create poor consistency of the memory records which in turn leads to disorganized memory records. This may be more pronounced in children than in adults since studies indicate that anxiety has an effect on memory performance in children (Hadwin, Brogan, & Stevenson, 2005). Omen formation is defined by the child's belief that there were signs warning of the impending trauma. If he or she only stays watchful enough he or she will be able to pick up on future omens and prevent future traumatic events from occurring. Pynoos et al. (R. S. Pynoos & Nader, 1988) call this process "cognitive reappraisals." Omen formation could explain hypervigilance in children.

Elementary school-aged children also engage in posttraumatic play. Posttraumatic play involves compulsive repetition of the trauma but does not relieve anxiety. Yet it is often defined by the players as "fun" (Terr, 1991). Piaget (1969) claims that fantasy and play are significant ways for children to reach problem solving and mastery. Posttraumatic play may be a way for the child to gain a sense of control and mastery. This age group also engages in posttraumatic reenactment. The reenactment involves a behavioral recreation of some aspect of the trauma, such as carrying a gun after a violent trauma (Judith Cohen, 1998; Hamblen, 2005). Reenactments do not have the component of "fun" (Terr, 1991).

Adolescents' posttraumatic stress disorder symptoms are more like those of adults, but include symptoms that are specific to this age group: aggressive and impulsive behavior. (Judith

Cohen, 1998). Like elementary school-aged children they are also likely to participate in posttraumatic reenactment

*Development of posttraumatic stress disorder symptoms*. Certain factors have been shown to influence the possible development of posttraumatic stress disorder in children as well as the gravity of symptoms. For those who have schemas of the world as dangerous and of the self as vulnerable, PTSD develops because the trauma primes this pre-existing knowledge (Foa & Rothbaum, 1998). There is a difference between representations about the self and representations about the world. Two things are central in the development of PTSD symptoms: the view of the world as being dangerous and the view of the self as being incapable. These two views will without doubt interact in the larger worldview. The loss of a parent may create thoughts of the world as dangerous since children are age appropriately dependent upon parents for protection. The trauma may also create changes in the child's brain chemistry causing interference with feelings of efficacy (Huther, 2002). In addition, the responses of others, who may blame the trauma victim or show disbelief at the time of a trauma event, will reinforce views of the world as dangerous and the self as inept. For a child who easily accepts the responsibility for a traumatic loss (Christ, 2000) such blame may lead to feelings of incompetence.

The severity of the event influences the development of PTSD (Judith Cohen, 1998). A more severe event will likely be more disparate from existing schemas of the world and is more likely to create PTSD symptoms in a child (Foa & Rothbaum, 1998). Interpersonal traumas, e.g. rape and assault, will also increase the severity of the PTSD symptoms as will the physical proximity to the event (R. S. Pynoos et al., 1993). The emotional closeness to the deceased may also impact the severity of symptoms – the closer a child feels to the deceased, the more likely

the child is to develop PTSD symptoms (R. S. Pynoos, Nader, Frederick, & Gonda, 1987). A parent is by most accounts the closest person to a child, and the person who provides both emotional and other supports (Bronfenbrenner, 1986). The sudden and/or violent loss of a parent violates the child's schema of the world as safe (Foa & Rothbaum, 1998) and likely will increase the severity of the trauma symptoms.

Good extended family support, however, may mitigate PTSD symptoms in children (Nader, 1997b). The reactions of important adults in the child's life may affect the child's tendency to develop PTSD (Rollins, 1997). A surviving parent who either exhibits increased re-experiencing or increased avoidance may delay or damage the child's own grieving process. Increased re-experiencing in the surviving parent may lead to overprotection of the child, and increased avoidance may inhibit the child from expressing feelings because of fear of upsetting the living parent. A parent with poor boundaries, who over-identifies with a child's pain, may become too passive in following set family rules (Nader, 1997a). This lack of rules may create problems for the child, who may get the message that the world is an unsafe place. In addition, the experience of multiple traumatic events has been shown to have some effect on the development and severity of PTSD. The higher the number of traumatic events a person has experienced, the higher the likelihood of developing PTSD (Nader, 1997a). Cohen et al. (2002) argue, however, that it may be possible that a history of previous losses or traumas that have been successfully addressed, may have taught the child good coping mechanisms and actually decrease the risk for PTSD. Gender may also play a role - girls seem to be at higher risk for PTSD than boys (Dyregrov, Kuterovac, & Barath, 1996; R. S. Pynoos et al., 1993; Winje & Ulvik, 1998). Next, the author will review trauma interventions to be followed by a literature review of PTSD treatment for children.

*Trauma Interventions*

Avoidance symptoms function to reduce the risk of activation of the trauma or fear network (Foa, Steketee, & Rothbaum, 1989). Anxiety occurs when the fear network becomes dysfunctional. The goal of treatment is to restore the network to be more functional and organized. Emotional processing, a term borrowed from Rachman (1980), involves the incorporation of new information into the fear structures that either increase or decrease emotional response. The work of therapy, therefore, is to activate the fear structure and provide incompatible information to decrease fear. Such therapy is done through the use of trauma narratives and exposure therapy, i.e. activation of the network, and the assimilation of new elements that are incompatible with the fear elements to change the basic structure of the network ( (Foa & Rothbaum, 1998). Excessive anger and numbing, overwhelming anxiety and depression can hinder activation of the fear structure and it is recommended that these factors be addressed before initiating exposure therapy (Jaycox & Foa, 1996)

Foa and her colleagues (Foa & Kozak, 1986; Foa & Rothbaum, 1998) stress the importance of cognitive processing as part of the treatment of posttraumatic stress disorder symptoms. Speaking of the loss is intended to promote cognitive restructuring and to promote self-regulation of emotions and bodily reactions (B. A. van der Kolk, 1996). Cognitive processing helps the traumatized victim to "correct" faulty schemas, such as the self as incompetent and the world as unsafe. For children, who depend on their parents for emotional support and safe keeping (Bronfenbrenner, 1986), a traumatic loss of a parent is likely to shatter their perception of the world as a safe place. It is interesting to note that grief theory speaks of the benefits of talking about and sharing memories of the loss as well (Worden, 1991), but for a different reason: to integrate the loss and eventually let go of the deceased.

Stress inoculation therapy (SIT) is a treatment protocol that includes both behavioral and cognitive interventions such as education, safety statements, role playing, thought stopping, muscle relaxation and breathing exercises (Feeny, Foa, Treadwell, & March, 2004; Rothbaum et al., 2000). SIT is part of the interventions suggested for the treatment of PTSD by Foa & Rothbaum (1998). The same techniques can be used with children. Education about common emotional, physical and behavioral reactions to trauma events as well as conversation about how a child can respond or protect him or herself should the event recur, normalizes the children's reactions, and reduces anxiety (Goenjian et al., 1997; Layne et al., 2001; Pfeffer, Jiang, Kakuma, Hwang, & Metsch, 2002; Salloum, Avery, & McClain, 2001). Safety statements help reduce the child's stress level (Judith Cohen & Mannarino, 2004) as well as facilitate the narrative sharing for the exposure component of treatment. Relaxation techniques are helpful in reducing stress-related symptoms in adults (Kabat-Zinn, Massion, Kristeller, & Peterson, 1992) and is recommended by several experts in trauma treatment of children (e.g. Judith Cohen & Mannarino, 1993; Deblinger & Heflin, 1996). Such techniques help traumatized children deal with hyperarousal symptoms allowing for an improved sense of control (Judith Cohen & Mannarino, 2004; Goenjian et al., 1997). Thought stopping (Ellis, 1962), another stress inoculation technique, helps a child control thoughts.

*Literature Review of Trauma Treatment for Children*

Exposure therapy, both imaginal and in vivo, is the most frequently studied intervention in the treatment of adults with chronic PTSD (e.g. J. L. Black & Keane, 1982; Brom, Kleber, & Defares, 1989; Fairbank & Keane, 1982). Unfortunately, exposure work with children suffering from PTSD has been less well examined. One researcher using exposure intervention working with war exposed children showed positive results using single-case designs (Saigh, 1986,

1987a, 1987b). However, exposure therapy has not been explored in controlled studies for decreasing symptoms of PTSD in children (Berliner, 1997; Judith Cohen, Berliner, & March, 2000).

Cognitive behavioral therapy (CBT) with children, including cognitive restructuring, relaxation exercises, and education, some with and others without a parent component, reduced PTSD symptoms, depression, and anxiety in sexual abuse victims (Celano, Hazzard, Webb, & McCall, 1996; Deblinger, Lippmann, & Steer, 1996; Deblinger, McLeer, & Henry, 1990; Farrell, Hains, & Davies, 1998; King et al., 2000). The sample sizes ranged from 4 to 91 with 3 – 16 year olds. CBT, used with eye-movement desensitization and reprocessing (EMDR), also reduced PTSD, depression and anxiety symptoms in second to sixth graders (sample sizes ranging from 32 – 176) who had experienced a natural disaster (Chemtob, Nakashima, & Carlson, 2002; Chemtob, Nakashima, & Hamada, 2002). Stein et al. (2003) used a wait-list group in the treatment of 126 sixth graders exposed to violence. The researchers found that the group treated with cognitive behavioral techniques in combination with exposure therapy had greater improvements in relation to PTSD, depression symptoms and psychosocial functioning than the wait-list. Cohen et al. (2004) used CBT interventions with a group of 8 to 14 year olds who had experienced child sexual abuse. She found a reduction in PTSD and depression symptoms, behavior problems and shame. Some of these studies were not statistically controlled, but cognitive interventions are seen as the most promising for children experiencing PTSD (Smith, Perrin, & Yule, 1999). A summary of interventions for PTSD with children is provided in Table 2.

## *Grief and Trauma*

Bereavement has been described as a specific type of posttraumatic stress (Callahan & Callahan, 1997) yet, to date, there is little connection made between the two phenomena. Few studies have addressed the issues of grief and PTSD though many grief experts would agree that some bereavement involves traumatic loss, such as loss due to suicide, homicide, or accidents. Therefore, traumatic responses are to be expected (Raphael, 1997). In the following pages the author will present a review of studies that have examined the interaction of the two variables of grief and trauma. This is followed by a review of outcome studies of treatment for these two interacting variables.

### *Interactions of the Two Variables*

In the mid-eighties Pynoos and his colleagues began to examine how traumatic losses may effect children (R. S. Pynoos & Eth, 1985; R. S. Pynoos et al., 1987; R. S. Pynoos, Nader, Frederick, & Gonda, 1987). Though grief and posttraumatic stress symptoms were not equally assessed in all of these studies, it was apparent that trauma had an effect on a child's grief. Children who were physically closer to a school girl killed by a sniper had higher PTSD scores than those who were not (R. S. Pynoos, Nader, Frederick, & Gonda, 1987) as did children who were emotionally closer to the victim. Other studies found that children who experienced the homicide of a family member, whether as a witness or later hearing about the murder, developed both PTSD and grief symptoms (Clements & Burgess, 2002). Siblings of homicide victims also showed both grief and PTSD symptoms (Brosius, 2004) and it was evident that the trauma experience delayed the grief work of these children. Trauma-produced after-affects such as intrusive thoughts, depression, anxiety, as well as disrespectful and offensive behavior, including truancy and criminal activity impeded the grief work in children bereaved by

Table 2.

*Summary of Interventions for PTSD with Children*

| Author | Design | Sample | Age Group | Variables | Intervention | Outcome |
|---|---|---|---|---|---|---|
| Saigh (1986; 1987a; 1987b) | SSD | Varied/ War trauma | 6-14 | Anxiety, depression subjective units of distress | Exposure | Improved |
| Celano et al. (1996) | Comparison group | 15/17/ CSA | 8-13 | PTSD, internalizing, externalizing, psychosocial functioning | CBT with PG/ SC with PG | Improved *in both groups* |
| Deblinger et al. (1996; 1999) | Randomized control groups | 24/22/22/21/ CSA | 7-13 | PTSD<br>Depression<br>Externalizing | CBT+Exposure/ CBT with PG and Exposure/PG/ Community care group | Improved *in groups 1+2*<br>Improved *in groups 2+3*<br>Improved *in groups 2+3*<br>(Results remained at 2-year follow-up) |
| Deblinger et al. (1990) | Within subject design | 19/CSA | 3-16 | PTSD<br>Anxiety<br>Depression<br>Behavior | CBT with Exposure | Improved<br>Improved<br>Improved<br>Improved |

Table 2. (continued)

*Summary of Interventions for PTSD with Children*

| Author | Design | Sample | Age Group | Variables | Intervention | Outcome |
|---|---|---|---|---|---|---|
| Farrell et al. (1998) | Multiple baseline design | 4/CSA | 8-10 | PTSD<br>Depression<br>Anxiety | CBT with limited Exposure | Improved<br>Improved<br>Improved |
| King et al. (2000) | Random. WL control | 12/12/12/ CSA | 5-17 | PTSD<br>Anxiety | CBT with Exposure/ CBT with Exposure and PG/WL | Improved in treatment groups<br>Improved in treatment groups |
| Chemtob et al. (2002) | Randomized treatment groups | 73/176/ Hurricane | $2^{nd}$-$6^{th}$ grades | PTSD | Individual CBT<br>Group CBT | Improved<br>Improved |
| Stein et al. (2003) | Randomized WL control group | 61/65/ Violence | $6^{th}$ grade | PTSD<br>Depression<br>Psychosocial functioning | CBT with Exposure/ WL | Improved in treatment group<br>Improved in treatment group<br>Improved in treatment group |
| Cohen et al. (2004) | Randomized control group | 89/91/ CSA | 8-14 | PTSD<br>Depression<br>Behavior<br>Shame<br>Attribution | CBT with Exposure (TF-CBT)/Child Centered Therapy | Improved in TF-CBT group<br>Improved in TF-CBT group<br>Improved in TF-CBT group<br>Improved in TF-CBT group<br>Improved in TF-CBT group |

SSD – Single Subject Design; PTSD – Posttraumatic Stress Disorder; CSA – Child Sexual Abuse; CBT – Cognitive Behavioral Therapy; PG – Parent Group; SC – Supportive Counseling; WL – Wait List; TF-CBT – Trauma Focused Cognitive Behavioral Therapy

homicide (Eth & Pynoos, 1994). Thinking about the lost loved one became harder because mental and/or actual pictures of the way the person died interfered with reminiscing, an important task of grief work. Remembrance became tarnished by the graphic violence associated with the homicide. In addition, the PTSD symptom of numbing in these children prevented full expression of grief feelings. When the anxiety of the trauma experience lessened, the children were at risk for escalating grief (Eth & Pynoos, 1994).

It does appear that the trauma experience may indeed impede the grief process (Dora Black, 1998). Black worked with several children who had lost one parent, usually their mother, through domestic violence. She concluded, "…interventions to prevent or ameliorate PTSD are usually necessary if the child has witnessed the killing or has witnessed previous domestic violence. Most children will then require therapeutic attention to promote mourning…" (Dora Black, 1998, p. 249). So Black believes that before the grief process can be dealt with, PTSD symptoms have to be addressed.

*Grief and Trauma Interventions*

Though not directly labeled as traumatic grief studies, there is a body of work that discusses interventions treating children who have experienced both grief and trauma. Researchers have examined the interaction between trauma and grief in homicide situations (R. S. Pynoos, 1992; R. S. Pynoos & Eth, 1984), community violence (Murphy, Pynoos, James, & Osofsky, 1997; R. S. Pynoos & Nader, 1988), sniper attack (Nader, Pynoos, Fairbanks, & Frederick, 1990; R. S. Pynoos, Nader, Frederick, & Gonda, 1987), suicide (Pfeffer, Jiang, Kakuma, Hwang, & Metsch, 2002), earthquake (Goenjian et al., 1997), and war (Saigh, 1986, 1987a, 1987b).

Pynoos and his colleagues (Goenjian et al., 1997; Layne, Saltzman, Savjak, & Pynoos, 1999; R. S. Pynoos, Steinberg, & Wraith, 1995) developed a treatment outline for bereaved children who had experienced a traumatic event. The basis of the outline is the belief that trauma adjustment for children and adolescents is influenced not only by psychological but also by socio-environmental risk factors that must be addressed. Their outline addresses five foci, and intervention includes psycho-education, skill-building exercises, and process-oriented activities. The foci and their therapeutic goals and desired outcomes are listed in Table 3 (Layne et al., 2001, p. 280).

Goenjian et al. (1997), Layne et al. (2001) and Saltzman et al. (2001) created treatment models based on the five foci and used psycho-education, exposure, anxiety management techniques and cognitive restructuring to reduce grief and trauma symptoms. The treatment models were called Trauma/Grief Focused Psychotherapy. Goenjian et al. (1997) provided this trauma/grief treatment to 35 children who had experienced an earthquake with a non-randomized comparison control group of 29 children. Post treatment the experimental group had significantly lower PTSD scores, but no changes in depressive symptoms. However, the comparison group experienced an increase in both PTSD and depressive symptoms. Interestingly, grief symptoms were not measured in the research.

Saltzman et al. (2001) obtained similar results presenting treatment to 26 symptomatic students who had experienced community violence. Using self report and structured interviews the authors found that their intervention program significantly decreased PTSD symptoms and decreased complicated grief symptoms. Post-treatment review of grade point average also showed that grades improved significantly post treatment. However, depressive symptoms did not decrease with any degree of significance.

Table 3

*Therapeutic Foci, Therapeutic Interventions, and Targeted Outcomes*

| Focus | Goals | Outcome |
|---|---|---|
| Trauma Experience | Normalize and validate posttraumatic stress reactions; enhance coping skills; construct trauma narrative; clarify distortions; process negative emotions; identify and process worst traumatic moments and associated intense emotions | Reduction in in PTSD symptoms, depression symptoms and grief symptoms |
| Trauma and Loss Reminders | Assess type and frequency of trauma and loss reminders and associated reactivity; enhance coping; build tolerance for expectable reactivity to trauma reminders; link and discriminate between traumatic experiences and trauma reminders | |
| Posttraumatic Adversities | Identify adversities in school, peer-family relationships; living conditions; health, etc.; promote problem-solving-coping abilities including acceptance and adaptation; increase social skills for appropriate support seeking regarding traumatic experiences | |
| Interplay Trauma/Grief | Normalize and validate grief reactions; enhance coping and support-seeking skills; reconstitute a non-traumatic image to facilitate reminiscing; enhance coping; build tolerance for expectable reactivity to loss reminders, process conflicted feelings in relation to the deceased | Positive psychosocial adjustment |
| Resuming Develop-Mental Progression | Identify missed developmental opportunities; assess functional impairments; initiate personal goal-directed efforts in compromised life domains; promote pro-social efforts to create a more favorable recovery environment | |

Layne and his colleagues (2001) confirmed some of the above results. The authors worked with 55 adolescents, ages 15 to 20, who had experienced the war in Bosnia and Hercegovina. Grief, depression and trauma symptoms were measured. Though not planned, the

authors serendipitously created a comparison group when five schools were unable to complete the program, dropping out after two of the four planned treatment modules. However, pre-testing results showed no differences between the groups on the three measures of grief, PTSD and depressive symptoms. Again, basing their treatment on the five foci (R. S. Pynoos, Steinberg, & Wraith, 1995) the adolescents who participated in the full program (*n*=28) showed significant improvements in PTSD, grief and depressive symptoms. In addition, these reductions were associated with higher levels of psychosocial adaptation as measured by the Child Self-Rating Scale (Hightower, Cowen, & Spinell, 1987).

Two studies used separate treatment models though similar treatment interventions to Layne et al. (2001), Saltzman et al. (2001) and Goenjian (1997). Salloum et al. (2001) and Pfeffer et al. (2002) applied psycho-educational techniques about grief, trauma and expression of feelings in an attempt to decrease PTSD symptoms in children who had lost a loved one to homicide and suicide. One of the studies, uncontrolled with 45 inner city adolescent survivors of homicide victims, showed significantly lower scores in PTSD symptoms after treatment (Salloum, Avery, & McClain, 2001). The other study, with children bereaved by suicide, showed significantly lower scores in anxiety and depressive symptoms post treatment and in comparison with a waitlist control group (Pfeffer, Jiang, Kakuma, Hwang, & Metsch, 2002). However, in this study PTSD scores were not lowered which is an important difference from the previous studies. It may be hypothesized that suicide, which often carries a stigma, also carries posttraumatic stress symptoms that are more difficult to mediate. It is interesting to note that neither Salloum et al. (2001) nor Pfeffer and her colleagues (2002) measured grief reactions in their studies, yet called their interventions bereavement/trauma psychotherapy.

Two other suggested treatment modalities for trauma and grief for children were found in the literature. Murphy et al. (1997) describe a school-based prevention/intervention program for children exposed to family and/or community violence. The intervention program addresses psychological as well as cultural and social aspects of trauma and grief. Adult caregivers of the children are also included in parts of the program. However, no outcome studies using this intervention program are available. Stubenbort et al. (2001) describe a cognitive-behavioral intervention program with both adults and children affected by an air crash. Again, no outcome measures were provided for the program. A summary of trauma focused grief interventions with children can be found in Table 4.

## *Childhood Traumatic Grief*

To clarify the definition of Childhood Traumatic Grief (CTG) used in this study, an overview of the current debate of the definitions of complicated and traumatic grief must be discussed and is presented next. After the presentation of this discussion, the current definition of childhood traumatic grief is provided, followed by a summary of differences between uncomplicated grief, posttraumatic stress disorder and childhood traumatic grief. This is in turn followed by a literature review of childhood traumatic grief interventions.

### *Current Definitional Issues*

Over the past several years there has been a discussion in the literature related to complicated and traumatic grief in both adults and children. Webb (2004) bases her interpretation of traumatic grief in children on Prigerson & Jacobs' (2001) definition in adults - that the response would be to a death that is typically not considered traumatic, but is experienced as such due to the make-up of that relationship and the survivor's attachment or dependency on that relationship. Webb states, "traumatic grief creates responses of intrusive, distressing

preoccupation with the deceased person in the form of yearning, longing, and searching", and that one difference in traumatic grief from normal grief is "in the intensity and duration of these responses" (Webb, 2004, p. 11). Others agree with this definition (Melhem et al., 2004b). Traumatic grief, according to these authors, includes separation distress, and a belief that grief is what keeps humans connected to the deceased. These authors claim that traumatic grief is different and separate from posttraumatic stress disorder, since it is an unconscious effort to maintain the connection rather than to avoid recapitulation of the stressor.

Others feel that the term traumatic grief should be reserved for bereavement experiences caused by loss that can be independently classified as trauma regardless of response or interpretation of the bereaved individual (Malkinson, Rubin, & Witztum, 2000). Malkinson and her colleagues also propose that complicated grief be used to refer to the response of the bereaved, regardless of the cause of death. This raises the question: Does complicated grief arise from exposure to a traumatic death or from attachment issues? It seems that some authors, writing about children and grief, interchange the terms traumatic and complicated grief (Malkinson, Rubin, & Witztum, 2000; McDermott, Prigerson, Reynolds, & Houck, 1997; Melhem et al., 2004a, 2004b), further contributing to the confusion of the terms and their proper interpretation. What all the definitions do have in common, though, is that when a child experiences a parent's death to trauma, the intrusion of PTSD symptoms may prevent the child from completing his or her grief tasks (R. S. Pynoos, 1992; Webb, 2004).

*Current Definition*

More recently, in view of increasing community violence and terrorist attacks, a new term has been coined: Childhood Traumatic Grief (CTG) (Brown & Goodman, 2005; Brown, Pearlman, & Goodman, 2004; Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002).

Table 4

*Summary of Trauma-Focused Grief Interventions with Children*

| Author | Design | Sample | Age Group | Variables | Intervention | Outcome |
|---|---|---|---|---|---|---|
| Goenjian et al. (1997) | Non-random. control group | 35/29 Earthquake | $6^{th}$-$7^{th}$ grades | PTSD<br>Depression | TF Grief Int. | Improved in treatment group<br>Unchanged |
| Saltzman et al. (2001) | Pre-Experi-mental | 26/Comm-unity violence | 11-14 | PTSD<br>Complicated grief symptoms<br>Depression<br>GPA | TF Grief Int. | Improved<br>Improved<br><br>Unchanged<br>Improved |
| Layne et al. (2001) | Non-planned non-random. comparison Group | 28/27/ War | 15-20 | PTSD<br>Grief<br>Depression | TF Grief Int. | Improved in full txment gr.<br>Improved in full txment gr.<br>Improved in full txment gr. |
| Salloum et al. (2001) | Pre-experi-mental | 45/ Homicide | 11-19 | PTSD | Psycho-education/ Expression of feelings | Improved |
| Pfeffer et al. (2002) | Non-random. WL compari-son group | 39/36/ Suicide | 6-15 | PTSD<br>Anxiety<br>Depression | Psycho-education/ Expression of feelings | Unchanged in both groups<br>Improved in treatment group<br>Improved in treatment group |

PTSD – Posttraumatic Stress Disorder; TF – Trauma Focused; GPA – Grade Point Average; Txment - Treatment

These authors all agree on a definition of childhood traumatic grief: Both grief and PTSD reactions are present, but more specifically, childhood traumatic grief is characterized as a situation in which trauma symptoms intrude on the child's ability to express his or her grief symptoms. The cause of death can be either objectively described as a traumatic death or subjectively interpreted by the child as a traumatic experience. In CTG the child cannot stop thinking about the trauma of the death and cannot fully process the loss. Therefore, the pain of the grief cannot ebb since the child cannot complete or integrate the prescribed grief tasks (Judith Cohen & Mannarino, 2004; Judith Cohen, Mannarino, & Knudsen, 2004; R. S. Pynoos, 1992).

Intrusive thoughts and memories may be activated by (a) reminders of the trauma (trauma reminders) such as people, smells, places, sounds etc.; (b) reminders of the loss (loss reminders), e.g. places, people, memories, objects, etc.; (c) reminders of change (change reminders), e.g. people, places, or things (R. S. Pynoos, 1992). These intrusive thoughts in turn may create shaking, headaches, dizziness (physiological arousal) and feelings of helplessness and fear (psychological distress). To avoid reminders of the trauma, the loss, and the changes caused by the trauma, the child employs avoidance and numbing coping mechanisms to decrease feelings of pain. This in turn alienates the child who will be prone to separate from others. Avoidance may take the form of dreams which stress the traumatic character of the loss, rather than provide comfort through loving memories of the dead as is more common in dreams reported in uncomplicated bereavement. To employ avoidance-of-terror invoking dreams, traumatized children may delay bedtime or avoid going to sleep, trying to stay awake most of the night. However, by avoiding feeling the pain of the loss and by avoiding loss and change reminders which psychologically changes the relationship with the lost loved one into a memory, the traumatized child is not able to complete the necessary grief tasks (Dora Black, 1998; Judith

Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002). There may be several trauma, loss and change reminders that may be out of the child's control and the traumatized child might, therefore, employ more drastic numbing and avoidance coping mechanisms than the child bereaved by uncomplicated loss, who may benefit from such reminders in their healing process.

Cohen and her colleagues (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002) see the differences between childhood traumatic grief and complicated bereavement in the source of the triggering trauma – in complicated grief it is the loss of a person on whom the child has been overly dependent, and in childhood traumatic grief it is the horror and fear connected with the death itself, both objectively and subjectively. These two conditions differ further in terms of interference with the resolution of the grieving process: in complicated grief, interference is seen as emerging primarily from the person's dependency needs, and in childhood traumatic grief interference is observed in the intrusive trauma, loss and change reminders with resulting avoidance mechanisms (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002). This study will use the above current definition and description of childhood traumatic grief (Brown & Goodman, 2005; Brown, Pearlman, & Goodman, 2004; Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002; R. S. Pynoos, 1992).

*Similarities and Differences between Uncomplicated Grief, Posttraumatic Stress Disorder, and Childhood Traumatic Grief*

Symptoms seen in children who have experienced uncomplicated grief include sleeping and eating disturbances, nightmares, feelings of guilt, difficulties in school, acting out problems, difficulties in separating from the surviving parent, regressive behavior, and avoidance in talking about the loss (Christ, 2000; Willis, 2002; Wolfelt, 1996). A child who has experienced a traumatic death may display the same symptoms (Yule, 2001). However, there are important

similarities and differences between uncomplicated grief and posttraumatic stress disorder symptoms; between uncomplicated grief and childhood traumatic grief symptoms; and between childhood traumatic grief and posttraumatic stress disorder symptoms. Though uncomplicated grief, childhood traumatic grief and posttraumatic stress disorder symptoms all involve avoidance, intrusion and re-experiencing symptoms, these symptoms present differently in these conditions

*Similarities and differences between uncomplicated grief and posttraumatic stress disorder symptoms*. In PTSD the re-experiencing involves intrusive distressing thoughts, images and dreams that center on the horror of the experience. Re-experiencing of a trauma event may also occur through distressing dreams, disorganized or agitated behaviors, reenactment of the trauma, or anguish when presented with reminders of the traumatic event (Scheeringa, Zeanah, Drell, & Larrieu, 1995). In uncomplicated grief the re-experiencing takes the form of yearning or searching for the deceased and centers around memories of the deceased, both pleasurable and sad ones (Nader, 1997a). In addition, re-experiencing in a traumatized child often comes out as repetitive play with traumatic overtones and a tragic ending (Judith Cohen, 1998; Terr, 1991). This quality and persistence of the play makes the trauma response different from grief related play displayed by a child who is experiencing uncomplicated bereavement.

Avoidance in PTSD can take the form of restlessness, poor concentration, behavioral problems (Malmquist, 1986) and detachment, especially in adolescents (Nader, 1997a). Avoidance may include reminders of the event and emotions, both happy and sad, and may alternate or coexist with traumatic re-experiencing. In uncomplicated grief avoidance usually

consists of phases of shock and disbelief that disappear relatively soon after the death and may alternate or coexist with periods of play or excessive activity (Nader, 1997a).

Arousal appears in children with uncomplicated bereavement and traumatized children in the form of sleep disturbance, impaired concentration and anger. In traumatized children the anger may escalate into a murderous rage. The anger is directed at both the victim and a possible assailant. In traumatized children, sleep disturbances are related to intrusive thoughts of the trauma or fears of dreaming about the traumatic event. Children experiencing uncomplicated bereavement may find comfort in their dreams because they remind them of their loved ones' past presence (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002).

*Similarities and differences between uncomplicated grief and childhood traumatic grief.* In uncomplicated grief it is common for a child to identify with the deceased. Indeed, integrating positive aspects of the deceased into the child's self-concept is one of the tasks described for uncomplicated grief resolution (Wolfelt, 1996). A child who has experienced the traumatic loss of a loved one is likely, however, to avoid identifying with the person lost to a trauma, fearing that any identification puts them at risk for sharing the traumatic fate of their loved one (R. S. Pynoos, 1992). The avoidance in a traumatically bereaved child may also take the opposite direction of over-identification with the deceased (Nader, 1997a). By taking on several of the deceased's characteristics or behaviors or changing his or her name to that of the deceased's, the child avoids acceptance of the reality of the loss which is the first task of grief resolution (Worden, 1991). A child experiencing uncomplicated bereavement often works with little difficulty on the task of becoming attached to a caring adult to replace the attachment to the deceased (Wolfelt, 1996). A traumatically bereaved child may work to avoid forming further attachments for fear of losing yet another loved one (Judith Cohen, Mannarino, Greenberg,

Padlo, & Shipley, 2002). Guilt and self-blame (so-called magical thinking), where the child questions the meaning of the death and if it could have been prevented it, are common in both the traumatically bereaved child and the child with uncomplicated bereavement. However, the traumatically bereaved child may become more pronounced in the expression of guilt and self-blame by engaging in rescue or revenge fantasies (E. S. Eth & R. S. Pynoos, 1985).

*Similarities and differences between childhood traumatic grief and posttraumatic stress disorder*. The trauma symptoms in childhood traumatic grief are typical posttraumatic stress disorder symptoms, however in childhood traumatic grief the manifestation of posttraumatic stress disorder symptoms prevents grief work (Brown & Goodman, 2005; Brown, Pearlman, & Goodman, 2004; Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002). In childhood traumatic grief it is not necessary for the child to have witnessed the death or to have experienced the trauma of discovering a dead body. The child may have heard second-hand of the trauma, e.g. a child who is informed that the parent has died in a car accident or finds out that the parent committed suicide. The child may develop posttraumatic stress disorder symptoms by imagining how the death occurred. Cohen and her colleagues (2002) also suggest that a child's subjective perception of the death is relevant in childhood traumatic grief. If the child's subjective experience is traumatic and invokes feelings of helplessness, horror and fear, it is irrelevant that the death was not objectively traumatic.

For some children trauma and loss reminders stay separate and therefore, a traumatically bereaved child may have posttraumatic stress disorder symptoms without experiencing childhood traumatic grief. Conversely, childhood traumatic grief may be present without a full-blown PTSD diagnosis (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002). Pynoos et al. (1987, p. 61) stated that "in children, sometimes grief and post-traumatic

stress reactions manifest independently of one another, while at other times there is an interplay between them." Table 5 shows a summary of the similarities and differences between uncomplicated grief, posttraumatic stress disorder and childhood traumatic grief.

*Childhood Traumatic Grief Interventions*

Cohen & Mannarino (2004) have developed a treatment modality geared specifically towards childhood traumatic grief or CTG. Their proposed individual treatment modality is based on a combination of grief focused tasks (Wolfelt, 1996; Worden, 1996) and trauma-focused cognitive behavioral therapy (TF-CBT) similar to the model developed by Pynoos et al. (1995). Trauma focused components are addressed first. By reducing PTSD symptoms, the child will be better able to tolerate memories of the lost loved one and can move through the grief work which is presented later in the treatment. A parent component at the midway point of treatment and at the end of treatment parallels the treatment of the child. There are also some joint family sessions. This intervention model has proven effective in reducing PTSD, anxiety and depression symptoms in sexually abused children (Judith Cohen, Deblinger, Mannarino, Hibbs, & Jensen, 2005; Judith Cohen, Deblinger, Mannarino, & Steer, 2004). Two outcome studies using this TF-CBT intervention with bereaved children were found in the literature: one involved a child who lost his father in the uniformed services in the September 11 disaster (Brown, Pearlman, & Goodman, 2004) and the other a pre-experimental study of 22 children who had lost a parent to varying traumatic events such as accident, suicide, homicide and drug overdose (Judith Cohen, Mannarino, & Knudsen, 2004). One of these studies measured both childhood traumatic grief and posttraumatic stress disorder symptoms (Judith Cohen, Mannarino, & Knudsen, 2004). The study found that the children's scores on research measures decreased significantly post treatment, giving credence to the efficacy of the treatment. The subject in

Brown et al.'s (2004) study showed reductions in anxiety, depression, aggression, student-teacher conflict and dependency and showed increased levels of adaptability. A summary of trauma focused cognitive behavioral interventions with bereaved children is presented in Table 6.

Most outcome studies in regards to grief, trauma and traumatic grief interventions for children involve weekly therapy sessions stretched over varying amounts of time. This treatment modality, however, involves an ongoing commitment for parents/guardians in terms of time, effort, and money. Many families are not able to make such time and effort commitments, leaving many bereaved children without the treatment they need. Therefore, it is important to find an innovative, efficacious intervention format not involving a long-standing commitment from the parent or guardian. The next pages of this paper provide information about camps as a treatment setting and a literature review of the use of camps in bereavement treatment. A short description follows of the independent variable under study in this research project – Camp Magik.

### *Camp Setting*

Social work has a long historical association with camping programs (Michalski, Mishna, Worthington, & Cummings, 2003). Today many camping programs are used to provide interventions with specific population groups having medical, physical, or psychosocial needs (Kelk, 1994). Unfortunately, social work research on the efficacy of camping programs is scarce (Marx, 1988). It is noted in the literature that even though camping programs are valuable social work interventions, they need to be more fully developed (Breton, 1990). Some is known, however, about the positive effects of the camp setting. The camp event can offer psychological, social, emotional, and physical benefits (Kelk, 1994) because the children experience a break

Table 5

*Summary Table: Similarities and Differences between Uncomplicated Grief, PTSD & CTG*

| Symptoms | Uncomplicated Grief | PTSD | CTG |
|---|---|---|---|
| Re-experiencing | Memories of deceased<br>Yearning, searching | Intrusive thoughts of horror of experience<br>Distressing dreams<br>Disorganized and agitated behavior<br>Reenactment of trauma<br>Repetitive play | Symptoms the same as those in PTSD and these symptoms prevent the child's grief work |
| Avoidance | Shock<br>Disbelief | Constrained affect and play<br>Regression of developmental skills<br>Withdrawal<br>Belief of not live long enough to become an adult<br>Restlessness<br>Poor concentration<br>Behavior problems<br>Detachment | Same as above |
| Arousal | Sleep disturbances<br>Impaired concentration<br>Anger<br><br>Dreams about lost loved one that may bring comfort | Sleep disturbances<br>Impaired concentration<br>Anger at victim and murderous rage towards assailant<br>Nightmares about horror of death | Same as above |
| Identification with deceased | Integrates positive aspects of of the deceased into self-concept | | Avoids identification or over-identifies with deceased |
| Attachment to caring adult | Forms new attachment to caring adult to replace attachment to deceased | | Avoids forming attachment out of fear of losing yet another loved one |
| Magical thinking | Displays guilt and blame for death | | Displays pronounced guilt and blame for death with rescue or revenge fantasies |
| Cause of symptoms | | Witness death or discover dead body | Witness death or discover dead body OR<br>Witness or hear about death |
| Trauma reminders<br>Loss reminders<br>Change reminders | No<br>Yes<br>Yes | Yes<br>Yes<br>Yes | Yes<br>Yes<br>Yes |

from their daily routines and an opportunity to be close to nature. Camp programs can help campers increase their self-worth, sense of efficacy, physical skills, and the strength of their relationships with peers as well as with adults (Kelk, 1994; Levitt, 1994). It may be important for children who are experiencing traumatic grief to interact with peers with similar experiences in a non-threatening environment because the numbing and avoidance in childhood traumatic grief may lead to extreme detachment where the child feels estranged or alienated from others (Nader, 1997a). The camp setting strengthens group cohesion (Stubenbort, Donnelly, & Cohen, 2001) and provides companionship and emotional, instrumental/tangible and informational supports (Antonucci & Jackson, 1990). Such social supports mitigate posttraumatic stress disorder symptoms (Nader, 1997a), are helpful in trauma resolution (Nader, Pynoos, Fairbanks, & Frederick, 1990) and are stressed in Horowitz's (1986) stress response theory.

A semi-structured play setting helps traumatized children to express themselves freely (Hurley, 1991), and play activities such as archery, canoeing, nature hikes, campfires, and participation in ropes courses are often included in camp activities. Also, extra playtime is a great stress reliever for grieving and traumatized children (Naierman, 1997). Alternating counseling sessions with playtime may be clinically helpful to children who cannot tolerate strong or painful feelings for long periods of time (Samide & Stockton, 2002). Play as therapy often helps a child's comfort level in sharing his or her story (Deblinger & Heflin, 1996).

*Literature Review of Camp as Bereavement Treatment Setting*

Though scant, there are some studies evaluating the efficacy of interventions with bereaved children in the camp setting. Stokes and Crossley's (1995) study of a bereavement weekend camp is purely descriptive. The treatment modality includes group sessions to share feelings surrounding the loss and education about death and the grieving process, structured in

Table 6

*Summary of Trauma-Focused Cognitive Behavioral Interventions with Bereaved Children*

| Author | Design | Sample | Age Group | Variables | Intervention | Outcome |
|---|---|---|---|---|---|---|
| Cohen et al. (2004) | Pre-experim. | 22/ Type I traumas | 6-17 | PTSD<br>CTG | TF-CBT | Improved<br>Improved |
| Brown et al. (2004) | Case study | 1/ September 11, 2001 attack | 5 | Anxiety<br>Depression<br>Agression<br>Student-teacher conflict<br>Dependency<br>Adaptability | TF-CBT | Improved<br>Improved<br>Improved<br>Improved<br>Improved<br>Improved |

PTSD – Posttraumatic Stress Disorder; CTG – Childhood Traumatic Grief; TF – Trauma Focused; CBT – Cognitive Behavioral Therapy

combination with arts and crafts and other regular camp activities. Creed et al. (2001) used satisfaction surveys to provide qualitative data from a weekend bereavement camp for children who had lost a sibling. Feedback for the most part was positive. Barrett (2004) performed a qualitative study using semi-structured interviews with campers and their parents/guardians as well as archival data of feedback after participation in a bereavement camp for children. Applying the constant comparison method the author was able to examine the benefits of group and outdoor/adventure components. Loy (2000) applied a mixed methods design in his study with varied results. The experimental, treatment-control post-measure-only design component showed difficulties in measuring grief, while the qualitative survey indicated that the children benefited in regard to normalization of feelings and increased family communication. None of the treatment interventions at the various bereavement camps addressed the possibility of trauma symptoms in the bereaved children.

*Camp Magik and the Posttraumatic Stress Disorder and Childhood Traumatic Grief Variables*

The camp that is the focus of this study, Camp Magik (Mainly About Grief in Kids) began in 1995 under the direction of this researcher. Prior to this research project this non-profit endeavor had held 21 camps in Georgia and one in West Virginia. The funding for the camps comes from grants and donations from concerned organizations and individuals. It is free of charge to participating children. The camp has been and continues to be of a dynamic nature, taking into consideration new research findings and adjusting accordingly to the efficacy data. In view of recent information in the literature regarding Childhood Traumatic Grief (CTG) and Post Traumatic Stress Disorder (PTSD) symptoms in bereaved children, the researcher designed a new trauma focused grief intervention. This study examined the relationship between types of

death and CTG and PTSD symptoms, as well as, the efficacy of the newly developed intervention in reducing CTG and PTSD symptoms in participating campers.

*Summary*

The studies on children's grief reviewed in this chapter indicate that a loss from a violent death results in posttraumatic stress disorder symptoms in addition to grief reactions. It appears that posttraumatic stress disorder symptoms may prevent a child from completing his or her grief tasks. All of the above studies deal with what would be considered a Type I trauma (Terr, 1991) or with what Webb (2004) calls mass trauma. These deaths are all sudden and/or violent. However, a salient question remains unanswered: How are children who lose a parent to a death from a prolonged illness affected? It can be debated whether the loss of a parent to an expected death, such as cancer, can be considered a traumatogenic experience since it does not involve danger, violence or threat and may not be a distinct or short-lived event (Smith, Perrin, & Yule, 1999). It can be argued, though, that any loss of a parent during childhood is a traumatic event (Krueger, 1983). As Worden says, "The loss of a parent through death is obviously a trauma" (1996, p. 102). Black (1978) agrees, saying that a child's ego cannot sustain the grief process without injury to the child's psyche.

Terr (1991) divides traumas into two categories: Type I involves a sudden, single and unexpected blow and Type II involves long-standing and expected blows. Terr mentions as examples of Type II repeated child abuse in various forms. However, it would also make sense that witnessing a parent die slowly from cancer, or chronic heart disease, may constitute repeated and expected blows which may involve a feeling of threat to a child who does not understand the disease or dying process. The child stands to lose his or her primary and most important support system (Bronfenbrenner, 1986) and may be concerned about his or her own personal well-being

(Christ, 2000). Witnessing the dying could thus produce powerful feelings of fear and/or helplessness. It is also developmentally "unnatural" for a young parent to die, which would make it an event out of the ordinary.

The type of death does not determine the bereavement process in adults (Marcey, 1996). Instead those who think that the death of their loved one could have been prevented suffer in higher degree with posttraumatic stress disorder symptoms. Children who engage in magical thinking (Christ, 2000) may, therefore, be at higher risk for PTSD symptoms since they may see most deaths as preventable. There is some indication that children experience PTSD symptoms whether they have lost a parent to a sudden, objectively defined traumatic death or to an expected death after a prolonged illness (McClatchey & Vonk, 2005).

No outcome studies on the treatment of posttraumatic stress disorder and childhood traumatic grief symptoms have been found on children who have experienced the loss of a parent to a prolonged illness. This type of trauma warrants serious attention. Terr (1991) believes that changes caused by either type I or type II traumas may stay with the child for several years, leading to a number of different disturbances in adulthood, including psychotic thinking, dissociation, violent behavior, passivity, self mutilation, and/or anxiety disorders**.** Both Type I, a sudden, single and unexpected blow, and Type II traumas, involving long-standing and expected blows, may produce symptoms of repeatedly perceived memories (visual, tactile, positional or olfactory), repetitive behaviors (posttraumatic play and reenactments), trauma-specific fears and changed attitudes about the future. Victims of both types of trauma experience their future to be limited and have a lack of trust of people and themselves. Other trauma symptoms are more common in type II traumas: denial and psychic numbing; self-hypnosis and dissociation; and rage. The rage can be turned inward with suicide and self-mutilation as a result, or turned

towards another. Sometimes the rage is so frightening to the child that it produces severe passivity. Including the loss of a parent to a prolonged illness in the type II category of traumas puts such a loss in a new light that warrants further examination.

Even though the definition of childhood traumatic grief includes deaths that the child subjectively experiences as traumatic, no outcome studies of childhood traumatic grief treatment for children who have experienced a non-violent, non-sudden loss of a parent are available. Previous childhood traumatic grief outcome studies include subjects who have experienced Type I (sudden and unexpected) traumas only. These studies are limited in their scope as both were statistically uncontrolled. Previous outcome studies using trauma/grief focused therapy were either pre-experimental (Layne et al., 2001; Salloum, Avery, & McClain, 2001; Saltzman, Pynoos, Steinberg, Aisenberg, & Layne, 2001) or quasi-experimental with non-equivalent comparison groups (Goenjian et al., 1997; Pfeffer, Jiang, Kakuma, Hwang, & Metsch, 2002). Also, all of the trauma-focused grief treatments as well as the treatment of childhood traumatic grief involve time consuming protocols ranging from three weeks (Goenjian et al., 1997) to 20 weeks and longer (Layne et al., 2001).

At this point in time there is an absence in the literature of addressing posttraumatic stress disorder or childhood traumatic grief symptoms in children who have experienced the loss of a parent after a non-violent, non-sudden death. The purpose of this study is to assess the presence of PTSD and CTG symptoms in children who have lost a parent to an expected death, as well as evaluating the effectiveness of reducing PTSD and CTG symptoms in bereaved children using a short term intervention treatment model set in a camp environment. With this purpose in mind, a conceptual model was created to direct the current study.

*Conceptual Model*

From reviewing the literature it becomes evident that many children who experience the loss of a parent to a sudden and/or violent death may develop PTSD and CTG symptoms. Trauma focused grief therapy, a combination of cognitive-behavioral and grief interventions, show promising results with this population. In the model, based on the theory and grounded in the literature, the trauma is addressed first by using cognitive-behavioral interventions, followed by grief tasks. The conceptual model for this phenomenon is described in Figure 2.

Since the present study will examine children bereaved of a parent to deaths both sudden and/or violent, as well as, after prolonged illness, the following conceptual model is presented. The model's main features are shown in Figure 3.

The subjects of interest in the current study were children bereaved due to loss of a parent either to a sudden and/or violent death *or* to a prolonged illness. For the purpose of this research study the definition of a long/prolonged illness was an illness that had lasted for a month or longer. The definition of a sudden death was a death that occurred less than a month after the onset of its cause. Violent death was defined by end of life by brutal, cruel, or aggressive means, such as accident, gunshot, fire, strangling, knife wound, terrorist attack, hurricane or drowning. Bereaved children in this study were children ages 7 – 17 who had lost a parent to any type of death within the past one to 48 months. The units of analysis in this study, or the dependent variables, were posttraumatic stress disorder and childhood traumatic grief symptoms as measured by two self-report measures, the UCLA PTSD Index for Children (Steinberg, Brymer, Decker, & Pynoos, 2004) and the Extended Grief Inventory (EGI) (Layne, Savjak, Saltzman, & Pynoos, 2001) which are both described in chapter 3, Methodology. The independent variables were type of death and a new treatment modality based on the literature review of treatment for

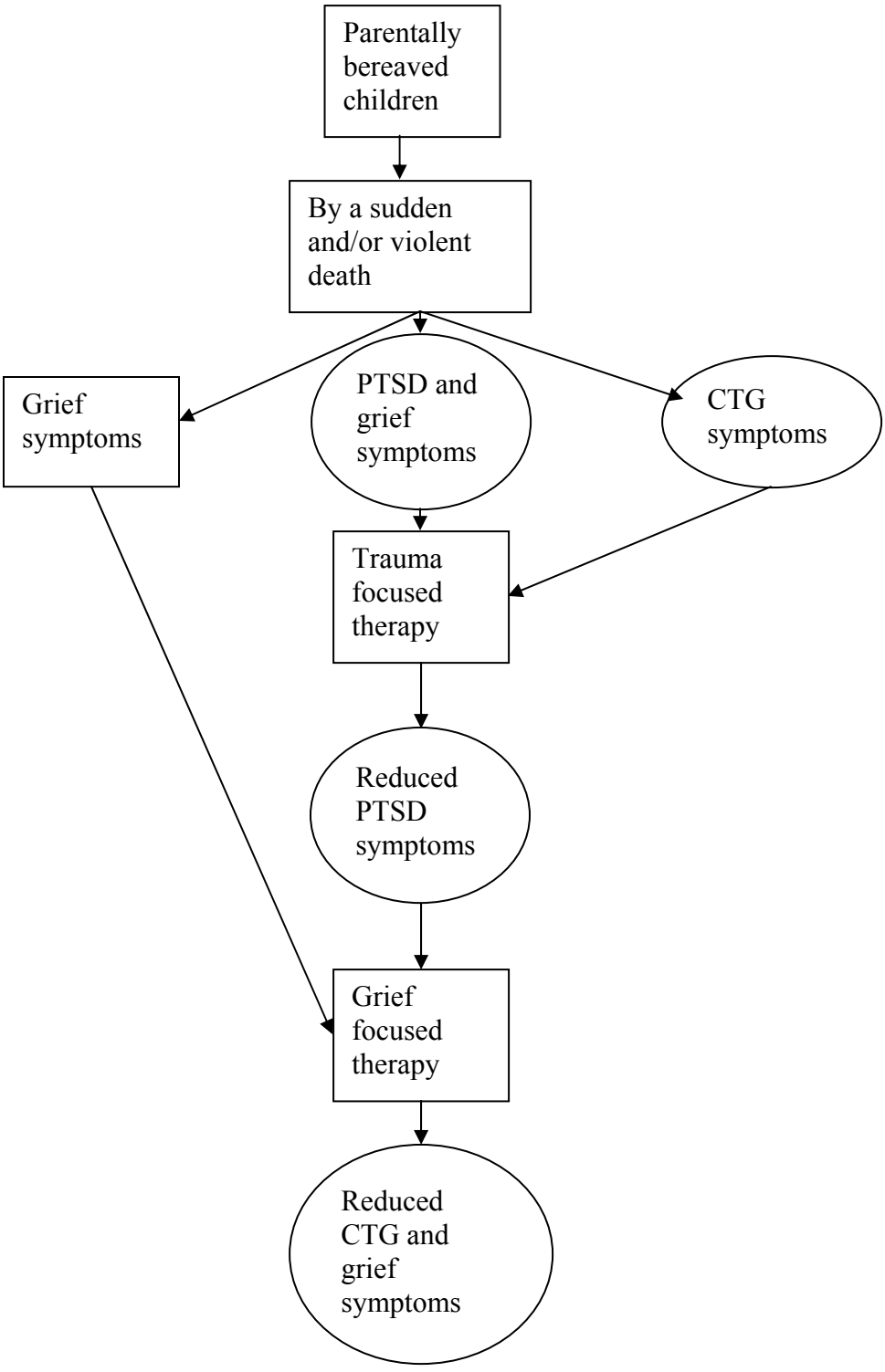


*Figure 2*. Conceptual Model for Treatment of PTSD and CTG symptoms in children bereaved of a parent to a sudden and/or violent death.

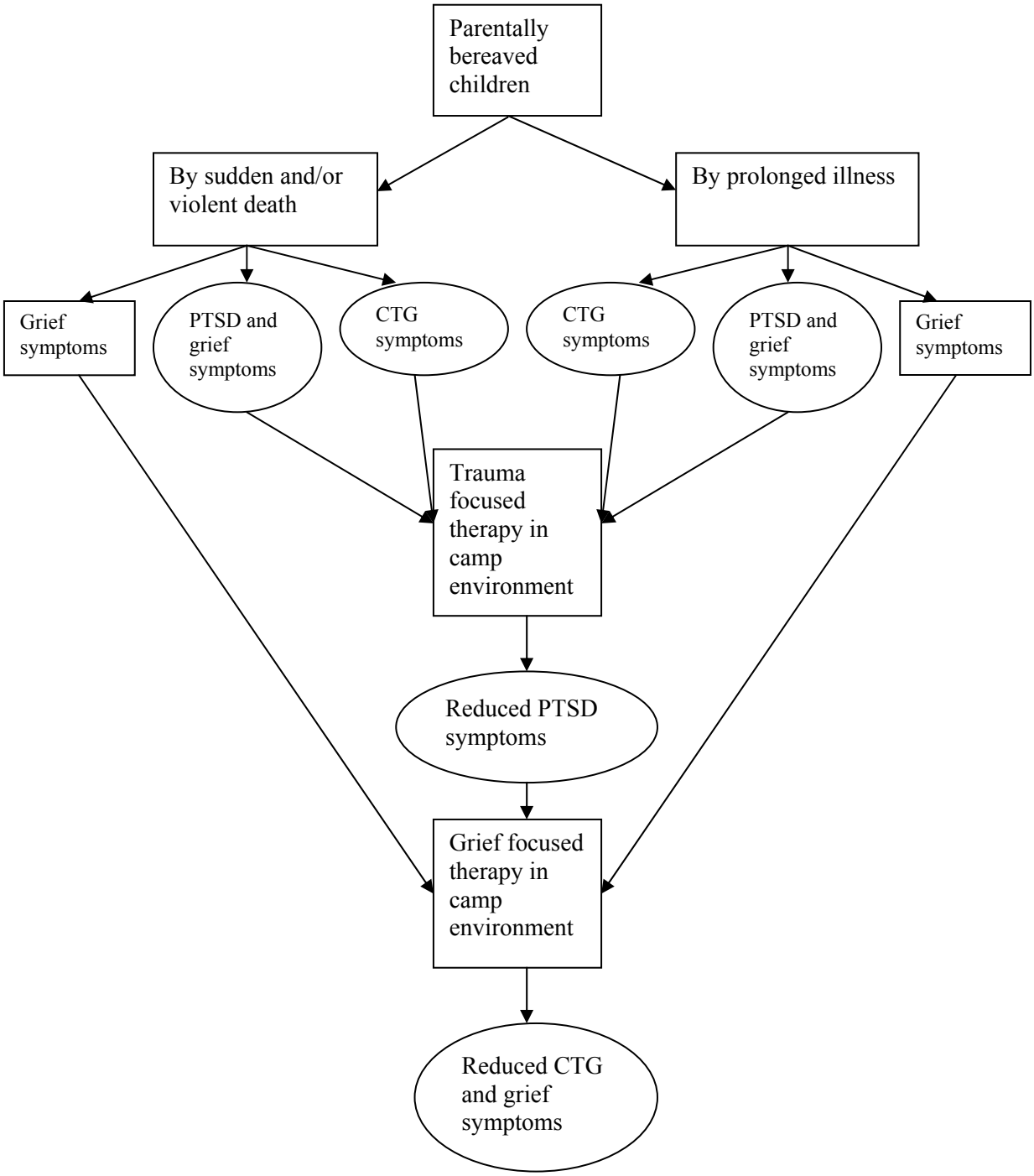


*Figure 3*. Conceptual Model for Treatment of PTSD and CTG symptoms in children bereaved of a parent to a sudden and/or violent death or to death by prolonged illness of a parent.

grief and trauma: trauma focused grief therapy provided in a camp environment. Camp was defined as a 48 hour over night weekend stay at a children's camp where parentally bereaved children received trauma focused grief therapy supervised by mental health professionals licensed in the state of Georgia. The children were divided into two age groups, ages 7-11 and ages 12-17 with intervention excercises based on age and developmental levels. The therapy consisted of (a) exposure (telling of their stories); (b) activities to help identifying and expressing feelings; (c) cognitive restructuring; (d) relaxation and imagery exercises; and (e) the unsent letter technique. The trauma focused interventions preceded the grief focused interventions as suggested in the literature (e.g. Brown, Pearlman, & Goodman, 2004; Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002; R. S. Pynoos, Steinberg, & Wraith, 1995) and included the first four of the five foci suggested by Pynoos and his colleagues (the traumatic experience, trauma and loss reminders, posttraumatic adversities, and interplay of trauma/grief ) (R. S. Pynoos, Steinberg, & Wraith, 1995). The group sessions were intermingled with a memorial service and a memory quilt making session all designed to facilitate integration of the grief tasks (Wolfelt, 1996; Worden, 1991), as well as, regular camp activities such as canoeing, hiking, and other play activities. The complete treatment intervention manual is available from the author upon request.

### *Research Questions*

To iterate, there is a paucity of studies for successful treatments of bereaved children. It has not been established in the literature to what extent children who have experienced the loss of a parent to a prolonged illness experience posttraumatic stress disorder and childhood traumatic grief symptoms. There are indications that children bereaved of a parent after prolonged illness do exhibit PTSD symptoms (McClatchey & Vonk, 2005). The intent of this

study is designed to estimate the effects on children of a parental death after a prolonged illness in regards to the two variables: posttraumatic stress disorder and childhood traumatic grief symptoms. No outcome studies of the treatment of PTSD and CTG symptoms with children who have experienced the loss of a parent after a prolonged illness exist in the literature. Therefore, it is a further objective of this study to address this omission by examining the effectiveness of a new treatment intervention. Furthermore, the few studies which have addressed the issues of PTSD and CTG symptoms in bereaved children are uncontrolled and use small sample sizes (Brown, Pearlman, & Goodman, 2004; Judith Cohen, Mannarino, & Knudsen, 2004). The current treatment interventions are time-consuming. With today's busy lifestyles and few opportunities for bereaved children to congregate in support of each other, a treatment model that is short in time as well as rich in opportunities for children to interact may be beneficial to parentally bereaved children. With these purposes in mind the following research questions were raised:

1. Do children who experience a parental loss after an extended illness experience PTSD and CTG symptoms to the same extent as those children who lose a parent to a sudden and/or violent death?
2. Does a short term intervention, such as a trauma focused grief intervention taking place in a camp setting over a weekend benefit children who suffer from PTSD and CTG symptoms?

These research questions examine specific conceptual relationships within the proposed theoretical model but do not try to validate the model as a whole as this is beyond the scope of this study. It is hoped, however, that this study will lead to further research as it may raise more

questions about the occurrence of PTSD and CTG symptoms in parentally bereaved children and what constitutes effective treatment for such symptoms.

*Hypotheses*

The hypotheses in this study, derived from the above research questions, were as follows:

1. Children who have experienced the death of a parent after a prolonged illness to such causes as cancer, end-stage diabetes or chronic heart disease, will experience childhood traumatic grief symptoms as measured by the EGI to the same extent as children who have experienced a sudden and/or violent death of a parent to such causes as accidents, heart attacks, fires, homicide and suicide.
2. Children who have experienced the death of a parent after a prolonged illness to such causes as cancer, end-stage diabetes or chronic heart disease, will experience posttraumatic stress disorder symptoms as measured by the UCLA PTSD Index to the same extent as children who have experienced a sudden and/or violent death of a parent to such causes as accidents, heart attacks, fires, homicide and suicide.
3. Participation in a weekend bereavement camp based on trauma focused grief therapy will decrease the severity of childhood traumatic grief symptoms as measured by the EGI in children bereaved of a parent to death.
4. Participation in a weekend bereavement camp based on trauma focused grief therapy will decrease the severity of posttraumatic stress disorder symptoms as measured by the UCLA PTSD Index in children bereaved of a parent to death.
5. Participation in a weekend bereavement camp based on trauma focused grief therapy will be equally effective in decreasing childhood traumatic grief as measured by the

EGI in parentally bereaved children whether the loss occurred to an expected death or to a sudden/violent death

6. Participation in a weekend bereavement camp based on trauma focused grief therapy will be equally effective in decreasing posttraumatic stress disorder symptoms as measured by the UCLA PTSD Index in parentally bereaved children whether the loss occurred to an expected death or to a sudden/violent death

# CHAPTER 3

# METHODOLOGY

## *Research Design*

This study examined the incidence of Childhood Traumatic Grief (CTG) and Posttraumatic Stress Disorder (PTSD) symptoms among parentally bereaved children, as well as, the effectiveness of a short term trauma focused grief intervention in a camp setting. Due to financial and practical circumstances a randomized control group was not possible. However, additional funding was obtained so that two camps could be run in close succession in the same general geographical area. Based on these constraints and opportunities, a non-equivalent comparison group design was chosen for this study.

The non-equivalent comparison group design is quasi-experimental. This design is used when random assignment from a common pool of subjects cannot be accomplished (Rubin & Babbie, 2001). Instead, an already existing "control" group that appears to be similar to the experimental group is employed. Change is measured on the dependent variable(s) before and after the independent variable has been introduced to one of the groups. In this study, the dependent variables were Childhood Traumatic Grief (CTG) and Posttraumatic Stress Disorder (PTSD) symptoms as measured by the Extended Grief Inventory (EGI) and the UCLA PTSD Index respectively (see under "Instrumentation" below). The bereavement camp was the independent variable. Pre and post-test scores on the EGI and UCLA PTSD Index reported by children who attended an early session of the bereavement camp (Camp A or immediate treatment group) were compared to pre and posttest scores on the same instruments reported by

children who did not attend this same session of camp. This second group served as the non-equivalent comparison group. The comparison group attended a later session of camp (Camp B or delayed treatment group). Test scores of the EGI and UCLA PTSD Index were first obtained from both groups immediately prior to Camp A. The experimental group then participated in Camp A. Both groups subsequently received testing number 2 of the EGI and the UCLA PTSD Index two weeks after Camp A. The comparison group attended Camp B two weeks after Camp A, immediately following test 2 of this group. Both groups then received a third testing, testing number 3, two weeks after Camp B. The design for this study is shown in Figure 4.

| | **Test 1** | **Treatment** | **Test 2** | **Treatment** | **Test 3** |
|---|---|---|---|---|---|
| CampA | O | X | O | | O |
| Camp B | O | | O | X | O |

O=testing; X=treatment/camp session

*Figure 4*. Study Design.

There was no random assignment and this design did not remove all other potential explanations for change, though it did provide an answer to the question: Did parentally bereaved children, attending the weekend Camp Magik, show a decrease in CTG and PTSD symptoms when compared to parentally bereaved children (in the same geographical area) who did not attend the weekend camp?

### *Sampling Procedures and Participants*

A purposive sample was used in this study. After obtaining IRB approval, an announcement for both camps was simultaneously mailed to schools, hospices, hospitals, and departments of family and children services in an urban/suburban area in the southeastern United States. Two separate sessions of the camp were available for registration and two camps were held two weeks apart in April and May of 2006 with the participants of the second camp serving as the non-equivalent comparison group. Forty-nine children ages 7 – 17 who had lost a parent/guardian to death within the past 3 to 48 months were accepted to Camp A and 56 children to Camp B. Remaining applications were held and those children were guaranteed a spot in subsequent camp sessions in the same area. Surviving parents gave the investigator permission to test 47 children from Camp A and all 56 children from Camp B. The investigator, however, only pre-tested 53 children from Camp B on the Extended Grief Inventory (EGI) measuring childhood traumatic grief symptoms and 54 children on the UCLA PTSD Index measuring posttraumatic stress disorder (PTSD) symptoms. Two children from Camp B could not be reached by telephone prior to the first camp session, and one child chose not to answer questions on the EGI. In addition the scores of one child from Camp A were discarded on both instruments as this child did not understand several of the questions and, therefore, did not answer them. In summary, the investigator pre-tested 99 children on the EGI and 100 on the UCLA PTSD Index.

### *Instrumentation*

Two standardized questionnaires were used in this research project: (a) The University of California at Los Angeles Post-Traumatic Stress Disorder Reaction Index for Children (UCLA PTSD Index) (Steinberg, Brymer, Decker, & Pynoos, 2004), illustrated in Appendix B, to

measure PTSD symptoms and (b) the Extended Grief Inventory (EGI) (Layne, Savjak, Saltzman, & Pynoos, 2001), shown in Appendix C, to measure CTG symptoms.

*The UCLA PTSD Index* (Steinberg, Brymer, Decker, & Pynoos, 2004) is a screening tool designed to assess exposure to trauma and PTSD symptoms in children ages 7-18. It is divided into three parts. The first consists of a trauma history where the presence or absence of a traumatic event is recorded. Trauma is defined as having been exposed to a disaster, accident, war, sexual abuse, or "anything else really scary", or hearing about a violent death or serious injury (Steinberg, Brymer, Decker, & Pynoos, 2004). The second part consists of a systematic evaluation of A1 and A2 DSM-IV criteria (APA, 2000) such as objective and subjective features of the distressing experience, e.g. "Were you scared that you would die?" The third part of the scale looks at the frequency of occurrence of re-experiencing, avoidance and arousal symptoms over the month prior to the administration of the scale. The participant has an option of five frequencies, ranging from 0 ("none of the time") to 4 ("most of the time"). This study used only the third part of the instrument to estimate PTSD symptoms as the death of the child's parent was considered the child's trauma history. The second part of the instrument was not used since a diagnosis of PTSD was not the focus of this study.

The UCLA PTSD Index part three is a 20 item paper and pencil self-report instrument. When DSM-IV criterion A is met, and the child endorses, with a 3 ("much") or a 4 ("most"), one re-experiencing symptom, 3 of the avoidance symptoms and 2 of the arousal symptoms, the child is likely to have a full diagnosis of PTSD. Validity of previous versions of the UCLA PTSD Index has been supported by many studies (Steinberg, Brymer, Decker, & Pynoos, 2004). The latest scale version has shown to have good convergent validity (0.70) with the PTSD Module of the Schedule for Affective Disorders and Schizophrenia for School-Age Children, Epidemiologic

version (Steinberg, Brymer, Decker, & Pynoos, 2004). The UCLA PTSD Index showed sensitivity of 0.93 and specificity of 0.87 in detecting PTSD, if using a cut score of 38 (Rodriguez, Steinberg, Saltzman, & Pynoos, 2001). The UCLA PTSD Index also has good convergent validity (0.82) with the Child and Adolescent Version of the Clinician-administered PTSD Scale. Researchers have demonstrated support for the internal consistency of the UCLA PTSD Index with a Cronbach's alpha of 0.90 (Roussos et al., 2005). Test retest reliability has been supported with a reliability coefficient of .84 (Roussos et al., 2005).

The authors of the UCLA PTSD Index suggest that researchers using this scale calculate overall PTSD severity scores by summing the scores for each question that relates to a DSM-IV symptom (Steinberg, Brymer, Decker, & Pynoos, 2004) or by summing the scores for all symptoms. In this study the scoring was managed by summing the scores for each question relating to a DSM-IV symptom (17 items of re-experiencing, avoidance, arousal) and by examining the changes in the total scores for each symptom after participation in the bereavement camp. Thus by looking at each symptom of PTSD separately, more detailed information of the effectiveness of camp was obtained. The total score for the combined symptoms was also acquired.

The authors do not have a firm cut score for the diagnosis of PTSD but suggest that scores of 38 or above indicate a diagnosis of PTSD (Rodriguez, Steinberg, Saltzman, & Pynoos, 2001). Diagnosing of PTSD was, however, not an issue for this study as the intention of the intervention was to reduce PTSD symptoms, not to diagnose PTSD. For the purpose of this study the cut score of 38 was used to indicate severity of symptoms only. Another issue with the UCLA PTSD Index is that it does not have items that relate to functional impairment to assess

for criterion F in the current DSM –IV diagnosis (APA, 2000). Therefore, functional impairment was not addressed in this study.

*The Extended Grief Inventory* (EGI) (Layne et al., 2001b) is a 28-item paper and pen self-report measure. It measures the frequency of grief reactions experienced during the past 30 days. The answers are measured on a 5-point frequency scale ranging from "never" (0) to "almost always" (4). The measurement is an improved version of the UCLA Grief Screening Inventory (R. S. Pynoos, Nader, Frederick, & Gonda, 1987). A factor analysis by the authors yielded three subscales: *positive connection* (11 items) which included normal grief reactions (e.g., "I feel that, even though the person is gone, he/she is still an important part of my life"); *complicated grief reactions* (7 items), i.e. feeling that life is purposeless since the death (e.g., "Life for me doesn't have much purpose since his/her death"); and *traumatic intrusion and avoidance* (9 items) (e.g., "Unpleasant thoughts about how the person died get in the way of enjoying good memories of him/her", "I don't talk about the person who died because it is too painful to think about him/her"). Item number 25 ("I feel more distant from the people I care about since he/she died") is unlabeled by the authors. The authors used a preliminary version of the EGI with a sample of war-exposed Bosnian adolescents. The scale showed acceptable-to-very good internal consistency reliability (full scale Cronbach's alpha = .93, subscale alphas between .70 and .90) (Layne, Savjak, Saltzman, & Pynoos, 2001). The authors claim that the EGI has shown good convergent validity in its correlations with measures of theoretically related constructs, such as posttraumatic stress and depressive symptoms, loss and trauma reminders, and somatic symptoms (*r*'s fall between .3 and .6).

Brown & Goodman (2005) also conducted a factor analysis of the EGI using 83 children and adolescents who had lost fathers in the uniformed services in the September 11, 2001

terrorist attack. These authors found three factors and named them (a) *traumatic grief* (23 items); (b) *positive memory* (3 items); and (c) *ongoing presence* (2 items). All the EGI subscales of Layne et al. (2001) and the EGI subscales of Brown & Goodman (2005) were significantly correlated except for positive memory (Brown & Goodman, 2005) and complicated grief (Layne, Savjak, Saltzman, & Pynoos, 2001). Brown & Goodman's study showed reliability of Cronbach's alpha of 0.94 for the EGI-Traumatic Grief subscale and of .62 and .73 for the EGI-Ongoing Presence and EGI-Positive Memories subscales respectively. The discrepancy between the results of Layne et al.'s (2001) and Brown & Goodman's (2005) factor analyses needs further evaluation, and suggests that there are questions in regard to the definition of CTG as well as the possibility of two different constructs being examined – traumatic and complicated grief. Further construct development needs to be explored with a large, heterogeneous sample of bereaved children. This is beyond the scope of this study. For the present study, the 23 items identified by Brown & Goodman (2005) as measuring traumatic grief were used to measure CTG.

Scoring of the EGI for this study was done by summing the frequencies reported by the subjects. In this study both the UCLA PTSD Index and the EGI were used two weeks after intervention even though the original instruments asked for a 30 day recall. The application of the instruments was changed to ask for recall within the past two weeks at all testings. PTSD and grief symptoms may decrease naturally over time (Graham, 1999), and the researcher decided that by measuring the symptoms within two weeks of the intervention, a more accurate measure of the effects of the intervention would be obtained. If the treatment were successful, the scores obtained two weeks after treatment should show a significant decrease.

It is important to note that both the EGI and the UCLA PTSD Index had been normed on children who had experienced sudden and/or violent losses only (Brown & Goodman, 2005; Layne, Savjak, Saltzman, & Pynoos, 2001; Roussos et al., 2005). Since the scales had not been normed on children who had lost a parent to a prolonged illness, it was important to evaluate their reliability and validity with this population. The internal consistency reliability of the two instruments was assessed for both Type I and Type II traumas for the children attending the camps in this study. The reliability for the EGI in the total sample was 0.923 using Cronbach's Alpha. The reliability for those children who had experienced an expected loss was 0.930; 0.921 was calculated for those children who had experienced a sudden/violent loss. The reliability of the UCLA PTSD Index for the total sample was 0.874 using Cronbach's Alpha. For those children who had experienced an expected loss the reliability was 0.88; and for those who had experienced a sudden/violent loss the reliability was 0.874. As there might be some concern that testing by two different means, i.e. by telephone and in person, may affect the testing results, the reliability for the two ways of testing was obtained. The reliability for the EGI for those tested in person was .935, and for those tested by telephone .911. The reliability for the UCLA PTSD Index was .861 for those children tested in person; 0.887 for those tested by telephone. The coefficient alphas obtained show high levels of internal consistency for both scales (Nunnally, 1978) and it was, therefore, assumed that the data obtained was reliable.

### *Data Collection Procedures*

Parents/guardians of camp participants of both camps received a packet in the mail containing a cover letter explaining the research project and inviting their child/ren to participate. The packet was mailed to arrive approximately three weeks before Camp A and five weeks prior to camp B. The packet contained the consent form for research to be signed by the

parent/guardian who were asked to fax or mail (self-addressed stamped envelopes were provided) the forms to the investigator, with a deadline set at one week prior to Camp A. Parents of campers for Camp A were also allowed to bring the consent forms with them when dropping their children off at Camp A.

Participation in the research project was voluntary. It was stressed to both the parents/guardians and the children that there was no penalty for non-participation in the research. Participation was described as confidential, but not anonymous. All participants were assigned code numbers and no names were placed on the research instruments. No names will ever be used in any publication or dissemination of data. The children's parents filled out demographic data such as name, address, age, gender, health issues, and particular loss on the camp application form. Code numbers and pertinent demographic information were entered onto an Excel spreadsheet that only the principal investigator has access to.

Upon arrival to Camp A children whose parents had consented to have them participate in the study were accompanied by a mental health professional or a graduate student in social work or psychology, who had been trained in the protection of human subjects, to a private spot and read an assent for research form. All mental health professionals and graduate students, as well as all other counselors and volunteers involved in camp, were trained in procedures for intervention should a child experience distress as a result of the study. If assenting to participate, children aged eleven and under were read the EGI and the UCLA PTSD Index. Children age twelve and older were asked to complete the EGI and the UCLA PTSD Index on their own, with a mental health professional or graduate student on hand to answer any questions. The campers enrolled in Camp A then participated in the weekend's camp activities. Treatment consisted of six counseling sessions. The counseling sessions were held for groups of six to eight children

divided into groups according to age. The group sessions were conducted by one mental health professional (lead counselor) and one co-counselor (such as a teacher, social work/psychology student, etc) who was not a mental health professional but who had experience working with children. A one-day mandatory training session was provided to all lead and co-counselors to ensure treatment integrity. The first counseling session took place on the first evening of camp after several getting acquainted exercises and a separate session dedicated to explaining to the children what to expect at camp in terms of counseling sessions and other activities. The first, as well as the second counseling session held on Saturday morning, were dedicated to exposure, allowing the children to tell their stories without interruptions. Bedtimes Friday and Saturday nights, were devoted to relaxation and imagery exercises.

After a trust-building ropes course activity Saturday mid-morning, the third session, assigned to identification of feelings and safe ways of expressing these feelings, took place. This session was followed by a puppetry show for the younger children and a play for the older children performed by professional actors volunteering their services to camp. These shows were specifically written for camp and designed to help the children identify and normalize their feelings. A quilt making session in the afternoon of the second day was intended to help the children memorialize their loved ones. Cognitive restructuring sessions occurred in the late afternoon of the second day. Saturday evening was dedicated to a talent show allowing the children to express their feelings in free and artistic ways in skits, singing, dancing, playing of instruments, or in any other ways that the children chose. The talent show was followed by a memorial service, and the day was closed with a relaxation reading in the children's cabins. Sunday morning's counseling sessions involved discussions of changes since the children's losses. The intention was to make meaning of the loss and to identify positive coping

mechanisms. The weekend's activities concluded with a session to preserve positive memories and with a communication ritual involving an "unsent" letter. The complete treatment intervention manual is available upon request.

Campers for Camp B, whose parents had consented to have their children participate in the study, were contacted via telephone by a mental health professional or graduate student in social work or psychology during the week preceding Camp A and were read the two instruments. This group served as the non-equivalent comparison group.

Two weeks after the conclusion of Camp A, camp B took place. Those children whose parents had agreed to have them participate in the research study were administered the two instruments, the EGI and the UCLA PTSD Index, upon arrival to Camp B by the same procedures as outlined for the research participants in Camp A. Camp B then ensued. Research participants in Camp A received a phone call for post administration of the EGI and the UCLA PTSD Index the week immediately following Camp B. In addition, all campers were contacted by phone and administered the EGI and the UCLA PTSD Index two weeks after Camp B. Table 7 shows a time line of the study.

### *Data and Data Analysis*

The instruments provided ordinal data, which were quantified and treated as quasi-interval data for comparisons between pre- and post-tests and between groups. All quantitative data were entered into SPSS (2003). The investigator double-checked the scoring of the instruments and the data entry into SPSS and made appropriate corrections. Subsequently, the investigator randomly selected 15 tests through Quantis PCI Card (Quantis PCI Card, 2006). A trained assistant reviewed the scoring and data entry of these randomly chosen subjects. The accuracy rate was 100% with no errors discovered.

Table 7

*Timeline for Study*

| | |
|---|---|
| December 21, 2005 | Submission of IRB application |
| February 15-20, 2006 | Announcement of two bereavement camps is released to school counselors, DFCS offices, hospital and hospice social workers |
| April 1-5, 2006 | Confirmation letters with pre-stamped, self addressed envelopes sent to participating families of both camps. Letters include explanation of research and consent forms |
| April 17-21, 2006 | Testing 1 by telephone of children participating in second camp (Camp B) |
| April 21, 2006 | Testing 1 at arrival to camp of children participating in first camp (Camp A) |
| April 21-23, 2006 | Camp A takes place |
| May 5, 2006 | Testing 2 of participants in second camp (Camp B). These test scores will be the comparison scores for testing 2 of participants in the first camp (Camp A) |
| May 5-7, 2006 | Camp B takes place |
| May 8-12, 2006 | Testing 2 by telephone of participants in first camp (Camp A) |
| May 22-26, 2006 | Testing 3 (follow-up) by telephone for participants in first camp (Camp A); testing 3 by telephone for participants in second camp (Camp B) |
| June 1-15, 2006 | Analysis of test results |
| June 15- July 31, 2006 | Write-up of results |

Time Table for Testing

| | **Testing 1** | **Testing 2** | **Testing 3** |
|---|---|---|---|
| Camp A | April 21, 2006 | May 8-12, 2005 | May 22-26, 2006 |
| | **Testing 1** | **Testing 2** | **Testing 3** |
| Camp B | April 17-21, 2006 | May 5, 2006 | May 22-26, 2006 |

The data were examined for outliers using Cook's distance. Identified outliers were explored for explanations. The outliers related to unforeseen circumstances in some of the children's lives and it was decided to include them in the overall results of the study. Possible explanations of the outliers are presented in chapter 5.

To answer the hypotheses a multiple regression model was used as the statistical test of significance. Multiple regression is a multivariate statistical technique through which the relationship between a dependent or criterion variable and a set of independent or predictor variables can be analyzed. This model conceptually treats continuous and categorical variables alike, and is pertinent to designs when independent variables are continuous, categorical or a combination of both (Pedhazur, 1997). The regression model also has the advantage of being able to identify the separate effects of each independent variable as well as any interaction between them. In the current study the model looked at the categorical variables of treatment versus control and sudden/violent deaths versus prolonged deaths. These variables were dummy coded and used as the independent variables. CTG and PTSD symptoms as measured by the EGI and UCLA PTSD Index were used as the outcome. The regression model answered hypotheses one and two, the question whether CTG and PTSD symptoms were equally prevalent in children bereaved by sudden, unexpected deaths and children bereaved after a prolonged illness using the following equation:

Estimated EGI scores = Bo+B1(Type of death)+error

Estimated PTSD scores = Bo+B1(Type of death)+error

Passage of time, however, may reduce the scores of traumatic grief and PTSD symptoms (Graham, 1999) and, therefore, time since loss, a continuous variable, was entered as an independent variable to test the relationship between time since loss and EGI and PTSD scores:

Estimated EGI scores = Bo+B1(Time)+error

Estimated PTSD scores = Bo+B1(Time)+error

Demographic variables, such as gender, age and race, and environmental variables, such as type of loss, were also explored as extraneous variables. In addition, the regression model answered hypotheses three and four, the question whether treatment, a categorical variable, significantly decreased CTG and PTSD scores in our sample controlling for pretest scores:

Estimated EGI scores = Bo+B1(Camp)+B2(EGI pretest scores)+error

Estimated PTSD scores = Bo+B1(Camp)+B2(PTSD pretest scores)+error

To answer hypotheses five and six to explore whether treatment was equally effective for those children who had lost a parent to a sudden/violent or expected death, the regression model was used to look for an interaction between camp intervention and type of death. The following equations were used:

Estimated EGI scores = Bo+B1(Camp)+B2(EGI pretest scores)+B3(Type of death)+B4(Camp*Type of death)+error

Estimated PTSD scores = Bo+B1(Camp)+B2(PTSD pretest scores)+B3(Type of death)+B4(Camp*Type of death)+error

The hypotheses were tested at the .05 alpha level of significance. There was, therefore, a 5% risk of committing a Type I error.

*Assumptions*

There are four assumptions related to multiple regression: the relationship between X and Y is linear; the residuals are normally distributed across X values; the residuals have homogeneous variances across X values; and the residuals are independent of each other (Pedhazur, 1997). The following models were tested for violations:

EGI scores=Bo+B1(camp)+(EGI pretest scores)+error

PTSD scores=Bo+B1(camp)+(PTSD pretest scores)+error

The first assumption was tested using a scatterplot of predicted versus outcome scores of the EGI and UCLA PTSD Index with a line fitted to examine whether the relationship was linear. To test for the second assumption of normality a normal P-P plot was used. The assumption of homogeneity was tested using a scatterplot of the standardized residuals on the Y axis versus the predictor on the X axis. Independence, i.e. the assumption that each observation was not related to any other observations in the study, could have been violated in this study since there were some occurrences of siblings from families grieving the same person. This assumption was tested by creating a scatterplot of residuals on the Y axis versus the predictor on the X axis. None of the assumptions appeared to be violated in this study. Appendix C shows the plots from testing these assumptions.

*Effect Size and Power*

Studies addressing treatment of CTG and/or PTSD symptoms in bereaved children do not mention effect size with the exception of Cohen et al. (Judith Cohen, Mannarino, & Knudsen, 2004). These authors report an effect size of .83 for the treatment of CTG, and 0.81 for the treatment of PTSD. Both of these effect sizes are considered large (Jacob Cohen, 1977). However, the means and standard deviations given in some of the other studies involving grief and PTSD symptoms were used to calculate effect sizes by applying methods described in Rubin & Babbie (2001) and Fischer (1990). In doing so, medium and large effect sizes were found for the treatment of PTSD (Goenjian et al., 1997; Layne et al., 2001; Salloum, Avery, & McClain, 2001; Saltzman, Pynoos, Steinberg, Aisenberg, & Layne, 2001). Medium to large effect sizes were also found for the treatment of grief symptoms (Layne et al., 2001; Saltzman, Pynoos,

Steinberg, Aisenberg, & Layne, 2001). In this study the researcher was expecting a medium effect size of between 0.45 – 0.50. The average effect size reported in psychological research is medium (Keppel, 1991; Lipsey, 1990). The treatment implemented in this study was of shorter duration and included only four of the five foci suggested by Pynoos and his colleagues for the treatment of traumatic grief (Goenjian et al., 1997; Layne et al., 2001; Layne, Saltzman, Savjak, & Pynoos, 1999; R. S. Pynoos, Steinberg, & Wraith, 1995). Based on these facts, anticipating a medium effect size rather than a large effect size seemed to be appropriate.

Statistical power is the probability that a statistical test of the null hypothesis upon sample data will (correctly) yield statistical significance when the null hypothesis is false for the population from which the sample is drawn (Lipsey, 1990). Power estimates are based on the minimum effect size the researcher wishes to detect (Keppel, 1991). A reasonable value of power in behavioral research is 0.80. Having set the one-tailed alpha level at 0.05 and expecting the treatment design to yield a medium effect size (J. Cohen, 1992) a sample of approximately 50-55 subjects in each group was required for a power of .80 (Lipsey, 1990) for the hypotheses. In the current study, the immediate treatment group was slightly smaller than that ($n$=49). In this sample forty children had experienced an expected loss; sixty had experienced a sudden/violent loss. Thus, the group that had experienced a loss due to a prolonged illness was smaller than desired.

## *Limitations*

### *Threats to Internal Validity*

The participants at the two camps were obtained through the same recruitment process, and the similarity of the two groups was explored by comparing pretest scores of the two dependent variables. Such a similarity would give the non-equivalent comparison group design

more effective control, controlling for history, maturation, testing, instrumentation, selection and mortality (Campbell & Stanley, 1963). The similarity of the two groups in terms of baseline demographics, such as gender, age and race, and environmental factors, such as type of loss and type of death, were further examined by using dummy coding. Regression may have been a threat to internal validity and so may interaction of selection and maturation, but it was not likely since the groups were recruited in the same way from the same territory (Campbell & Stanley, 1963).

*Threats to External Validity*

A biased sample does pose threats to external validity (Rubin & Babbie, 2001). This research sample may not have been representative of the general population of bereaved children in the United States due to the limited location of the camps and the lack of random selection. Parents who applied for their children to attend a grief camp may have been parents who were better educated regarding possible consequences of grief and loss or parents who were more supportive of their children than parents who did not enroll their children.

Reactive effects of testing arrangements may have influenced the study results (Campbell & Stanley, 1963). The children knew they were participating in a study and this knowledge may have made them aware of their own behavior. This may have lead to self-monitoring with improvement which was not due to the treatment modality per se. This effect may have made the sample unrepresentative of a population that would receive the intervention in a non-experimental setting. Also, the placebo effect may have made the children feel better, i.e. the effects may have been caused by some non-specific attributes of the intervention or the research procedures and not the specific treatment modality (Rubin & Babbie, 2001).

In addition, this sample was taken from one geographical area which also limited its generalizability. For all these reasons it would not be logical to try to make this sample representative of all bereaved children ages 7-17 in the United States. It was of great importance that the researcher described the population studied in as much detail as possible (Rubin & Babbie, 2001) to let the reader judge the external validity. This study included age, gender, race, type of loss and type of death experienced, as well as the conditions under which the sample was obtained, i.e. an urban/suburban setting in the southeastern United States.

# CHAPTER 4

# RESULTS

In this chapter the researcher presents the results of a study designed to examine the presence of Childhood Traumatic Grief (CTG) and Posttraumatic Stress Disorder (PTSD) symptoms among parentally bereaved children, as well as, the effectiveness of short term trauma focused grief interventions in reducing CTG and PTSD symptoms. In this non-equivalent comparison group design study, the researcher initially reports demographic data of the two camp groups to observe differences that might have existed prior to the conducted research. The means of the two groups on the two scales used, the Extended Grief Inventory (EGI) and the UCLA PTSD Index, were also examined for differences, as were the number of participants in each camp with Childhood Traumatic Grief (CTG) and Posttraumatic Stress Disorder (PTSD) symptoms in the moderate to severe ranges. Next, the relationship between the two scale scores for the combined groups was studied. Possible effects due to extraneous variables were then explored. This examination was followed by testing of hypotheses one, two, three, four and five respectively. Finally, the researcher studied how the children's scores changed over the duration of the study from T1 to T2 to T3.

## *Exploration of Differences between Groups*

### *Demographic Data and Time since Loss*

To evaluate differences in the demographic data between the participants in Camp A (immediate treatment group) and Camp B (the delayed treatment group) a series of two-way tables of counts and the inferential statistic of chi-square were used to describe the relationship

between the categorical independent variable of camp assignment and gender, age-group (the children were divided into two age groups, ages 7-11 and ages 12-17 with intervention excercises based on age and developmental levels), type of loss (mother or father), and type of death (expected or unexpected) as the dependent variables. For the variable of race, a two by three table of counts was used. The inferential statistic of chi-square is used to compare actual differences with expected differences when working with categorical and nominal variables (Monette, Sullivan, & DeJong, 2005; Moore, 2003) The comparisons showed no significant differences between the two camps in regard to these variables. These results are presented in Table 8.

The inferential statistic of the *t*-test, used when comparing two population means (Moore, 2003), was used to see if time since loss, measured in months, differed between the two camp populations. The *t*-test is robust and can be used for skewed distributions when the sample size is greater than 40 (Moore, 2003). The mean time since loss for Camp A was 12.57 (*SD* 13.82) months and for Camp B 15.11 (*SD* 13.49) months. An independent samples *t*-test showed that this difference in time since death was not statistically significant [$t(98)=.930$; $p=.355$] with an average time since loss for the two groups being 13.9 months ranging from 1 to 48 months.

*Test Scores*

A series of independent samples *t*-tests were also used to compare the mean EGI and PTSD scores at Testing 1 (T1) by camp groups. The results of the means and standard deviations of the EGI and PTSD scores are presented in Table 9.

No statistically significant differences between the two groups were detected on the dependent variables even though the EGI and UCLA PTSD Index scores were somewhat higher for the participants in Camp A than for the participants in Camp B. In addition, the three PTSD

Table 8

*Campers' Gender, Race, Age Group, Type of Loss, and Type of Death*

| | Cross tabs | | | | |
|---|---|---|---|---|---|
| Demographics | Camp A *n* (%) | Camp B *n*(%) | $X^2$ | *df* | *p* |
| Gender | | | | | |
| Female | 21 (45.7) | 31 (57.4) | 1.375 | 1 | .241 |
| Male | 25 (54.3) | 23 (42.6) | | | |
| Race | | | | | |
| Caucasian | 25 (54.4) | 33 (61.1) | .466 | 2 | .792 |
| African American | 18 (39.1) | 18 (33.3) | | | |
| Latino | 3 (6.5) | 3 (5.6) | | | |
| Age Group | | | | | |
| 7–11 | 24 (52.2) | 32 (59.3) | .506 | 1 | .477 |
| 12–17 | 22 (47.8) | 22 (40.7) | | | |
| Type of Loss | | | | | |
| Mother | 18 (39.1) | 21 (38.9) | .001 | 1 | .980 |
| Father | 28 (60.9) | 33 (61.1) | | | |
| Type of Death | | | | | |
| Expected | 17 (37.0) | 23 (42.6) | .329 | 1 | .566 |
| Sudden/Violent | 29 (63.0) | 31 (57.4) | | | |

Table 9

*Campers' Scores at T1 on the EGI and UCLA PTSD Index*

| | Independent Samples *t*-tests | | | | | | |
|---|---|---|---|---|---|---|---|
| Measure | Camp A Mean (*SD*) | *n* | Camp B Mean (*SD*) | *n* | *t* | *df* | *p* |
| EGI | 44.20 (20.18) | 46 | 39.70 (18.97) | 53 | 1.142 | 97 | .256 |
| PTSD Total | 29.37 (13.83) | 46 | 26.44 (14.23) | 54 | 1.038 | 98 | .302 |
| Re-experiencing | 8.37 (4.71) | 46 | 7.63 (5.24) | 54 | .737 | 98 | .463 |
| Avoidance | 11.33 (6.15) | 46 | 9.43 (6.43) | 54 | 1.503 | 98 | .136 |
| Arousal | 9.67 (5.09) | 46 | 9.39 (4.50) | 54 | .297 | 98 | .767 |

subscales showed similar results for the two groups. The mean scores for the combined groups were 41.79 (*SD* 19.568) for the EGI and 27.79 (*SD* 14.055) for the UCLA PTSD Index. Table 10 shows descriptive statistics of the two camps combined.

*Severity of Symptoms*

The EGI does not have an official clinical cut score. However, using a cut score of 46 to indicate moderate to severe symptoms seemed reasonable after discussions with the author of the instrument (Layne, 2006). A score of 46 or above would indicate an average frequency score of 2 or higher on each item which is judged to be a clinically significant frequency (Layne, 2006). Using 46 as a cut score for moderate to severe symptoms of CTG, 48 children (49%) of the total sample had scores above that marker at T1 indicating moderate to severe symptoms of CTG as measured by the EGI. Using a cut score of 38 on the UCLA PTSD Index to indicate the possibility of a PTSD diagnosis (Rodriguez, Steinberg, Saltzman, & Pynoos, 2001), 25 children

Table 10

*Descriptive Statistics*

| | *N* | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| EGI | 99 | 3 | 89 | 41.79 | 19.568 |
| PTSD Total | 100 | 0 | 61 | 27.79 | 14.055 |
| Re-experiencing | 100 | 0 | 20 | 7.97 | 4.992 |
| Avoidance | 100 | 0 | 28 | 10.30 | 6.343 |
| Arousal | 100 | 0 | 20 | 9.52 | 4.758 |
| Gender | 100 | 0 | 1 | .48 | .502 |
| Race | 100 | 0 | 1 | .42* | .496 |
| Age | 100 | 6 | 16 | 10.68 | 2.453 |
| Age Group | 100 | 0 | 1 | .44 | .499 |
| Type of Loss | 100 | 0 | 1 | .61 | .490 |
| Type of Death | 100 | 0 | 1 | .60 | .492 |
| Time | 100 | 1 | 48 | 13.94 | 13.633 |

*African American and Latino combined

(25%) of the total sample had scores of 38 or higher at T1. Forty-five percent of the children who had experienced an expected loss scored above the cut score for severe to moderate symptoms for CTG, as did 51 percent of those who had experienced a sudden/violent loss. Twenty percent of participating children who had lost a parent to an expected loss showed a level of symptoms above 38 for PTSD. In children who had experienced a sudden/violent loss of a parent the percentage above the marker for a possible diagnosis of PTSD was 28 percent. From

the immediate treatment group, Camp A, 25 children (54%) had moderate to severe childhood traumatic grief symptoms. From Camp B, 25 children (43%) had moderate to severe childhood traumatic grief symptoms. Both groups of campers thus had similar numbers of children who met this researcher's criteria for moderate to severe symptoms in regards to EGI, [$X^2(1)=1.183$; $p=.277$]. At camp A, 13children (28%) had scores of thirty-eight (38) or above on the UCLA PTSD Index whereas 12 children (22%) had such scores at Camp B. This was not a statistically significant difference, [$X^2(1)=.483$, $p=.487$].

Another way of examining clinical presence of CTG symptoms as measured by the EGI is to calculate the average score per item – any item with an average of 2.0 or above would signify clinical concern. Twelve items (52%) had an average of 2 or above from camp A; 6 items (26%) had an average score of 2 or above from Camp B. This, however, was not a statistically significant difference ($p=.07$). To summarize, there were no significant differences observed between the participants of the two groups in regard to demographic data, scores on CTG and PTSD instruments or severity of symptoms.

*Relationship between Childhood Traumatic Grief and Posttraumatic Grief Symptoms*

The definition of CTG states that a child can experience CTG symptoms with only some PTSD symptoms, and that it is possible to have severe PTSD symptoms and yet not have CTG symptoms (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002). However, the relationship between CTG and PTSD symptoms was strong in this study's sample, Pearson correlation .809 with 66% of the variance in CTG scores accounted for by PTSD scores. The relationship between the CTG and PTSD symptoms are depicted in Figure 5.

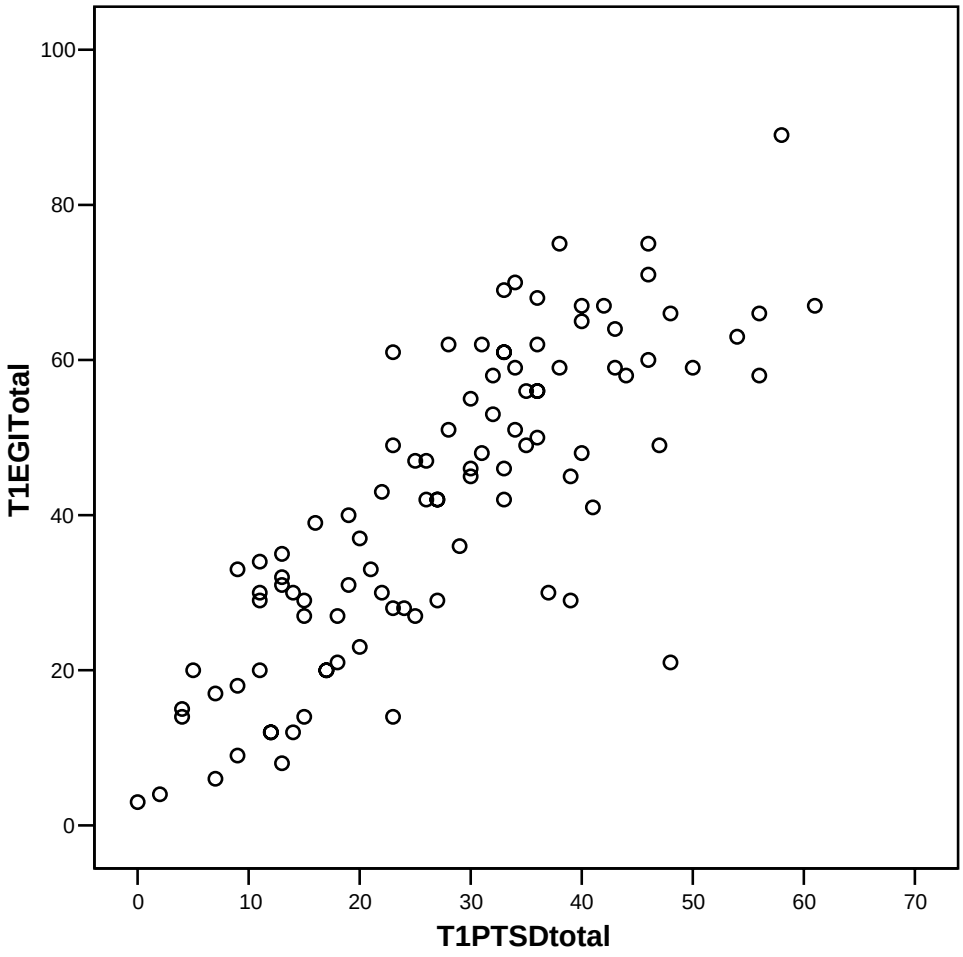


*Figure 5*. Scatterplot of CTG and PTSD symptoms.

*Extraneous Variables*

A series of regression models was conducted to examine the prediction of CTG symptoms as measured by the EGI from time [estimated EGI scores = Bo+B1(time)+error]; gender [estimated EGI scores = Bo+B1(gender)+error]; type of loss [estimated EGI scores = Bo+B1(type of loss)+error]; race [estimated EGI scores = Bo+B1(race)+error]; and age [estimated EGI scores = Bo+B1(age)+error] to rule out the effects of these extraneous variables Time decreased symptoms only slightly, and its effect was not statistically significantly [$t(1)$=-

.503; *p*=.616]. There were no differences found between males and females or type of loss. African American children scored higher on the EGI but not to a statistically significant level. Yet race accounted for 4% of the variance in EGI scores. Younger children did score statistically significantly higher than older children, with age accounting for 6% of the variance in EGI scores.

A similar series of regression models to examine the relationship between PTSD scores, time and demographic variables showed that PTSD symptoms as measured by the UCLA PTSD Index did not decrease statistically significantly over time [(1)=-.730; *p*=438]. Females scored higher than males, but the total PTSD scores were not statistically significantly different based on gender, nor type of loss. African American children had statistically significantly higher total PTSD scores with the greatest difference coming from the avoidance and arousal scales. Younger children also scored statistically significantly higher on the total PTSD scale as well as on all the subscales of re-experiencing, avoidance and arousal. Race and age accounted for 5% and 9.5%respectively of the variance in PTSD scores. Tables 11 - 14 show these results.

### *Hypotheses Testing*

#### *Hypothesis 1*

A linear regression analysis was conducted to evaluate the prediction of CTG symptoms as measured by the EGI from type of death in parentally bereaved children. The regression equation for estimating the EGI scores was:

EGI scores = Bo+ B1(type of death)+error, i.e. EGI scores = 41.700 + 0.147(type of death), where the intercept was the expected mean of the EGI scores for those who had experienced an expected loss. The slope showed that the expected mean of EGI scores for those

Table 11

*Score Coefficients on the EGI and UCLA PTSD Index by Gender*

| Regression Models | | | | |
|---|---|---|---|---|
| Model 1: DV: Total EGI scores | | *Std. error* | *t* | *p* |
| Constant | 44.519 | 2.698 | 16.502 | .000* |
| Gender | -5.753 | 3.915 | -1.469 | .145 |
| Model 2: DV: Total PTSD scores | | | | |
| Constant | 29.788 | 1.937 | 15.377 | .000* |
| Gender | -4.163 | 2.796 | -1.489 | .140 |
| Model 3: DV: Re-experiencing scores | | | | |
| Constant | 8.788 | .685 | 12.821 | .000* |
| Gender | -1.705 | .989 | -1.723 | .088 |
| Model 4: DV: Avoidance scores | | | | |
| Constant | 11.154 | .875 | 12.743 | .000* |
| Gender | -1.779 | 1.263 | -1.408 | .162 |
| Model 5: DV: Arousal scores | | | | |
| Constant | 9.846 | .661 | 14.886 | .000* |
| Gender | -.679 | .955 | -.712 | .478 |

*p<.05

Table 12

*Score Coefficients on the EGI and UCLA PTSD Index by Race°*

| Regression Models | | | | |
|---|---|---|---|---|
| Model 1: DV: Total EGI scores | | *Std. error* | *t* | *p* |
| Constant | 38.914 | 2.517 | 15.461 | .000* |
| Race | 7.670 | 4.067 | 1.886 | .062 |
| Model 2: DV: Total PTSD scores | | | | |
| Constant | 25.190 | 1.825 | 13.802 | .000* |
| Race | 6.783 | 2.949 | 2.300 | .024* |
| Model 3: DV: Re-experiencing scores | | | | |
| Constant | 7.448 | .659 | 11.307 | .000* |
| Race | 1.052 | 1.064 | .988 | .326 |
| Model 4: DV: Avoidance scores | | | | |
| Constant | 9.224 | .824 | 11.199 | .000* |
| Race | 2.998 | 1.331 | 2.253 | .027* |
| Model 5: DV: Arousal scores | | | | |
| Constant | 8.517 | .612 | 13.922 | .000* |
| Race | 2.733 | .989 | 2.764 | .007* |

*p<.05

° Latino group not included in this analysis due to low number

Table 13

*Score Coefficients on the EGI and UCLA PTSD Index by Age Group*

| Regression Models | | | | |
|---|---|---|---|---|
| Model 1: DV: Total EGI scores | | *Std. error* | *t* | *p* |
| Constant | 45.964 | 2.575 | 17.851 | .000* |
| Age Group | -9.395 | 3.862 | -2.433 | .017* |
| Model 2: DV: Total PTSD scores | | | | |
| Constant | 31.607 | 1.796 | 17.599 | .000* |
| Age Group | -8.675 | 2.708 | -3.204 | .002* |
| Model 3: DV: Re-experiencing scores | | | | |
| Constant | 9.518 | .628 | 15.164 | .000* |
| Age Group | -3.518 | .946 | -3.718 | .000* |
| Model 4: DV: Avoidance scores | | | | |
| Constant | 11.696 | .825 | 14.178 | .000* |
| Age Group | -3.174 | 1.244 | -2.552 | .012* |
| Model 5: DV: Arousal scores | | | | |
| Constant | 10.393 | .625 | 16.628 | .000* |
| Age Group | -1.984 | .942 | -2.105 | .038* |

*p<.05

Table 14

*Score Coefficients on the EGI and UCLA PTSD Index by Type of Loss*

| | Regression Models | | | |
|---|---|---|---|---|
| Model 1: DV: Total EGI scores | | *Std. Error* | *t* | *p* |
| Constant | 44.447 | 3.172 | 14.012 | .000* |
| Type of Loss | -4.316 | 4.041 | -1.068 | .288 |
| Model 2: DV: Total PTSD scores | | | | |
| Constant | 29.231 | 2.254 | 12.966 | .000* |
| Type of Loss | -2.362 | 2.886 | -.818 | .415 |
| Model 3: DV: Re-experiencing scores | | | | |
| Constant | 9.051 | .791 | 11.441 | .000* |
| Type of Loss | -1.773 | 1.013 | -1.750 | .083 |
| Model 4: DV: Avoidance scores | | | | |
| Constant | 10.692 | 1.020 | 10.487 | .000* |
| Type of Loss | -.643 | 1.305 | -.493 | .623 |
| Model 5: DV: Arousal scores | | | | |
| Constant | 9.487 | .766 | 12.390 | .000* |
| Type of Loss | .054 | .980 | .055 | .956 |

*p<.05

who had experienced a violent/sudden loss was 0.147 higher than for those who had experienced an expected loss. The 95% confidence level for the slope, -7.848 to 8.143, did contain the value of zero, and, therefore, CTG symptoms were not significantly related to type of death experienced by parentally bereaved children. Thus, as hypothesized, children who had experienced an expected loss tended to have similar CTG symptoms as measured by the EGI as those children who had experienced a sudden/violent loss. Zero (0) percent of the variance of the CTG symptoms was accounted for by its relationship with type of death.

With age having a significant influence on CTG symptoms as measured by the EGI, a regression analysis with type of death and age as independent variables was conducted [estimated EGI scores = Bo+B1(type of death)+B2(age)+error]. Type of death remained a statistically non-significant predictor and age remained a statistically significant predictor (p=.016).

*Hypothesis 2*

A linear regression analysis was also conducted to look at the prediction of PTSD symptoms from type of death encountered by parentally bereaved children. The regression equation for estimating PTSD symptoms for the two types of death was:

PTSD scores = Bo+ B1(type of death)+error, i.e. PTSD = 27.000 + 1.317(type of death), where the constant, or intercept, showed that the expected mean of PTSD symptoms for those who had experienced an expected loss was 27.00. The slope showed that the expected mean of PTSD symptoms for those who had experienced a sudden/violent loss was 1.317 higher than for those who had experienced an expected loss. The 95% confidence level for the slope, -4.400 to 7.033, included the value of zero, and it can, therefore, be concluded that PTSD symptoms were

not significantly related to type of death in parentally bereaved children. Zero (0) percent of the PTSD variance could be attributed to its relationship with type of death.

Conducting a linear regression analyses for the three sub-symptoms of PTSD, i.e. re-experiencing, avoidance and arousal, revealed that the 95% confidence levels for the slopes were -1.706 to 2.356, -2.206 to 2.956 and -1.316 to 2.550 respectively. Again, these slopes supported the hypothesis of no difference between PTSD sub-symptoms experienced by children bereaved of a parent by a sudden/violent death versus an expected death. The results are presented in Table 15.

As age and race had shown to have a statistical significance influence in regard to PTSD symptoms, a linear regression analysis was also conducted to evaluate the prediction of PTSD symptoms as measured by the UCLA PTSD Index from type of death, age and race [estimated PTSD scores = Bo+B1(type of death)+B2(age)+B3(race)+error]. Only age (p=.002) remained a statistically significant predictor. Twelve (12) percent of the variance of PTSD symptoms was explained by this model.

*Hypotheses 3and 4*

Testing 2 (T2) occurred two weeks after Camp A, immediately prior to the delayed treatment for the non-equivalent comparison group, Camp B. Forty (41) campers from Camp A could be reached and 49 of the registered campers for Camp B reported to the delayed treatment session. One of the campers in the non-equivalent comparison group declined to participate in T2, and one camper's scores had to be discarded because the subject left several questions unanswered. Two of the campers tested at T2 from the non-equivalent comparison group had not been tested at T1 as they had not been reached by telephone. This, therefore, left 45 campers from the non-equivalent comparison group.

Table 15

*Score Coefficients on the EGI and UCLA PTSD Index by Type of Death*

| Regression Models | | | | |
|---|---|---|---|---|
| Model 1: DV: Total EGI scores | | *Std. error* | *t* | *p* |
| Constant | 41.700 | 3.110 | 13.409 | .000* |
| Type of Death | .147 | 4.028 | .037 | .971 |
| Model 2: DV: Total PTSD scores | | | | |
| Constant | 27.000 | 2.231 | 12.101 | .000* |
| Type of Death | 1.317 | 2.880 | .457 | .649 |
| Model 3: DV: Re-experiencing scores | | | | |
| Constant | 7.775 | .793 | 9.806 | .000* |
| Type of Death | .325 | 1.024 | .318 | .752 |
| Model 4: DV: Avoidance scores | | | | |
| Constant | 10.075 | 1.008 | 9.999 | .000* |
| Type of Death | .375 | 1.301 | .288 | .774 |
| Model 5: DV: Arousal scores | | | | |
| Constant | 9.150 | .755 | 12.126 | .000* |
| Type of Death | .617 | .974 | .633 | .528 |

*p<.05

A linear regression analysis with the total EGI scores from T2 entered as dependent variable, camp as independent variable and the total EGI scores at T1 as a covariate was conducted to evaluate the effectiveness of camp on childhood traumatic grief. The regression equation for evaluating the T2 EGI scores was:

Estimated EGI score = Bo + B1 (camp) + B2 (EGI pretest score)+error, i.e.

EGI = 10.095 + 8.733 (camp) + .561 (EGI pretest score)

The 95% confidence interval for the slope for camp, 2.398 to 15.068, did not contain the value of zero, and therefore, children who attended camp experienced a significantly greater reduction in their EGI scores compared to children who did not attend the camp. Approximately 40% of the variance of the T2 EGI scores was accounted for by this model.

A linear regression analysis was also conducted with the total PTSD scores from T2 as the dependent variable, camp as independent variable and the total PTSD scores at T1 as a covariate to assess the hypothesis of the camp's effectiveness on post traumatic stress disorder symptoms. The regression equation for estimating the T2 PTSD score was:

Estimated PTSD score = Bo + B1 (camp) + B2 (PTSD pretest score)+error, i.e.:

PTSD = 6.516 + 3.811(camp) + .642 (PTSD pretest score)

Though the PTSD scores declined, the 95% confidence interval for the slope of camp, -.883 to 8.506, did contain the value of zero, and, therefore, camp was not significantly related to PTSD scores. This means that children who attended camp did not experience a significantly greater reduction in their PTSD scores compared to those children who did not attend camp. Approximately 41% of the variance of the PTSD scores was accounted for by this model. The relationship between camp participation and all subscales of the UCLA PTSD Index, i.e. re-

experiencing, avoidance and arousal, all have slopes that contain the value of zero at a 95% confidence level. The results are presented in Table 16.

Table 16

*EGI and PTSD Score Coefficients*

| | Regression Models | | | | | |
|---|---|---|---|---|---|---|
| Model 1: DV: Post test scores EGI | | $R^2$ | *t* | *p* | Partial $\eta^2$ | Observed Power |
| Constant | 10.095 | .398 | 2.446 | .017* | | |
| Camp | 8.733 | | 2.742 | .007* | .083 | .773 |
| Pretest score | .561 | | 7.073 | .000* | | |
| Model 2: DV: Post Test scores PTSD | | | | | | |
| Constant | 6.516 | .408 | 2.188 | .031* | | |
| Camp | 3.811 | | 1.615 | .110 | .030 | .358 |
| Pretest score | .642 | | 7.509 | .000* | | |
| Model 3: DV: Post test scores Re-experiencing | | | | | | |
| Constant | 2.979 | .317 | 3.443 | .001* | | |
| Camp | 1.325 | | 1.679 | .097 | .033 | .382 |
| Pretest score | .497 | | 6.034 | .000* | | |
| Model 4: DV: Post-test Scores Avoidance | | | | | | |
| Constant | 2.033 | .340 | 1.466 | .146 | | |
| Camp | 1.812 | | 1.494 | .139 | .026 | .315 |
| Pretest score | .637 | | 6.511 | .000* | | |

Table 16 (continued)

*EGI and PTSD Score Coefficients*

Model 5: DV: Post-test Scores Arousal

| | | | | | | |
|---|---|---|---|---|---|---|
| Constant | 3.771 | .289 | 3.450 | .001* | | |
| Camp | .554 | | .622 | .535 | .005 | .094 |
| Pretest score | .533 | | 5.806 | .000* | | |

* $p<.05$

Looking at severity of symptoms for concern between the two groups at T2, again using 46 as a cut score for moderate to severe symptoms in regards to childhood traumatic grief (Layne, 2006) and 38 as a possible indication of a PTSD diagnosis (Rodriguez, Steinberg, Saltzman, & Pynoos, 2001), 12 children (29%) from Camp A (treatment group) scored in the moderate to severe category on the EGI versus 22 children (48%) from Camp B (delayed treatment group). Using dummy coding a two-way table of counts was constructed with the categorical variable of camp attendance as the independent variable and scoring in the moderate to severe ranges for CTG as the dependent variable. The chi-square statistic showed a one-tailed statistical significance [$X^2(1)=3.136$; $p=0.039$]. A similar two-way table of counts was constructed for PTSD concern. At T2 for Camp A, five children (12%) scored 38 or higher on the UCLA PTSD Index, versus 13 children (28%) at T2 from Camp B. This result was also statistically significant at a one-tailed significance level [$X^2(1)=3.219$; $p=0.037$]. Examining the number of items on the EGI scale with averages of 2 or higher, the number of items decreased for the immediate treatment group from 12 prior to treatment to four after treatment.

At T2 some of the campers from the treatment group scored higher on the research instruments than they had at T1. These outliers were investigated and though some of these children had had experiences after camp that may have influenced the scoring, their scores were kept in the analyses conducted. A discussion of possible reasons for increased symptoms is presented in Chapter 5.

*Hypotheses 5 and 6*

A linear regression analysis was conducted to assess whether the relationship between camp participation and EGI scores was the same for children who had experienced a sudden/violent type of loss and those who had experienced an expected loss. T2 EGI scores were used as dependent variable; camp, pretest EGI scores, type of death and the interaction between camp and type of death were used as independent variables. The regression equation was:

Estimated EGI scores=Bo+B1(camp)+B2(EGI pretest scores)+ B3(type of death)+B4(camp*type of death)+error, i.e.

Estimated EGI scores =8.114+11.039(camp)+.567(EGI pretest scores)+2.826(type of death)+(-3.885)(camp*type of death).

The coefficient of the (camp*type of death) interaction was not statistically significant. Therefore, camp did not appear to affect EGI scores differently for the two types of death/loss. A linear regression analysis for the interaction between camp and type of death for PTSD scores [estimated PTSD scores =Bo+B1(camp)+B2(PTSD pretest scores)+B3(type of death)+B4(camp*type of death)+error] did not show statistically significant results for the total scores, nor the subscale scores. The results are shown in Table 17.

Table 17

*Coefficients for Interaction between Camp and Type of Death*

| | Regression Analyses | | | | | |
|---|---|---|---|---|---|---|
| Model 1: DV: Post-test scores EGI | | $R^2$ | *t* | *p* | Partial $\eta^2$ | Observed Power |
| Constant | 8.114 | .401 | 1.528 | .130 | | |
| Camp | 11.039 | | 2.219 | .029* | .057 | .592 |
| Pretest scores | .567 | | 7.031 | .000* | | |
| Type of death | 2.826 | | .591 | .556 | | |
| Camp_Typeofdeath | -3.885 | | -.594 | .554 | | |
| Model 2: DV: Post-test Scores PTSD Total | | | | | | |
| Constant | 5.940 | .410 | 1.571 | .120 | | |
| Camp | 5.068 | | 1.361 | .177 | .022 | .270 |
| Pretest scores | .646 | | 7.439 | .000* | | |
| Type of death | .757 | | .215 | .831 | | |
| Camp_Typeofdeath | -2.170 | | - .448 | .656 | | |
| Model 3: DV: Post-test Scores Re-experiencing | | | | | | |
| Constant | 2.958 | .317 | 2.552 | .013* | | |
| Camp | 1.459 | | 1.173 | .244 | .017 | .212 |
| Pretest scores | .498 | | 5.955 | .000* | | |
| Type of death | .021 | | .017 | .986 | | |
| Camp_Typeofdeath | -.239 | | -.147 | .884 | | |

Table 17 (continued)

*Coefficients for Interaction Between Camp and Type of Death*

| | | | | | | |
|---|---|---|---|---|---|---|
| Model 4: DV: Post-test Scores Avoidance | | | | | | |
| Constant | 1.914 | .340 | 1.043 | .300 | | |
| Camp | 1.809 | | .944 | .348 | .011 | .154 |
| Pretest scores | .637 | | 6.397 | .000* | | |
| Type of death | .200 | | .111 | .912 | | |
| Camp_Typeofdeath | .025 | | .010 | .992 | | |
| Model 5: DV: Post-test Scores Arousal | | | | | | |
| Constant | 3.457 | .298 | 2.523 | .014* | | |
| Camp | 1.454 | | 1.043 | .300 | .013 | .178 |
| Pretest scores | .540 | | 5.829 | .000* | | |
| Type of death | .400 | | .301 | .764 | | |
| Camp_Typeofdeath | -1.574 | | -.864 | .390 | | |

* $p<.05$

In a previous regression model age was shown to predict EGI scores, and age as well as race to predict PTSD scores. One regression analysis was run to examine the interaction between treatment intervention and age for CTG symptoms as measured by the EGI using pretest scores as covariates. Other regression analyses were run to examine the interaction between treatment intervention and age, as well as, the interaction between treatment intervention and race for PTSD symptoms as measured by the UCLA PTSD Index. Pretest scores of the UCLA PTSD Index were again used as covariates. No statistically significant interactions were found

in the three analyses. However, it should also be noted that power was low (0.20, 0.28 and 0.24 respectively).

*Repeated Measures*

Testing 3 (T3) occurred two weeks after Camp B and four weeks after Camp A. At this testing, 30 children were reached from Camp A, and 43 from Camp B. However, one child's scores were not included in the analysis as they were incomplete. Children at this time were out of school and several were out of town, making them impossible to reach. Several phone numbers were also disconnected with no new numbers available. Dummy coding was created for "out of contact at T3" and two regression analyses with pretest scores of the EGI and the UCLA PTSD Index as dependent variables and "out of contact at T3" as the independent variable showed no association between those who were and were not tested at T3 [$t(1,97)=-1.116$; $p=.267$] for the EGI scores and [$t(1,98)=-.009$; $p=.993$] for the PTSD scores. Further, a regression analysis using the "out of contact" dummy variable and T2 outcome showed no association, [$t(1,39)=-1.440$; $p=.158$] for EGI scores and [$t(1,39)=-.824$; $p=.415$] for PTSD scores for Camp A; [$t(1,44)=.306$; $p=.761$] for EGI scores and [$t(1,43)=.150$; $p=.882$] for PTSD scores for Camp B.

A one-way within-subject ANOVA was conducted with the 3 testing sessions as independent variable and the EGI scores as the dependent variable. The ANOVA for repeated measures is sensitive to individual differences and efficient (Keppel, 1991). It is robust to the normality assumption (Cook & Campbell, 1979), which is of importance in this study due to the fairly small number of campers available for all three testings. The results for the ANOVA indicated a statistically significant time effect for both camps.

Follow-up polynomial contrasts indicated a significant linear effect for both camps A and B with means decreasing over time, $F(1,29)=40.268$, $p= .000$, partial $\eta^2 =.581$, observed power 1.00 for Camp A; $F$, (1, 41)=15.480, $p= .000$, partial $\eta^2= .274$, observed power .970 for Camp B. Higher-order polynomial contrasts were non-significant for Camp A, but significant for Camp B, $F(1,41)=11.448$, $p= .002$, partial $\eta^2=.218$, observed power .910. The EGI scores increased slightly at T2 for Camp B participants (delayed treatment group) done immediately prior to the delayed treatment, but decreased significantly at T3 after participation in treatment. A paired samples two-tailed *t*-test showed that the EGI scores decreased significantly both between T1 – T2, T2-T3 as well as between T1-T3 for Camp A.

Another one-way within-subjects ANOVA was conducted with the 3 testing sessions as independent variable and PTSD scores (both total and the three subscales) as the dependent variables. The results for the ANOVA showed a significant time effect for both camps. Follow-up polynomial contrasts showed a significant linear effect with means of total PTSD scores decreasing over time for both camps; $F(1,29)=12.875$, $p=.001$, partial $\eta^2=.307$, observed power .934 for Camp A and $F(1,41)=10.065$, $p=.003$, partial $\eta^2=.197$, observed power .872 for Camp B. Higher-order polynomial contrasts were non-significant for Camp A but significant for Camp B for the total scores of the PTSD scale, $F(1,41)=7.297$, $p=.010$, partial $\eta^2=.151$, observed power .751. A paired samples two-tailed *t*-test showed a statistically significant decrease in means between T1 and T3 [$t(1,29)=3.588$; $p=.001$], and T2 and T3 [$t(1,29)=2.435$; $p=.021$] for Camp A. For Camp B, there was a significant time effect for the total PTSD scores which occurred between T2 and T3, [$t(1,41)=3.653$, $p=.001$] as well as between T1 and T3 [$t(1,41)=3.172$; $p=.003$], showing a decrease after treatment.

One way within-subjects ANOVA was also conducted to look at the sub-scales of re-experiencing, avoidance and arousal on the UCLA PTSD Index. The significant decrease in the total PTSD scores for Camp A came from the subscales of re-experiencing and avoidance. The significant decrease in the total PTSD scores for Camp B came from all three subscales. The means and standard deviations for the EGI and the UCLA PTSD Index for both Camps A and B at T1, T2 and T3 are presented in Table 18.

Table 18

*Means and Standard Deviations for the EGI and UCLA PTSD Index at T1, T2, and T3*

One-way, within-subject ANOVA (SPSS General Linear Modeling)

**CAMP A** (*n*=30)

| Measure | T1 | T2 | T3 | *F* | *p* | Partial | Observed |
|---|---|---|---|---|---|---|---|
| | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) | | | $\eta^2$ | power |
| EGI | 46.03 (19.11) | 36.37 (14.85) | 27.00 (15.94) | 21.69 | .000* | .608 | 1.000 |
| PTSD Total | 28.90 (13.20) | 25.80 (11.92) | 20.57 (13.81) | 6.34 | .005* | .312 | .865 |
| Re-experiencing | 8.23 (4.21) | 7.37 (3.61) | 5.27 (4.12) | 8.23 | .002* | .370 | .940 |
| Avoidance | 11.07 (6.00) | 9.57 (6.81) | 7.67 (6.92) | 3.92 | .032* | .219 | .658 |
| Arousal | 9.60 (5.46) | 8.87 (3.71) | 7.63 (4.81) | 3.08 | .062 | .180 | .547 |

One-way, within-subject ANOVA (SPSS General Linear Modeling)

**CAMP B** (*n*=42)

| Measure | T1 | T2 | T3 | *F* | *p* | Partial | Observed |
|---|---|---|---|---|---|---|---|
| | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) | | | $\eta^2$ | power |
| EGI | 40.81 (20.16) | 41.10 (21.19) | 28.88 (21.70) | 11.29 | .000* | .361 | .989 |
| PTSD Total | 26.29 (14.22) | 26.90 (15.95) | 19.05 (16.88) | 6.85 | .003* | .255 | .901 |
| Re-experiencing | 7.52 (4.82) | 8.07 (4.92) | 5.55 (4.93) | 5.31 | .009* | .210 | .809 |
| Avoidance | 9.45 (6.55) | 9.60 (7.37) | 6.79 (7.80) | 3.94 | .028* | .164 | .675 |
| Arousal | 9.31 (4.69) | 9.24 (5.49) | 6.71 (5.24) | 7.31 | .002* | .268 | .919 |

*$p<.05$

Box plots to illustrate the results of the one way within-subjects ANOVA are presented in Figures 6, 7, 8, and 9. The results are also shown in line charts (Figures 10, 11, 12, 13, and 14) for a visual comparison of the results of the two camps.

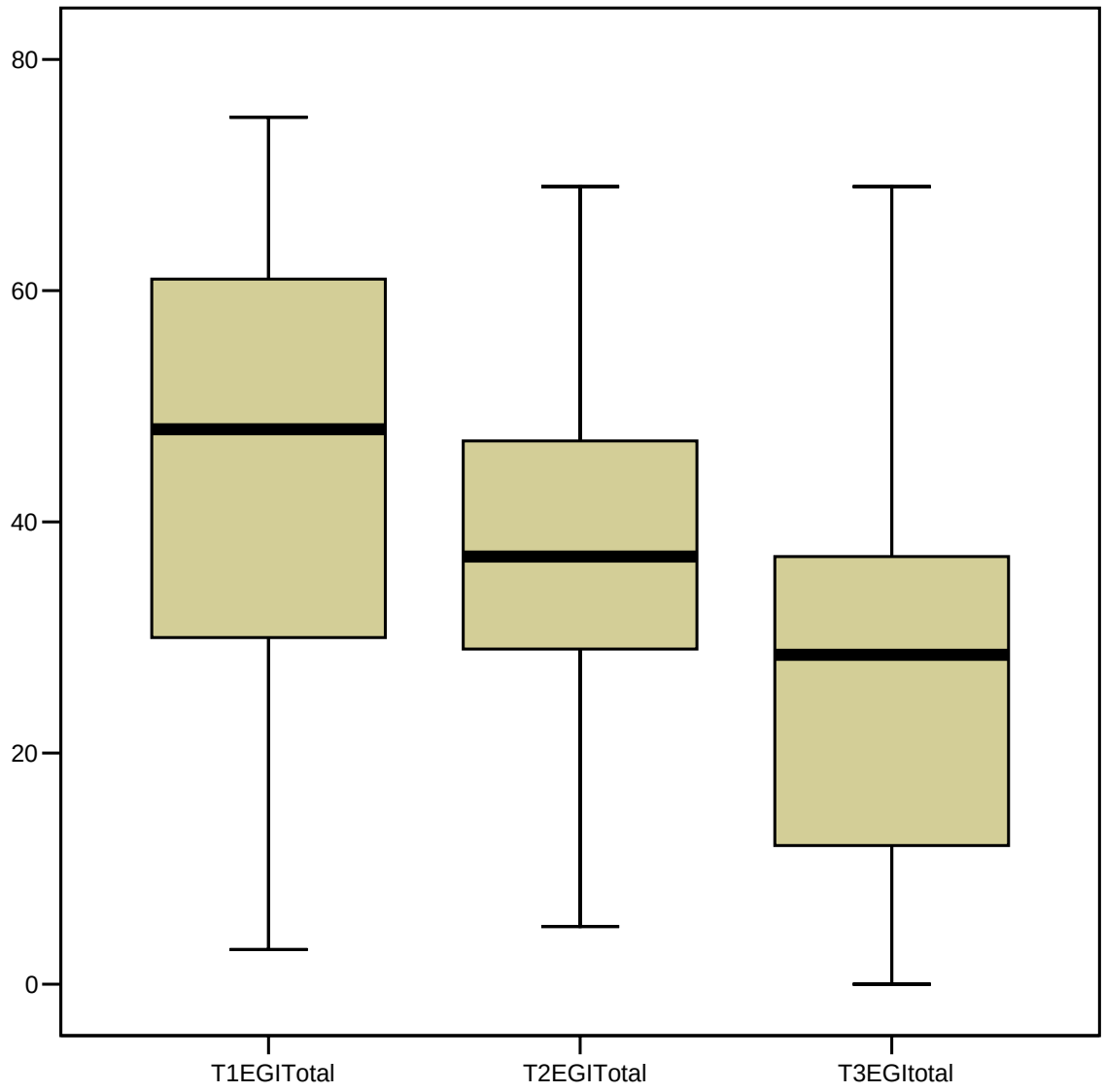


*Figure 6.* Boxplot of EGI scores for Camp A (*n*=30).

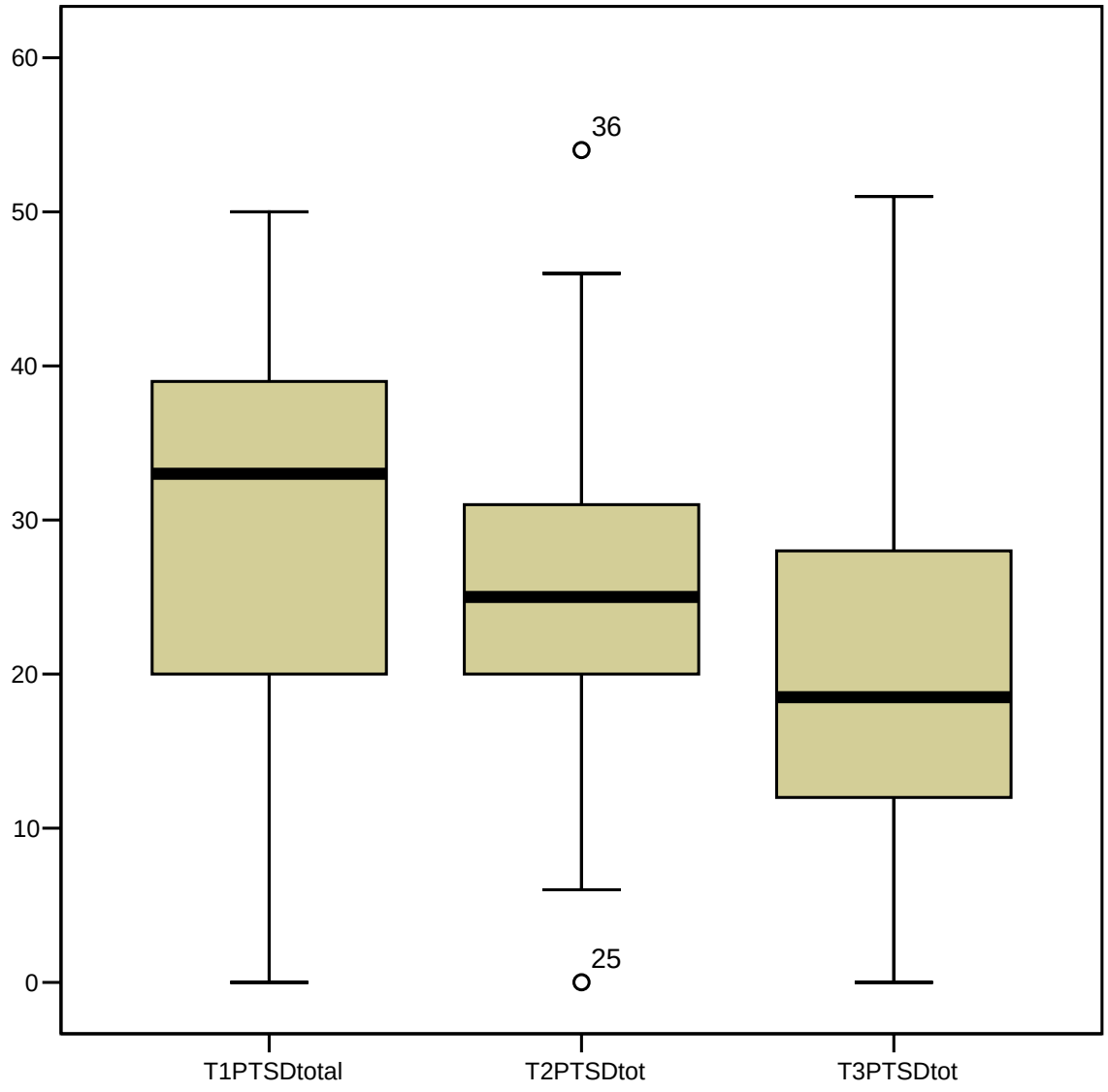


*Figure 7.* Boxplot of total PTSD scores for Camp A (*n*=30).

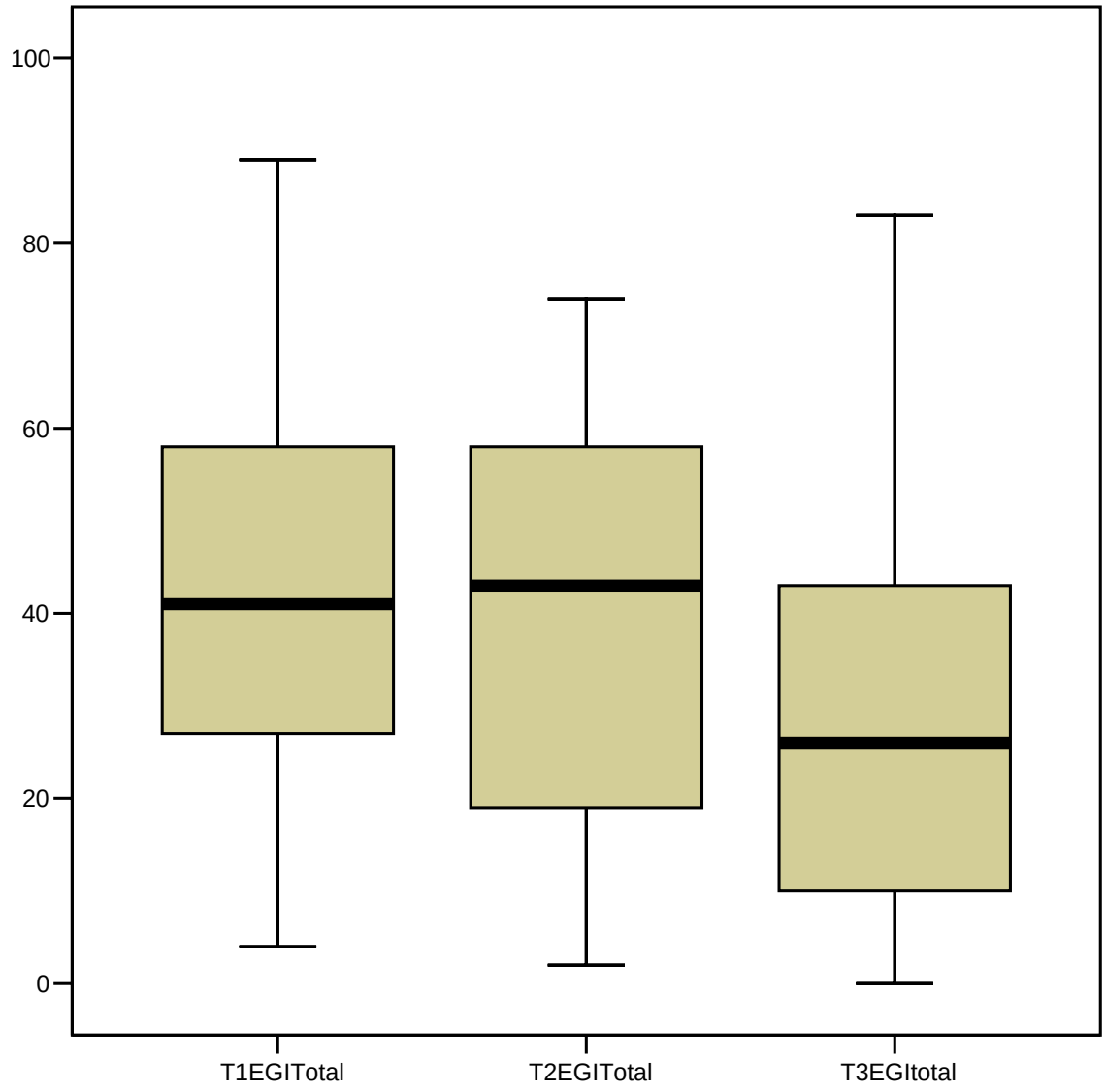


*Figure 8.* Boxplot of EGI scores for Camp B (*n*=42).

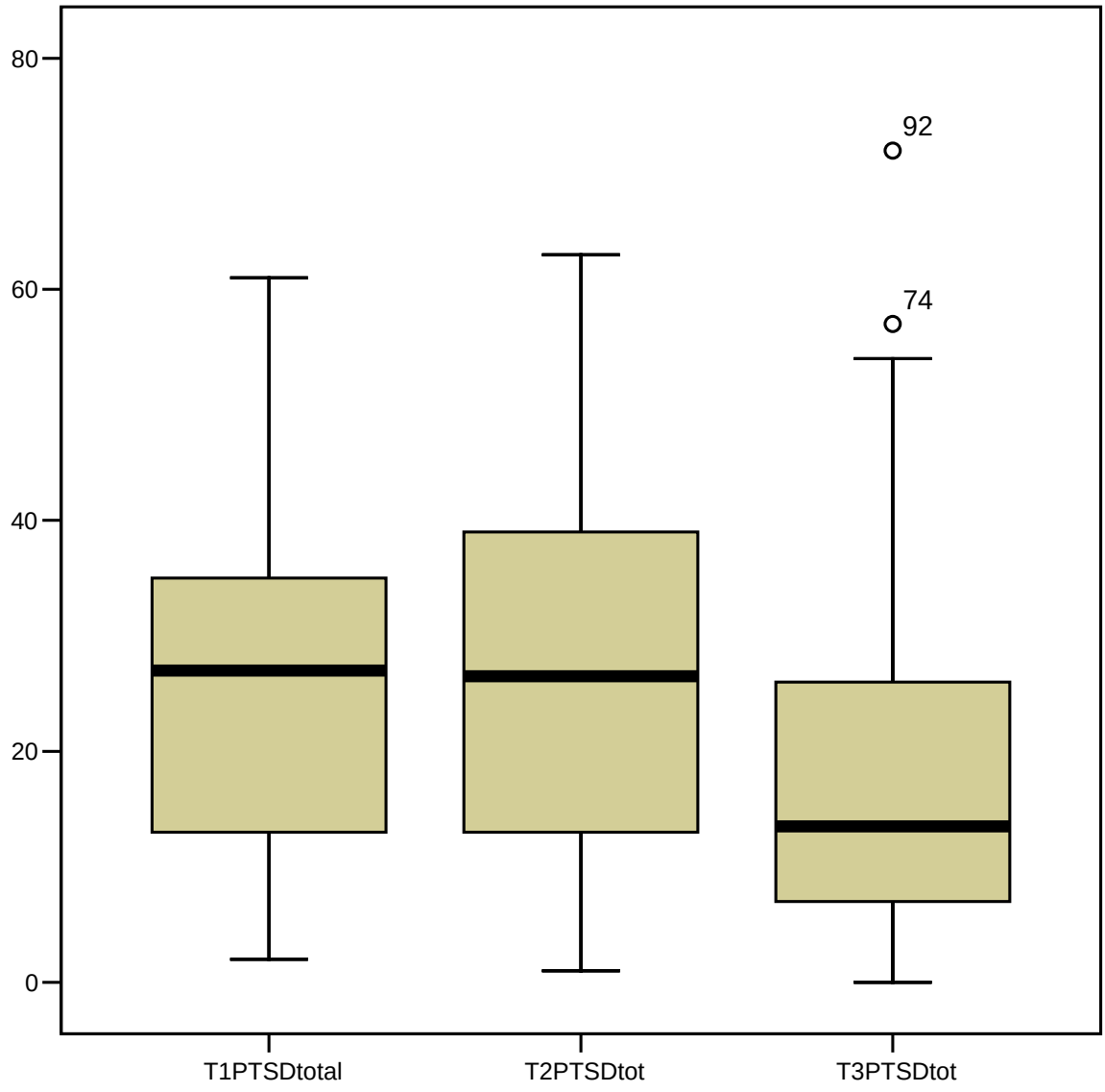


*Figure 9.* Boxplot of total PTSD scores for Camp B (*n*=42).

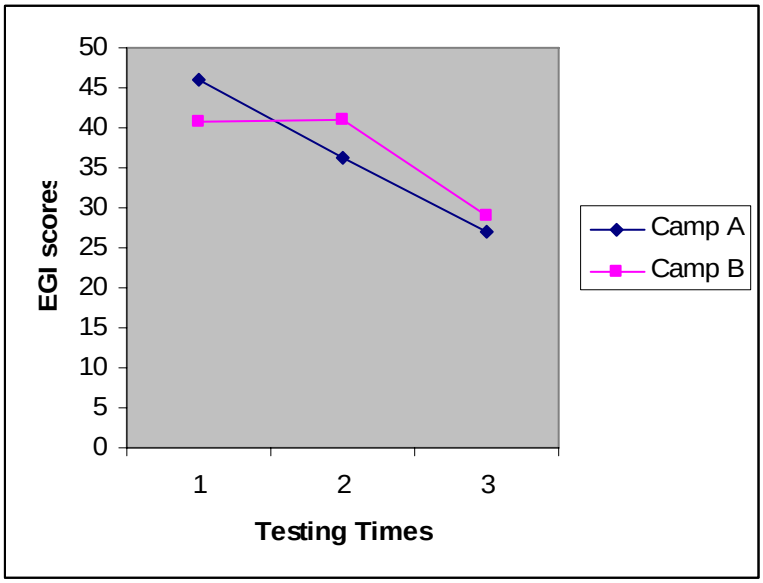


*Figure 10.* Mean EGI Scores at T1, T2 and T3 for Camp A (immediate treatment) (*n*=30) and Camp B (delayed treatment) (*n*=42) groups.

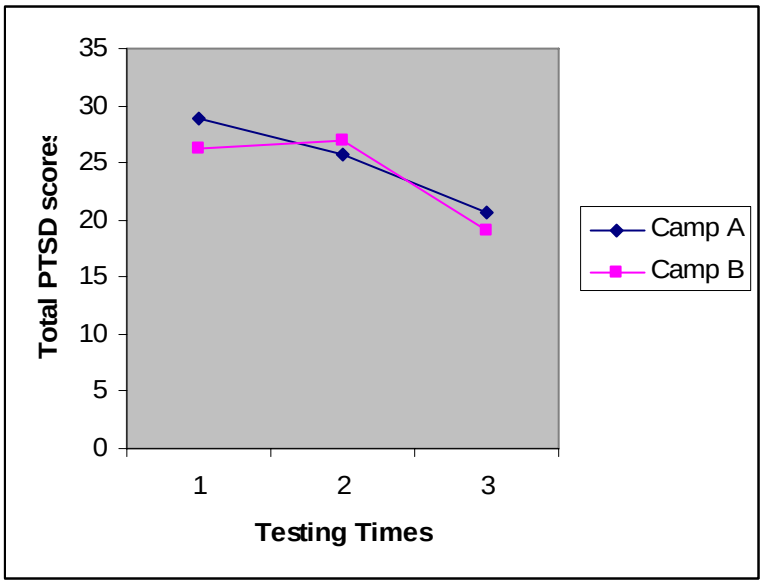


*Figure 11.* Mean total PTSD scores at T1, T2, and T3 for Camp A (immediate treatment) (*n*=30) and Camp B (delayed treatment) (*n*=42) groups.

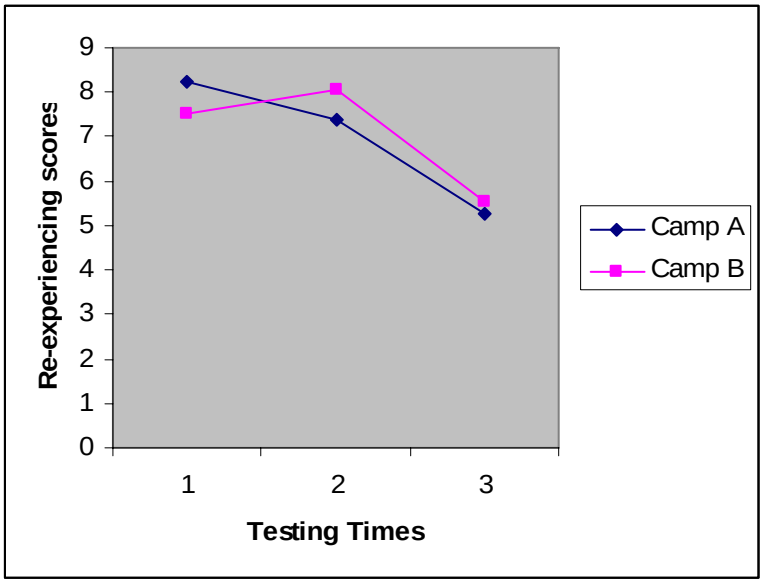


*Figure 12.* Mean re-experiencing scores at T1, T2, and T3 for Camp A (immediate treatment) *(n*=30) and Camp B (delayed treatment) (*n*=42) groups.

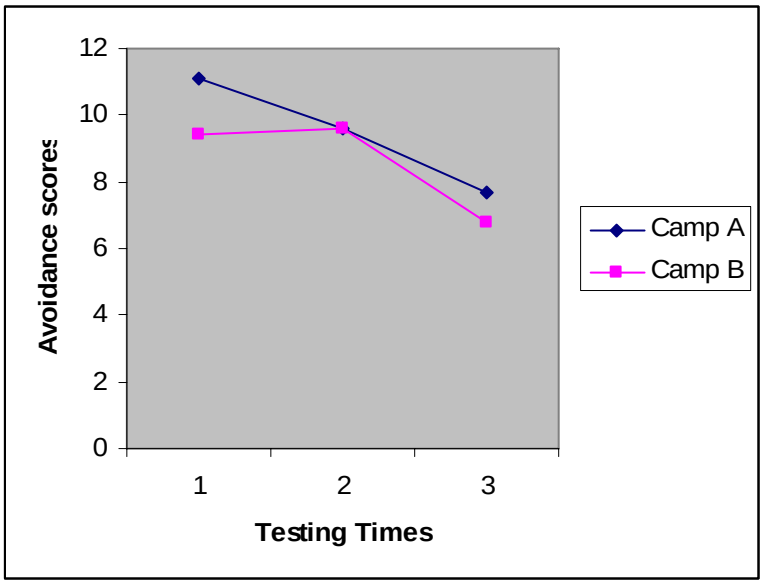


*Figure 13.* Mean avoidance scores at T1, T2, and T3 for Camp A (immediate treatment) *(n*=30) and Camp B (delayed treatment) (*n*=42) groups.

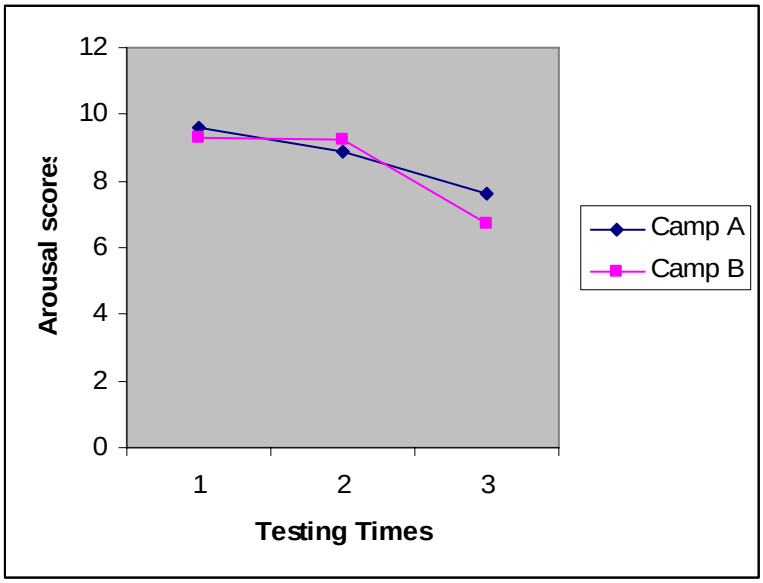


*Figure 14.* Mean arousal scores at T1, T2, and T3 for Camp A (immediate treatment) (*n*=30) and Camp B (delayed treatment) (*n*=42) groups.

The numbers in Table 18 and the line charts indicate that participants in the delayed treatment group (Camp B) made up the difference in scores resulting from the delay in participation in treatment compared with the immediate treatment group (Camp A).

# CHAPTER 5

# DISCUSSION

This study examined the prevalence of Childhood Traumatic Grief (CTG) and Posttraumatic Stress Disorder (PTSD) symptoms among parentally bereaved children, as well as, the effectiveness of a short term trauma focused grief intervention in a camp setting. Among the 100 parentally bereaved children who were initially tested, 72 (72%) completed the full study. The average age of the sample was 10.7 years, ranging from 7 to 16 years. The average time since loss was 13.9 months, ranging from 2 to 48 months. The sample consisted of slightly more females (52%), mirroring the gender demographic of the general population and that of the state where the study took place (US Census Bureau, 2005). The sample's race composition did not parallel the general American population with 58% being Caucasian, 36% African American and 6% Latino (US Census Bureau, 2005). This race composition did, however, more closely resemble that of the population of the state of the study.

The current research differs from earlier studies in several ways. First, in contrast to previous studies of Childhood Traumatic Grief (CTG) and Posttraumatic Stress Disorder (PTSD) symptoms in bereaved children (Judith Cohen, Mannarino, & Knudsen, 2004; Goenjian et al., 1997; Saltzman, Pynoos, Steinberg, Aisenberg, & Layne, 2001) this study examined CTG and PTSD symptoms in children who had experienced an expected loss and those children who had experienced a sudden/violent loss. Next, this study applied a quasi-experimental, nonequivalent control group design, which is a more rigorous design than the previously applied pre-experimental designs in studies assessing efficacy of treatments for CTG symptoms (Judith

Cohen, Mannarino, & Knudsen, 2004) or studies that have applied grief interventions in camp settings (Barrett, 2004; Creed, Ruffin, & Ward, 2001; Stokes & Crossley, 1995). In addition, the current study utilized a short-term treatment modality for both CTG and PTSD symptoms which differs from studies by previous researchers who have studied the effects of long-term treatments (e.g. Judith Cohen, Mannarino, & Knudsen, 2004; Goenjian et al., 1997; Layne et al., 2001).

In this chapter the researcher will first summarize the findings of this study; then place the current findings within the context of extant literature. Next, the researcher will discuss the limitations of the study. The chapter will conclude with implications for the intervention studied as well as implications for future research, theory and practice.

## *Summary of Results*

Results of this study indicate that children who had experienced an expected parental loss to death were just as likely to experience CTG and PTSD symptoms as those children who had experienced a sudden/violent loss of a parent to death. In addition, the researcher found that the applied treatment modality, short-term trauma-focused bereavement therapy in a camp setting, was successful in decreasing CTG and PTSD symptoms in the parentally bereaved children who participated in this study.

### *Type of Loss and Symptoms of CTG and PTSD*

Data analysis provided new and important information regarding type of loss and symptoms of CTG and PTSD. Data analysis showed that children who had experienced an expected loss of a parent experienced CTG and PTSD symptoms as measured by the EGI and UCLA PTSD Index respectively to the same degree as children who had experienced a violent/sudden loss of a parent. This finding indicated that both expected and unexpected losses create PTSD and CTG symptoms in parentally bereaved children. Consequently, loss of a

parent, whether to an expected or sudden/violent loss may entail a perceived threat to children and create the emotion of fear and a perceived sense of helplessness.

The results offered additional information concerning CTG symptoms in parentally bereaved children, suggesting that younger children exhibited CTG symptoms to a statistically significantly higher degree than older children. Developmental issues may play a role, but this issue is beyond the scope of this study and would warrant further investigation. In addition to type of loss, neither gender nor race had a statistically significantly impact on CTG symptoms among children participating in this study.

The study supported the results of a previous pilot study by the principal investigator (McClatchey & Vonk, 2005) finding no statistically significant difference in scores of PTSD symptoms between children who have experienced an expected versus sudden/violent loss. In contrast to the previous pilot study, this study involved only children who were parentally bereaved. The current study also supported earlier studies that race is related to the development of PTSD symptoms (Briere & Elliott, 1998) as African American children in this study had statistically significantly higher PTSD scores, measured by the UCLA PTSD Index, than Caucasian children. This finding contradicted McClatchey and Vonk's (2005) pilot study which showed no race differences in PTSD symptoms. However, this pilot study included a small sample, $n$=46, which may not have been large enough to detect differences between races. Interestingly, when type of death and age were controlled, race was no longer a significant predictor of PTSD scores. Not enough Latino children participated in the current study to make a comparison with this group meaningful.

Other results related to PTSD failed to support previous findings of other researchers. For example, adults who have experienced sudden, unexpected losses have been found to have

statistically significantly higher levels of PTSD symptoms than those adults who have experienced an expected loss (Lundin, 1984; Schut, de Keijser, van den Bout, & Dijkhuis, 1991). The current study indicated that the objective severity of an event may not be the determining factor of the severity of PTSD symptoms in children as previously suggested (Judith Cohen, 1998). The children studied in this research project showed PTSD symptoms to an equal extent, whether they had experienced an expected loss or an objectively traumatic loss. Therefore, other factors apparently played a role, e.g. the quality of the relationship with the deceased, availability of social supports, child's and/or surviving parent's coping skills, or a surviving parent's mental health (Nader, 1997a, 1997b; Rollins, 1997). This topic is beyond the scope of the present study but needs to be examined further.

The current study does not support previous findings of the role of gender in the development of PTSD symptoms (Dyregrov, Kuterovac, & Barath, 1996; Goenjian et al., 1997; R. S. Pynoos et al., 1993; Winje & Ulvik, 1998). Females in this study did not have a statistically significantly higher incidence of PTSD symptoms than males. This study does, however, support McClatchey and Vonk's (2005) findings that girls score somewhat higher on the various PTSD subscales. These findings also supported Winje & Ulvik's (1998) study which showed girls having higher re-experiencing scores.

The results of this study, which showed younger children having higher scores on the PTSD scale than older children, did not back previous findings of no age difference in scoring of PTSD symptoms (McClatchey & Vonk, 2005). Again, the pilot study by McClatchey & Vonk had a small sample size which may not have been large enough to detect such a difference. The current study did, however, contradict previous findings that older children have higher PTSD symptoms than younger children (Dyregrov, Kuterovac, & Barath, 1996; Green et al., 1991).

*Short Term Intervention and Symptoms of CTG and PTSD*

Data analysis indicated that a short-term treatment intervention based on trauma focused grief interventions reduced both CTG symptoms as measured by the EGI, and PTSD symptoms as measured by the UCLA PTSD Index. CTG and PTSD symptoms declined from T1 to T2 for children attending Camp A (immediate treatment group) when compared to those children attending Camp B (delayed treatment group) where CTG and PTSD symptoms increased. However, only the CTG symptoms declined at a statistically significant level at T2 for the immediate treatment group. The model accounted for 40 percent of the variance in CTG scores as measured by the EGI. This is a high percentage in social sciences and higher than the average found in clinical social work research (Rubin & Babbie, 2001). The regression model revealed that the effect size of the camp intervention, as measured by partial eta, was .083, which means that the camp by itself accounted for approximately 8 percent of the overall outcome variance. According to Rubin & Babbie (2001) interventions that explain between 5 and 10 percent of the outcome variance are average as reported in published evaluations. Even though the PTSD scores did not decline significantly at T2 for the immediate treatment group, they did decrease and by T3 had statistically decreased significantly. It is also important to note that forty-one percent of the variance in PTSD scores could be attributed to the model used which, as mentioned above, is a high percentage. In addition, the results have been presented with a two-tailed significance level. However, the hypotheses in regards to the effectiveness of the intervention on CTG and PTSD symptoms were one directional. The results, therefore, applying a one-tailed significance level, are stronger than noted in Table 16.

Analysis was also conducted in regard to changes in CTG and PTSD symptoms in children who attended Camp B, the delayed treatment group. This analysis showed that CTG and

PTSD symptoms increased slightly between T1 and T2. This result supported previous findings that PTSD symptoms may be persistent without treatment (Green, Korol, Smith, & al., 1991). The CTG and PTSD symptoms then declined statistically significantly at T3 after delayed treatment took place at Camp B. This statistically significant decrease in the CTG and PTSD symptoms between T2 and T3 gave additional support for the treatment effect of the camp intervention. The repeated measures ANOVA showed that the means were statistically significantly different with a substantial effect size as measured by partial eta and observed power well above .80.

Further, the two groups of children did not differ at T1 in the percentage of those who scored in the moderate to severe range of CTG symptoms as measured by the EGI using the suggested cut score by this researcher in collaboration with the author of the EGI instrument (Layne, 2006). Nor did the two groups differ at T1 in regard to scores at a level showing a possible PTSD diagnosis as measured by the UCLA PTSD Index. However, at T2 children from Camp A, the immediate treatment group, had a much smaller, statistically significant share of such cases in reference to both variables. It is, therefore, likely that the decrease in the CTG and PTSD symptoms was clinically meaningful as well. It is important to mention that caution needs to be used in suggesting a cut score for CTG symptoms since there is no established diagnosis for CTG (Layne, 2006). A diagnosis for traumatic grief for adults to be included in the DSM has been suggested (Prigerson & Jacobs, 2001; Prigerson, Shear, & Jacobs, 1999), but is not currently included in the taxonomy.

It is noteworthy that scores continued to go down at T3 for participants in Camp A. The researcher in this study asked for a two week recall using instruments designed to ask for a four week recall. It is possible that the design of four week recall was made to allow for enough

processing and integration of treatment to influence scoring fully, though this is not explicitly stated in the test construction data.

The decrease in CTG symptoms from T1 to T3 to a mean of 27.00 for the immediate treatment group and to a mean of 28.88 for the delayed treatment group again indicated effectiveness of the short term intervention program when compared to Cohen et al.'s (2004) long term intervention that took almost 8 weeks to reach such a mean of the CTG symptoms.

The study results also showed that children who had experienced an expected parental loss benefited from camp to the same extent as those who had experienced a sudden/violent loss of a parent. In addition, the camp benefited the two age groups equally. The same held true for African American children and Caucasian children.

### *Limitations*

The quasi-experimental non-equivalent control group design used in this study is helpful in controlling for most threats to internal validity such as history, maturation, testing, instrumentation, selection and mortality (Campbell & Stanley, 1963). This design, however, does not control for individual history that may have played a role in the outcome of the results. Some campers experienced upsetting events between treatment and post testing. Two children went through an additional intimate loss. The foster mother of another child was hospitalized in serious condition. Yet another child had serious issues trying to learn to live with a formerly absent parent. One young child learned after treatment upon the insistence and with the assistance of camp staff that her father's "accidental" death was indeed a suicide. These events may explain why these children did not show benefit from the camp at the first post-testing. As most of these events happened to children from Camp A, the events may also explain why PTSD symptoms did not decrease statistically significantly after Camp A at T2 and why Camp B

appeared to have a higher effect on its participants. However, most of the children who experienced these unfortunate events did show benefit from camp at T3, possibly indicating that because of other traumatic events they simply took longer to process the effects of treatment.

In addition, the research design does not control for the threats to external validity such as the Hawthorne effect or the placebo effect. Change in the subjects may be due to the subjects' knowledge that a study is being done, the extra attention received by subjects, or to some non-specific feature of the camp intervention and not the specific treatment modality outlined in the treatment protocol. To control for the placebo effect, a placebo group would have to be part of the study, and could be a consideration for future studies of the effectiveness of the treatment modality. Furthermore, assignment to the two groups was non-randomized. Lack of randomization raises questions about the generalizability of the results of the study. Another study that uses a placebo group as well as randomization in assignment to groups would eliminate most questions regarding the results of such a study. However, the generalizability of the study is also questioned by the selection of subjects from one geographical area only.

Furthermore, the drop-out rate, close to thirty-five percent from T1 to T3 for Camp A, is of concern. It is impossible to say if those children who could not be reached for the second or third testings differed in any way from those who could be reached. It is possible that the disconnection of some camper's home phone numbers indicated instability in these campers' lives, which may have led to different results at T3 could they have been reached. The children who dropped out of the study, however, did not show different results at T1 and T2 in EGI and PTSD scores from those who did participate in T3. The two groups were similar in size at T1 and T2, but at T3 the immediate treatment group, Camp A, was considerably smaller. The fact that Camp B results were similarly positive to those of Camp A helps alleviate some of the

concern of a smaller group size from Camp A. The assumption of independence could have been of concern in this study because the current study included more than one sibling from some families, which meant there was more than one child grieving the same person. A testing of this assumption showed, however, that independence was not violated.

In addition, the models used do not explain why some scores, mostly PTSD scores, did not decrease after treatment. History has been mentioned above, but some children were not known to have experienced any events that could have explained their unchanged, or in a few rare cases, higher PTSD scores, after treatment. It is possible that short-term treatment is not adequate for all children. It is also possible that the exposure sessions used at camp are not sufficient in length to affect PTSD symptoms for some children (Foa et al., 1999). Furthermore, excessive anger, numbing and/or anxiety may hinder the activation of the fear network (Jaycox & Foa, 1996) and need to be addressed prior to exposure therapy. It may be that some of the children came to camp with these pre-existing conditions.

Another concern is the running of several separate significance tests, which inflates the risk of committing a Type I error (Rubin & Babbie, 2001). One way to resolve this problem is to use the Bonferroni adjustment (Keppel, 1991). However, some researchers claim that this method is not a good alternative, partly because it increases the likelihood of Type II errors (Perneger, 1998). Instead it is better to describe what tests have been run. This is how the issue of inflated Type I error was handled in this study.

### *Implications for the Camp Magik Program*

It appears that a short-term treatment intervention for Childhood Traumatic Grief was effective for children who attended Camp Magik. The short-term treatment also approached statistically significant change in posttraumatic stress disorder symptoms two weeks after

treatment for Camp A, and showed statistically significant change in PTSD symptoms for both groups one month after Camp A, two weeks after Camp B. It can be argued that the results of this study showed clinical significance for CTG as the mean EGI scores declined from above the moderate to severe range to well under that range. The mean for PTSD scores was not above the cut score prior to treatment but still declined sufficiently to decrease CTG symptoms. These results implied that Camp Magik can continue its format with some confidence knowing that it appeared to help parentally bereaved children deal effectively with their losses.

The study results also provided evidence for the program in its pursuit of further funding for its non-profit endeavor. The fact that approximately half of all parentally bereaved children in this study experienced CTG symptoms above the suggested cut score upon arrival to camp stresses the importance of addressing PTSD symptoms in parentally bereaved children and indicates that these symptoms have to be dealt with first before the child can process his or her grief (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002; Eth & Pynoos, 1994). This study also showed, however, that there needs to be additional research conducted to evaluate the effectiveness of camp. Randomization to treatment and control groups as well as employing a placebo group would greatly improve the generalizability of this study. It would also be desirable for a future researcher of this camp to include more subjects in her study. Though the initial number of 100 subjects was satisfactory, the drop-out rate created less than desirable sized groups for T2 and T3. As drop-out always appear to be a factor in studies of this sort, a bigger initial number of subjects may be necessary to make up for this phenomenon. Thus, continued and expanded studies of the program would be appropriate to help the administrators and board members of Camp Magik know whether their specific program is a valid alternative to other PTSD and CTG treatment programs.

## *Implications for Research, Theory, Practice and Education*

### *Implications and Recommendations for Future Research and Theory*

This study leaves some obvious implications for further research. The study was quasi-experimental and indicated that approximately half of all children affected by parental loss show CTG symptoms in the moderate to severe ranges. More rigorous, experimental studies with randomization and a placebo group would yield generalizable results that this study is not able to provide. A larger sample from a more geographically and racially diverse group of children would also increase generalizability.

The current study had only a small number of Latino children, and no Asian subjects. The role of these races in the development of childhood traumatic grief and posttraumatic stress disorder symptoms needs further examination. This study contradicted previous studies on PTSD symptoms and its relation to gender and age suggesting further studies need to done to clarify these relationships. It may be of interest, as well, to look at reasons why younger children may develop CTG symptoms to a higher degree than older children.

This study did not pinpoint what causes PTSD and CTG symptoms in some parentally bereaved children but not in others. Variables, such as quality of relationship with deceased parent, coping skills of child and/or surviving parent/guardian, social supports, spiritual supports, etc. may be added to the research equation in hopes of answering such a question. In addition, there is still a question of possible differences between complicated and traumatic grief in children. Further factor analyses of the EGI with a sizeable number of subjects may expand clarity on this issue. Though reliability tests of the EGI and the UCLA PTSD Index with the current sample showed high reliability coefficients for both groups of children, those who had experienced an expected loss and those who had experienced a sudden/violent loss, the sample

may have been too small to give a dependable reliability coefficient. Additional reliability tests of the EGI and UCLA PTSD Index for children who have not experienced an objectively viewed traumatic loss would be helpful to shed light on the question whether this is a helpful instrument for this group of children.

The current conceptualization of CTG includes the notion that CTG is possible without a high degree of PTSD symptoms, and that a full-blown diagnosis of PTSD does not necessarily mean that the child will have CTG (Judith Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002). This study found a high correlation between the two phenomena in the participating subjects. Further examination of such correlations between CTG and PTSD symptoms may aid in the conceptualization of CTG.

*Implications for Practice*

The findings in this study that close to fifty percent of parentally bereaved children, whether bereaved through an expected or sudden/violent death, suffer from CTG symptoms in the moderate to severe ranges, makes it extremely important that professionals who work with bereaved children assess their clients for CTG and PTSD symptoms. Assessment and treatment both have to diverge from their current application to grief alone and incorporate an application of trauma assessment and treatment. Each parentally bereaved child needs to be carefully assessed for PTSD and CTG symptoms, and each clinician needs to understand the process and interplay of these two occurrences. This study bears out findings by other researchers that the trauma symptoms must be addressed first to allow the child to process his or her grief (Lindy, Green, Grace, and Titchener, 1983; Black, 1998; Cohen & Mannarino, 2002). To summarize, the first step in any grief intervention with parentally bereaved children should include an assessment of PTSD and CTG symptoms for optimal treatment and treatment results because

unaddressed symptoms may lead to depression, low self-esteem and poor performance (Layne et al., 2001).

This study also provided other important information for practicing professionals working with bereaved children. In contrast to previously conducted studies, it indicated that short-term treatment of CTG and PTSD can be effective. A weekend camp setting with professional counselors provides a cost-effective treatment for parentally bereaved children. Such a setting would also be a convenient treatment alternative to surviving parents/guardians as transportation issues may be minimized by having to transport the child to and from treatment only once. It is a fact well-known to clinical social workers that short-term treatments are becoming more and more desirable as managed care is less willing to provide payment for longer term treatment.

*Implications for Education*

There are also implications for future education of professionals in the area of children and grief. Currently such education entails a limited view of grief, focusing on the most common grief symptoms. However, considering the results of the current study, education must include up-to-date knowledge of PTSD (both symptoms and treatment), as well as current knowledge of the symptoms of CTG. In addition, the interaction between PTSD and CTG symptoms and effective treatment modalities must be taught. Only when professionals are adequately and properly educated and trained, can they effectively help parentally bereaved children.

## *Summary*

In sum, this study has provided new and important information to both practitioners and researchers involved with the issue of grieving children. The study showed that children, who

had lost a parent, whether to an expected death or a violent/sudden death, were at risk for developing PTSD and CTG symptoms. The study also showed that a long term treatment modality may not be needed to reduce PTSD and CTG symptoms sufficiently for parentally bereaved children to benefit. This important information should be incorporated into the assessment and treatment of parentally bereaved children to alleviate unnecessary suffering and other side effects in children who have the unfortunate experience of losing a parent at an early age.

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# APPENDICES

# Appendix A: UCLA PTSD INDEX

| HOW MUCH OF THE TIME DURING THE PAST MONTH | None | Little | Some | Much | Most |
|---|---|---|---|---|---|
| $1_{D4}$ I watch out for danger or things that I am afraid of. | 0 | 1 | 2 | 3 | 4 |
| $2_{B4}$ When something reminds me of what happened, I get very upset, afraid or sad. | 0 | 1 | 2 | 3 | 4 |
| $3_{B1}$ I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I do not want them to. | 0 | 1 | 2 | 3 | 4 |
| $4_{D2}$ I feel grouchy, angry or mad. | 0 | 1 | 2 | 3 | 4 |
| $5_{B2}$ I have dreams about what happened or other bad dreams. | 0 | 1 | 2 | 3 | 4 |
| $6_{B3}$ I feel like I am back at the time when the bad thing happened, living through it again. | 0 | 1 | 2 | 3 | 4 |
| $7_{C4}$ I feel like staying by myself and not being with my friends. | 0 | 1 | 2 | 3 | 4 |



| HOW MUCH OF THE TIME DURING THE PAST MONTH | None | Little | Some | Much | Most |
|---|---|---|---|---|---|
| $8_{C5}$ I feel alone inside and not close to other people. | 0 | 1 | 2 | 3 | 4 |
| $9_{C1}$ I try not to talk about, think about, or have feelings about what happened. | 0 | 1 | 2 | 3 | 4 |
| $10_{C6}$ I have trouble feeling happiness or love. | 0 | 1 | 2 | 3 | 4 |
| $11_{C6}$ I have trouble feeling sadness or anger. | 0 | 1 | 2 | 3 | 4 |
| $12_{D5}$ I feel jumpy or startle easily, like when I hear a loud noise or when something surprises me. | 0 | 1 | 2 | 3 | 4 |
| $13_{D1}$ I have trouble going to sleep or I wake up often during the night. | 0 | 1 | 2 | 3 | 4 |
| $14_{AF}$ I think that some part of what happened is my fault. | 0 | 1 | 2 | 3 | 4 |
| $15_{C3}$ I have trouble remembering important parts of what happened. | 0 | 1 | 2 | 3 | 4 |
| $16_{D3}$ I have trouble concentrating or paying attention. | 0 | 1 | 2 | 3 | 4 |
| $17_{C2}$ I try to stay away from people, places, or things that make me remember what happened. | 0 | 1 | 2 | 3 | 4 |
| $18_{B5}$ When something reminds me of what happened, I have strong feelings in my body, like my heart beats fast, my head aches, or my stomach aches. | 0 | 1 | 2 | 3 | 4 |
| $19_{C7}$ I think that I will not live a long life. | 0 | 1 | 2 | 3 | 4 |
| $20_{AF}$ I am afraid that the bad thing will happen again. | 0 | 1 | 2 | 3 | 4 |

Appendix B: EGI

| **A. Has anyone close to you ever died?** (please circle the answer) | **No** | (Skip the following 20 questions) |
|---|---|---|
| | **Yes** | (Please complete the following 20 questions) |

a. Whose death (or disappearance) has been the most difficult to deal with? (please describe your relationship to them)_____
b. Which month and year did this person die? _____
c. What happened that made this person die?
_____
_____

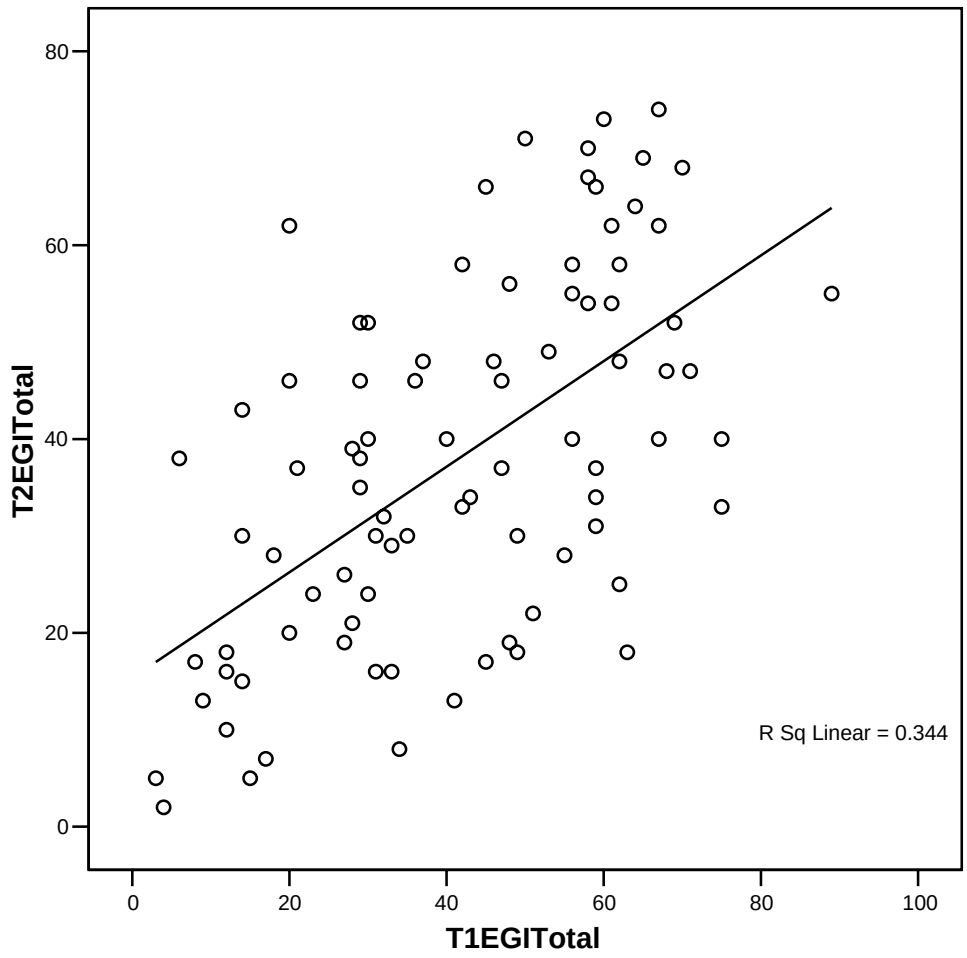
**Directions:** The following statements are about how you are dealing with the death(s) of someone you cared about. As you answer each question, think especially of your reactions to the loss of the person you described above. Circle the number that tells how often it has happened during the past month, using the Rating Scale on the front of this survey to help you. Remember that there are no wrong or right answers, so please answer each question as truthfully as you can.

| *Thought or Feeling:* | **Never** | **Rarely** | **Sometimes** | **Often** | **Almost Always** |
|---|---|---|---|---|---|
| 1) I enjoy good memories of him/her. N | 0 | 1 | 2 | 3 | 4 |
| 2) I don't do positive things that I ***want*** or ***need*** to do because they remind me of the person who died. TIA | 0 | 1 | 2 | 3 | 4 |
| 3) I think that I see or hear him/her, or that I can feel his/her presence nearby. N?? | 0 | 1 | 2 | 3 | 4 |
| 4) It's very hard to go on living without him/her. E | 0 | 1 | 2 | 3 | 4 |
| 5) I feel shocked or dazed when I think about his/her death. TIA | 0 | 1 | 2 | 3 | 4 |
| 6) I can't stop thinking about the person who died when I want to think about other things. TIA | 0 | 1 | 2 | 3 | 4 |
| 7) I have pleasant or comforting dreams about the person who died. N | 0 | 1 | 2 | 3 | 4 |

| *Thought or Feeling:* | **Never** | **Rarely** | **Sometimes** | **Often** | **Almost Always** |
|---|---|---|---|---|---|
| 8) I can't bring myself to accept that he/she is really dead. E | 0 | 1 | 2 | 3 | 4 |
| 9) I feel more lonely since he/she died. E | 0 | 1 | 2 | 3 | 4 |
| 10) I feel that, even though the person is gone, he/she is still an important part of my life. N | 0 | 1 | 2 | 3 | 4 |
| 11) I get upset thinking about his/her death. TIA | 0 | 1 | 2 | 3 | 4 |
| 12) Life for me doesn't have much purpose since his/her death. E | 0 | 1 | 2 | 3 | 4 |
| 13) It's harder to trust other people since he/she died. N?? | 0 | 1 | 2 | 3 | 4 |
| 14) I feel that my life is empty without him/her. E | 0 | 1 | 2 | 3 | 4 |
| 15) I don't ***talk*** about the person who died because it is too painful to think about him/her. TIA | 0 | 1 | 2 | 3 | 4 |
| 16) I don't see myself having a good life without him/her. E | 0 | 1 | 2 | 3 | 4 |
| 17) I enjoy thinking about him/her. N | 0 | 1 | 2 | 3 | 4 |
| 18) I feel like a big part of me died with him/her. E | 0 | 1 | 2 | 3 | 4 |
| 19) Unpleasant thoughts about ***how*** the person died get in the way of enjoying good memories of him/her. TIA | 0 | 1 | 2 | 3 | 4 |
| 20) I feel more irritable since he/she died. N | 0 | 1 | 2 | 3 | 4 |
| 21) I try not to ***think*** about the person who died because it brings up upsetting memories and feelings. TIA | 0 | 1 | 2 | 3 | 4 |
| 22) I find myself wishing that he/she would come back so we could be together again. N | 0 | 1 | 2 | 3 | 4 |
| 23) I have upsetting or scary dreams about him/her. TIA | 0 | 1 | 2 | 3 | 4 |

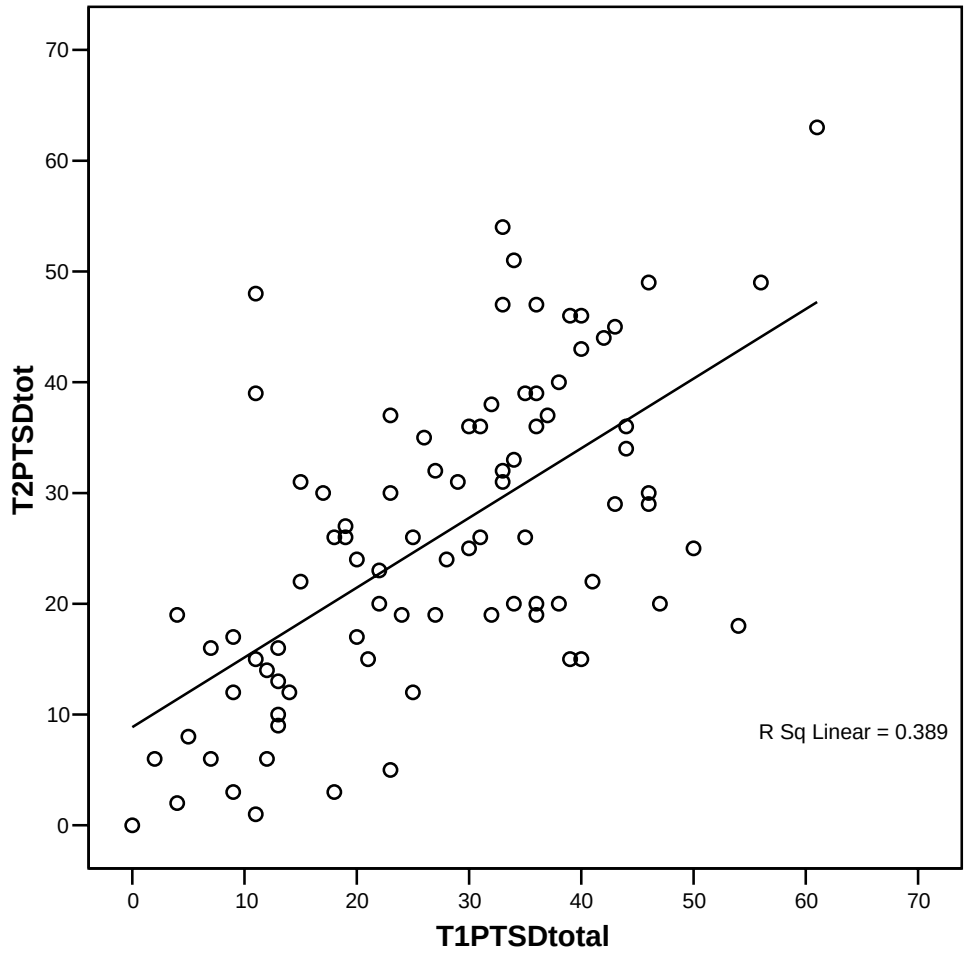
| ***Thought or Feeling:*** | **Never** | **Rarely** | **Sometimes** | **Often** | **Almost Always** |
|---|---|---|---|---|---|
| 24) I feel jealous of other people who haven't lost a loved one. N | 0 | 1 | 2 | 3 | 4 |
| 25) I feel more distant from the people I care about since he/she died. ?? | 0 | 1 | 2 | 3 | 4 |
| 26) I keep wanting to look for the person who died, even when I know he/she is not there. N? | 0 | 1 | 2 | 3 | 4 |
| 27) I feel angry that he/she died and left me. N | 0 | 1 | 2 | 3 | 4 |
| 28) I think about getting revenge on whoever is responsible for his/her death. TIA | 0 | 1 | 2 | 3 | 4 |

Appendix C: Testing for Violations of Assumptions



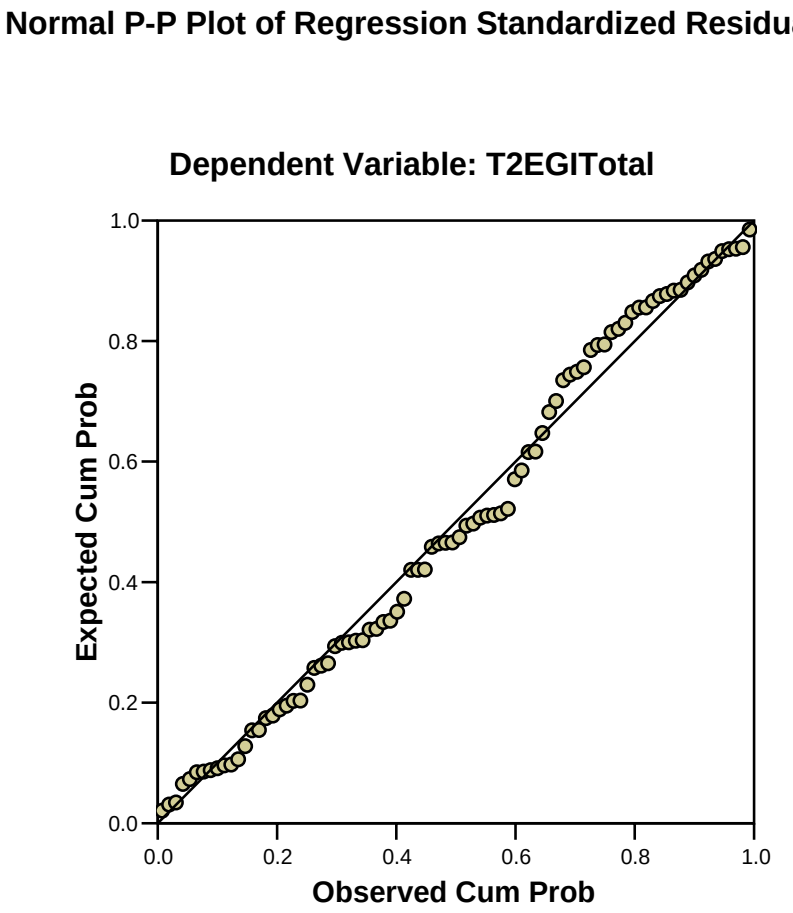

Assumption of linearity:

Estimated EGI scores=Bo+B1(camp)+B2(EGI pretest scores)

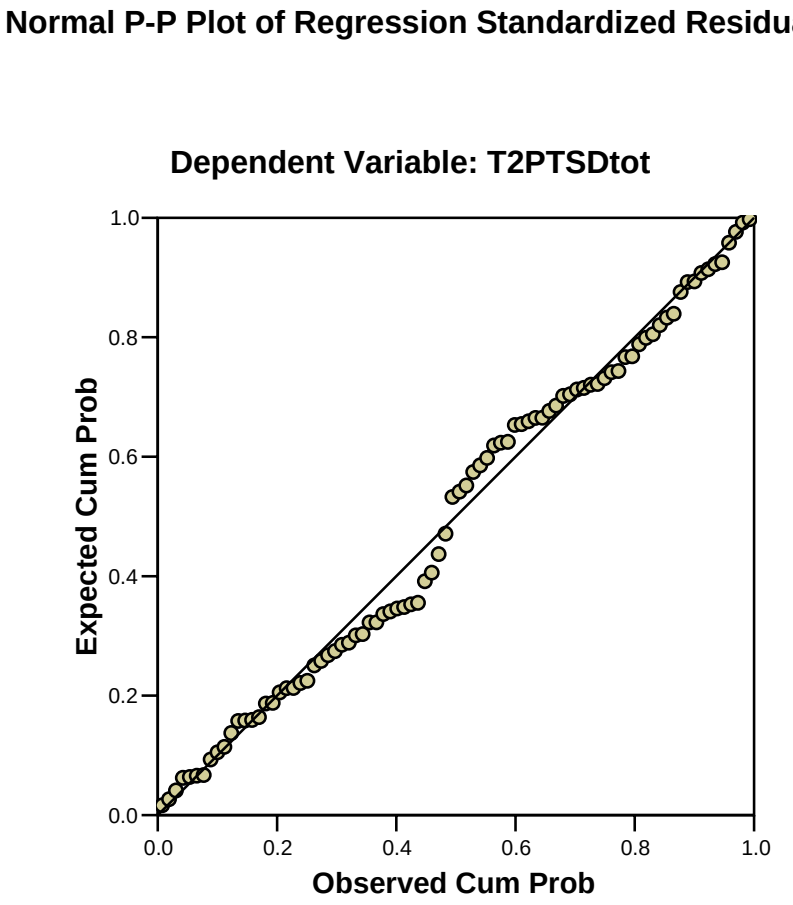



Assumption of linearity:

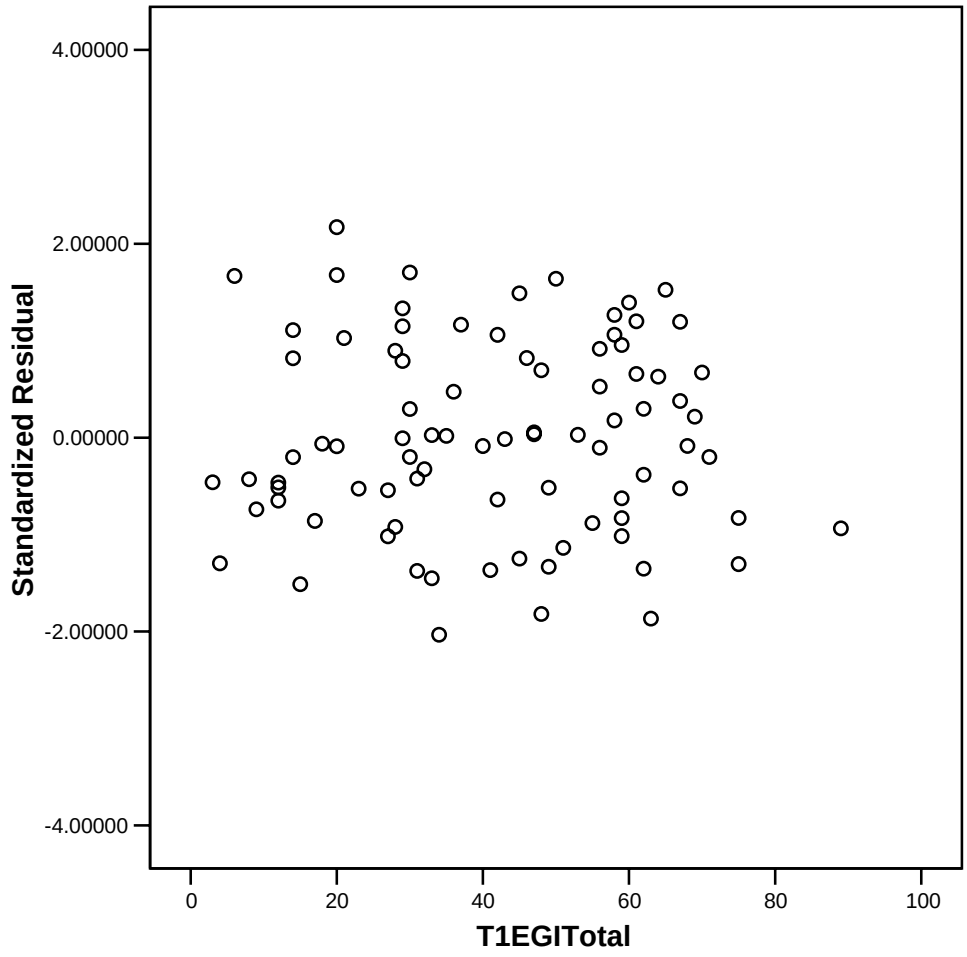
Estimated PTSD scores=Bo+(camp)+B2(PTSD pretest scores)



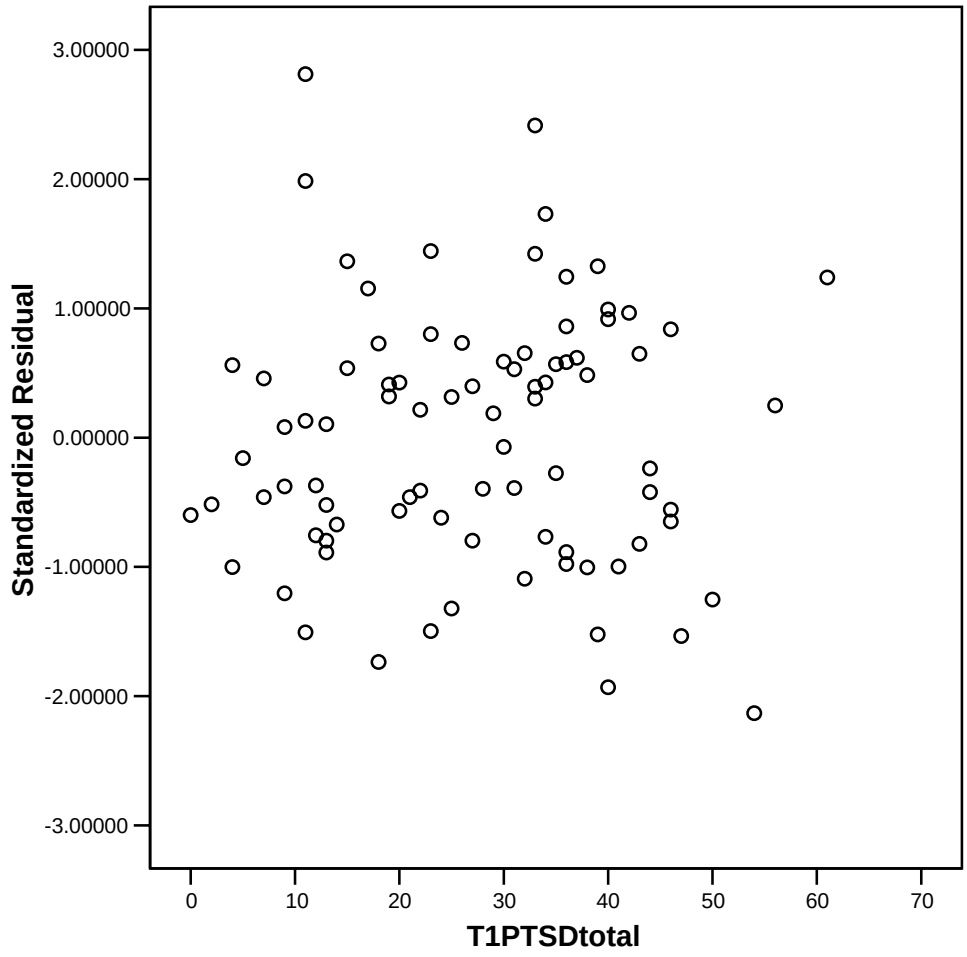

Model: EGI scores=Bo+B1(camp)+B2(EGI pretest scores) Assumption of Normality




Model: PTSD scores=Bo+B1(camp)+B2(PTSD pretest scores) Assumption of Normality




Model: EGI scores=Bo+B1(camp)+B2(EGI pretest scores) Assumptions of Homogeneity and Independence




Model: PTSD scores=Bo+B1(camp)+B2(PTSD pretest scores) Assumptions of Homogeneity and Independence