To the Graduate Council:

I am submitting herewith a thesis written by Lisa Tania Paton entitled "The Relationship Between Parental Observation of Child Depressive Behavior and Child Self Reported Depressive Symptoms in Bereaved Children". I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Health Education and Health Promotion.

Jack S. Ellison

Dr. Jack Ellison, Major Professor

We have read this thesis and recommend its acceptance:

Eugene C. Fitzhugh

Bill C. Wallace

Accepted for the Council:

Associate Vice Chancellor and Dean of The Graduate School

THE RELATIONSHIP BETWEEN PARENTAL OBSERVATION OF CHILD DEPRESSIVE BEHAVIOR AND CHILD SELF REPORTED DEPRESSIVE SYMPTOMS IN BEREAVED CHILDREN.

A Thesis
Presented for the
Master of Science Degree
The University of Tennessee, Knoxville

Lisa Paton
August 1999

ACKNOWLEDGMENTS

I am grateful for the support and assistance of many people during my graduate school studies and in my thesis preparation. The department of Health, Leisure and Safety has been helpful and supportive. I would like to thank my thesis committee, Dr. J. Ellison, Dr. E. Fitzhugh and Dr. B. Wallace for their assistance and recommendations. The statistics consultation provided by Carrie Springer has also been invaluable in preparing this thesis.

In the preparation of this thesis I would also like to thank the staff of University of Tennessee homecare services for their cooperation and assistance. In particular I would like to thank Mary Ann Butler, Jamie Smith, Carolyn Foster and Jackie Lee. Their support and insights have been invaluable in this project and in my graduate school study. I have also received support from the employee educational assistance fund at the University of Tennessee Medical Center and would also like to express my appreciation for this assistance to purchase books.

The support and encouragement to pursue education from my family and husband has also made this endeavor more meaningful and I would like to thank them as well.

ABSTRACT

The purpose of this study was to examine the relationship between bereaved child self reports and parental reports of child depressive symptoms among a group of bereaved children. Data was collected from data files of Camp Rainbow, a camp for bereaved children . Data included parent rated shortened Achenbach's Childhood Behavior Checklist (CBCL), child rated Children's Depression Inventory (CDI), age of the child, gender of the child, nature of the death, time since the death, and relationship to the deceased. A Pearson product moment correlation coefficient compared parent and child scores. Partial correlations were calculated between CBCL, CDI scores and the variables of interest (age, gender, nature of the death, time since death and relationship to the deceased) to determine how these variables affected the correlation.

Post hoc analyses were conducted to consider questions that arose from the data. A chi-square statistic was used to compare sample values and the expected values for both the CBCL and CDI scores. An agreement variable classifying parent and child scores based on the test cut off points was created for analysis. Mann-Whitney U tests and chi-square tests were used to compare the other five variables to the agreement between parent and child scores. Further questions examined the sets with CBCL scores above the cut off point and related to the variables of interest.

The study found that parents significantly rated their child's depressive symptoms higher than the children rated their own depressive symptoms. A number of implications for Camp Rainbow and future research were identified in the study.

TABLE OF CONTENTS

CHAPTER PAGE

I. INTRODUCTION
Statement of the Problem....3
Purpose of the Study....4
Need for the Study....4
Hypotheses
Primary Hypothesis....7
Secondary Hypotheses....7
Delimitations....8
Limitations....8
Assumptions....9
Definitions....9
Summary....10

II. REVIEW OF THE LITERATURE
Bereavement Processes for Children....11
Studies of Bereaved Children and Depressive Symptoms....14
Studies of Concordance with Treatment Seeking Adults....20
Studies of Concordance with Treatment Seeking Children....22
Studies of Concordance with Community Dwelling Children....28
Summary....29

III. METHODOLOGY
Purpose....31
Study Design....31
Study Variables....31
Subjects....32
Setting....32
Instrumentation
Achenbach's Child Behavior Checklist
Validity....33
Reliability....34
Clinical Utility....35
Normative Data....35
Children's Depression Inventory
Validity....36
Reliability....36
Clinical Utility....37
Normative Data....37
Procedure....37

Analysis of Data.....38
Summary.....40

IV. ANALYSIS OF DATA
Frequencies and Descriptions.....42
Primary Research Hypothesis.....44
Secondary Research Hypotheses.....45
Post Hoc Analysis Questions.....46
Summary.....54

V. SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS
Summary.....55
Findings.....56
Sample Characteristics.....57
Primary Research Hypothesis.....58
Secondary Research Hypotheses.....58
Questions Arising from the Data.....59
Conclusions.....61
Primary Research Hypothesis.....61
Secondary Research Hypotheses.....62
Questions Arising from the Data.....62
Recommendations for Camp Rainbow and Future Research.....65
Camp Rainbow Recommendations.....65
Recommendations for Future Study.....67

References.....70

Appendices
Appendix A UTMC homecare letter.....76
Appendix B UT Department Approval Letter.....78
Appendix C Form B.....80
Appendix D Routing Sheet for IRB approval.....85
Appendix E Letter to UTMC IRB (Dr. Fuhr).....87
Appendix F Letter from UTMC IRB (Dr. Fuhr).....89
Appendix G Letter from UT IRB (Brenda Lawson).....91

Vita.....93

LIST OF TABLES

TABLE

PAGE

1. Time Since Death....43

2. Age....43

3. Gender....43

4. Relation to Deceased....44

5. Nature of the Death....44

6. Child Rating (CDI) above the Cut and Parent Rating (CBCL) above Cut....46

7. Child Rating (CDI) above the Cut and Expected Value....47

8. Parent Rating (CBCL) above the Cut and Expected Value....47

9. Agreement and Age....49

10. Agreement and Gender....49

11. Agreement and Nature of the Death....50

12. Agreement and Time Since Death....50

13. Agreement and Relationship to the Deceased....51

14. Parent Rating (CBCL) above the Cut and Gender....52

15. Parent Rating (CBCL) above the Cut and Nature of the Death....53

16. Parent Rating (CBCL) above the Cut and Relation to the Deceased....53

17. Parent Rating (CBCL) above the Cut and Age and Time Since Death....54

THE RELATIONSHIP BETWEEN PARENTAL OBSERVATION OF CHILD DEPRESSIVE BEHAVIOR AND CHILD SELF RATED DEPRESSIVE SYMPTOMS IN BEREAVED CHILDREN.

Chapter I

Introduction

Children have a special relationship with others in their lives and the loss of a family member can be more devastating to children than to adults (Tonkins & Lambert, 1996). Between 4-5% of American children experience the death of a parent (Sandler et al., 1992; Tonkins & Lambert, 1996). The rate of bereavement is significantly increased with the inclusion of other close relatives.

The death of a parent can threaten the social and emotional development of the child (Schilling, Koh, Abramoritz, & Gilbert, 1992). The coping resources of bereaved children may be less adequate than bereaved adults (Tonkins & Lambert, 1996). Developmental issues for bereaved children can effect depressive symptom expression (Sanders, 1995). For children cognitive, emotional, physical and social changes are in a state of flux (Sanders, 1995). Children in this age group are also gaining emotional control and moving from external acting out toward inner control (Sanders, 1995). As they pass through this age group bereaved children may continue as though nothing happened after a death or try to hide their feelings of grief (Sanders, 1995).

There is no single path to bereavement for children (Leaman, 1995). The grief process can involve a mix of emotions including disbelief, belief, shock,

distress, anger, rationalization and acceptance (Leaman, 1995). Common subconcepts of death for children to master have been identified by Corr (1995) including: universality, irreversibility, nonfunctionality, causality and some type of continued life form. The first three of these concepts are commonly cited by other authors (Prichard & Epting, 1992).

Universality refers to the all inclusive nature of death for all living things. The permanence of death of the physical body is called irreversibility. The cessation of both internal and external bodily functions is called nonfunctionality. The situations and events that can bring about death are called causality. The final subconcept, some type of continued life form, is more controversial, however due to its frequent identification it was included by Corr (1995) as one of the subconcepts. These subconcepts are considered tasks for grieving children to master. They are not considered in terms of a certain chronological age achievement but concepts to be pursued at different times depending on a child's life experience. Children need to reprocess grief at each developmental stage (Tonkins & Lambert, 1996) and these concepts are considered to develop both in complexity and richness as the child develops (Corr, 1995). Parents and caregivers need to be attuned to the variety of behaviors that children may exhibit in their grief process and their need for individual consideration (Leaman, 1995).

Gersten, Beals, and Kallgren (1991) found that 9.8% of bereaved children were found to exhibit significant signs of depression compared to 1.3% of controls. Weller, Weller, Fristad and Bowes (1991) identified increased sleep disturbances,

social withdrawl and restlessness as problems of bereaved children. Sandler et al. (1992) identified increased anxiety, increased depression, social withdrawl, and drop in school grades as problems for bereaved children.

Grollman (1995) identified childhood grief reactions as denial, bodily distress (physical and emotional), hostile reaction to the deceased, hostile reaction to others, panic, guilt and idealization. Dangerous symptoms were identified as symptoms that persist after several months including sadness, inability to relax, tiredness, inability to sleep, disinterest in appearance, avoidance of social activities, indifference toward school and hobbies, feelings of worthlessness, drug and alcohol use and letting their moods control them (Grollman, 1995). The risk of childhood depression is seven times higher for parentally bereaved children than for non-bereaved children (Schilling, 1992). Wass and Corr (1984) describe feelings of inferiority, and a loss of self esteem that can result from a part of a loss of themselves. Clearly this multitude of problems should be a concern for caregivers.

Statement of the Problem

Parents of children age 5-13 may have difficulty recognizing grief reactions and childhood depressive symptoms. Information about how bereaved children's external behaviors relate to self rated depressive feelings can be helpful for parents, counselors and for programs for children who are grieving. Implications for parent education for detecting signs of childhood bereavement can be determined for further study.

In the death and bereavement literature a variety of approaches to measure depressive symptoms have been used. Authors have used a variety of informants including parents, children, teachers and various combinations of these. However, there is limited exploration or discussion specifically about the agreement between informants of depressive symptoms and depressive behaviors among bereaved children.

Purpose of the Study

The purpose of this study was to determine what relationship exists between parent reported depressive behavior to self reported child depressive symptoms among bereaved children.

A secondary purpose was to determine what relationships exist between gender, relationship to the deceased, length of time since death, cause of death and age to parent and child reports of depressive symptoms among bereaved children.

Need for the Study

Grieving children are often forgotten by grieving adults (Grollman, 1995). Silence and secrecy about death can deprive children of opportunities to share feelings and may result in their feelings being overlooked (Grollman, 1995). When a death occurs in a family, communication can break down (Sanders, 1995). This break down in communication can be detrimental to the child, parent and the grieving process for the family. There is a tendency to underestimate a child's need to grieve (Hemmings 1995). Often secrets are kept to protect the child, however this may in fact have a detrimental effect (Corr, 1995). It can be difficult

for parents to accurately recognize depressive feelings in a bereaved child (Hemmings, 1995). This may be the case since parents and caregivers are often experiencing their own grief reactions. Adults who serve as the primary caregivers can be too shocked to recognize their child needs them and also fail to recognize the signs of grief and sadness (Sanders, 1995). The caregiver or parent is often dealing with reduced emotional and physical reserves due to their own mourning experience (Hemmings, 1995). This lack of reserve can lead to reduced sensitivity and responsiveness to the child's need of comfort, reassurance and expression of feelings (Hemmings, 1995).

Hemmings (1995) describes general bereavement processes and principles for adults and children. She describes a tendency for adults to underestimate the child's need for support and a lack of sensitivity to the child. However, there is no citation of research supporting this assumption. The treatment program recommended by Hemmings (1995) and others (Schilling, Koh, Abramovitz, & Gilbert, 1992; Pennells, 1995; and Aldrich, 1995) draw on this assumption in the development of their programs. However, there is limited objective data in the bereavement literature relating parent observations and child self reports of depressive symptoms.

Depressive symptoms reported by parents alone may be insufficient to identify a bereaved child's depressive symptoms. Weller et al. (1991) found increased symptom endorsement among parentally bereaved children when child reports were used (as opposed to parent report only).

Bennett and Peterson (1995) cite three main reasons why children's self reports are included in research and treatment: 1. Self reports may be based on a variety of situations due to a higher self observation rate; 2. Omitting child observations would inappropriately narrow the focus on interventions and; 3. Internal feelings may be best described by the child as opposed to the parent or teacher. However, the advantages of parent ratings cannot be overlooked. Children may have difficulty understanding items or have difficulty identifying or analyzing their own feelings (Bennett & Peterson, 1995). As stated by Kashani et al. (1985) although total agreement between parent and child ratings is unlikely, improved agreement and understanding of the direction and contributors to disagreement can be useful in diagnosis, treatment and research. The literature does explore this issue of parent and child agreement with clinically referred depressed children and adults. The review of the literature included will highlight some of these studies. These studies can be helpful in developing similar studies among bereaved children and in interpretation of the results.

Clearly the significance of caregivers recognizing children's depressive reactions are important among bereaved children. Caregiver recognition can allow opportunities to process grief reactions and for caregivers to provide or seek support. Conversely, if caregivers are over reporting symptoms they may be unnecessarily worrying about their children and not realize what behavior may be part of a normal range for children. If caregivers are not accurately and effectively

identifying symptoms clearly there are indications for education and support to caregivers and bereaved children.

Currently there is a lack of literature reporting bereaved children's self reported depressive symptoms. Further complicating this paucity of literature is the lack of studies comparing bereaved children's self reports and their parent/guardian's reported observations of depressive behavior.

This study will help to determine the relationship between parents/caregiver's observation of depressive behaviors and child self report of depressive symptoms among bereaved children. This study will also explore the effect of variables such as age, gender, relationship to the deceased, nature of the death and time since the death on bereaved child and parent observation reports.

Hypotheses

Primary Hypothesis

There was no significant relationship between parental report of their child's depressive symptoms and child self reported depressive symptoms among a group of bereaved children.

Secondary Hypotheses

Age does not have any effect on the strength of the relationship.

Gender does not have any effect on the strength of the relationship.

Nature of the death does not have any effect on the strength of the relationship.

Time since death does not have any effect on the strength of the relationship.

Relationship to the deceased does not have any effect on the strength of the relationship.

Delimitations

This study was delimited by the factors stated below.

-The study was delimited to families who have a bereaved child attending Camp Rainbow in 1998.

- The study was delimited to families who have complete data sets available.

- The study was delimited to bereaved children aged 5-13 inclusive.

- The study was delimited primarily to children who have had a death of a family member within the past year.

Limitations

The limitations of this study include the factors outlined below.

-The study was limited by a lack of control of the degree of depressive behaviors or adjustment level of the children.

-The characteristics of the participants could not be controlled i.e. age, gender, race, SES or cognitive level and therefore limit this study.

- The nature of the death could not be controlled and was a study limitation.

- The relationship to the deceased could not be controlled and was a study limitation.

- The length of time since the death could not be controlled and was a study limitation.

- Child or parent participation in other bereavement counseling or support groups could not be controlled and was a study limitation.

Assumptions

The basic assumptions of this study are stated below.

- Measurement tools are valid and reliable.

- Responses will be honest and accurate.

- Responses will not be biased to what parents believe the researcher wants to know or to be socially acceptable.

- If assistance was provided to fill out questionnaires, there was no coaching of answers.

Definitions

Camp Rainbow: A camp for bereaved children held annually by University of Tennessee home care services at Camp Montvale, Blount County, Tennessee.

Camper: A child who was registered for Camp Rainbow.

Primary caregiver: The designated guardian responsible for the child's care.

Bereaved children: children aged 5-13 who have had a death of a primary family member, generally within the past year.

Parental observation of child depressive behavior: For the purposes of this study this variable was measured by the shortened Achenbach's Child Behavior Checklist (CBCL).

Child self reported depressive symptoms: For the purposes of this study this will be measured by the Children's Depression Inventory (CDI).

Primary family member: aunt, uncle, grandmother, grandfather, mother, father.

Summary

Chapter one has provided the background on childhood bereavement, the nature of bereaved children's depressive symptoms, the need for studies relating bereaved children's self reported depressive symptoms related to parent observations and the existing literature in this area.

To explore these issues closely, chapter two will review the related literature; chapter three will describe the study methodology and chapter four will report the data collected and analysis, and chapter five will summarize the findings and make further recommendations.

Chapter II

Review of the Literature

The review of the literature will briefly summarize some of the research on bereavement processes for children and depressive symptoms among bereaved children. The primary focus of the literature review will be on studies of concordance between parent and child ratings of child depressive symptoms. A variety of populations will be used due to the lack of specific literature addressing child depressive symptom concordance among bereaved children and their parents. Studies with samples from psychiatric treatment seeking adults, psychiatric treatment seeking children and community dwelling children have been identified and discussed due to their focus on concordance between child and parent ratings of child depressive symptoms.

Bereavement Processes for Children

Bereavement is a personal experience (Hemmings, 1995). Each mourner has a unique relationship with the deceased and for a child the loss of a family member may represent the loss of a relationship that could have developed across the life span (Hemmings, 1995). A variety of models and theories drawing on a range from psychoanalytic, cognitive to humanistic theories have been used to explain bereavement among children (Hemmings, 1995; Leaman, 1995; and Prichard & Epting, 1992).

Bereaved children are faced with a number of concepts and issues to master to help them adjust to a world without the deceased (Hemmings, 1995).

Subconcepts for children to master include universality, irreversibility, nonfunctionality, causality, and some type of continued life form (Corr, 1995). Other authors also describe the first three concepts (Prichard & Epting, 1992; Hemmings, 1995).

Universality refers to the fact that all living things die. Numerous children's stories have been written to help children understand that all living things die and death is a part of the life cycle. Irreversability refers to the permanent nature of the death, misunderstanding of this concept for children can be re-enforced by poor or vague explanations of death to children (Hemmings, 1995). Caregivers attempting to protect the child may use unclear ways to describe the death (Tonkins & Lambert, 1996). Explanations such as "She has gone now" or "he fell into a deep sleep" can confuse the child and encourage magical thinking about death (Hemmings, 1995). When mastering this concept children may exhibit searching behaviors in an attempt to reunite or find the deceased (Hemmings, 1995).

Nonfunctionality refers to the end of bodily functions (Corr, 1995). Children may be confused and believe the person may be able to move, for example try to get out of the coffin (Hemmings, 1995). Hemmings (1995) reports this issue commonly arises in dreams or nightmares.

The irreversability of death, the permanence of death, is a further concept outlined by Corr (1995). Magical thinking can also interfere with this mastery (Hemmings, 1995).

Causality of death refers to the events or situations that can bring about a death (Corr, 1995). Hemmings (1995) reports that self blame and anger for a betrayal from the world can be part of mastering this concept. Children may blame themselves or the world, feeling this death is unreasonable.

The final concept of some type of continued life form was described by Corr (1995) but is not as commonly discussed by other authors.

Children grieve differently than adults (Hemmings, 1995). They reprocess grief at each developmental stage and as life experience increases (Tonkins & Lambert, 1996). Hemmings (1995) reports children have pockets of intense emotions and thoughts, describing these experiences as intermittent and developmental in nature.

A wide variety of behavioral and affective features of bereaved children have been reported in the literature. Felner et al. (1981) reports teacher ratings of bereaved children indicating increased anxiety, depression and social withdrawl. Parent reports of bereaved children have been described by Van Eerdewegh, Bieri, Parrilla and Clayton (1982) and Sandler, Gersten, Reynolds, Kallgren and Ramirez (1988) as finding depressed moods, deterioration in school performance and conduct disorders.

Kranzler, Shaffer, Wasserman and Davies (1990) combined parent and teacher reports. In their study overall CBCL scores found forty per cent of the bereaved children in the very disturbed category compared to ten per cent of the controls.

Clearly a concerning variety of symptoms and concerns are raised for bereaved children by these studies. A wide variety of methodologies were used in these studies. One of the key issues in assessing depressive symptoms in children is which informant is used (Barrett, et al., 1991). This study is focused on the agreement between informants.

The following section examines studies using child and parent reports of bereaved children's depressive symptoms. This discussion will then move to studies about parent and child agreement about child depressive symptoms in a variety of populations.

Studies of Bereaved Children and Depressive Symptoms

Worden and Silverman (1996) who have reviewed the literature of studies about the impact and effect of parental bereavement on children, cite a lack of child self reports as a weakness among studies of bereaved children. Studies of bereaved children often focus only on parent reported observations. Measurement techniques varied considerably among all the studies from a combination of structured interviews to checklists or a combination of the two. The Children's Depression Inventory (CDI) and Child Behavior Checklist (CBCL) were both very commonly used due to their psychometric properties and utility. However there is limited discussion specifically about the agreement between informants of depressive symptoms among bereaved children.

Siegel, Karus, and Raveis (1996) studied child reported symptoms for children with a parent facing cancer-related death. In this study observations were

noted prior to and post death of the parent. Both measurements were taken within a year of the death, with the post-death measurement being completed at least six months after the death. The CDI and the State Trait Anxiety Inventory were both completed by the child only. Data analyses involved comparison to a community dwelling control group. Children facing an impending death did reveal a significantly higher mean score of psychological distress. However, at seven to twelve months post death, on average, the bereaved children depressive symptoms and anxiety level was very similar to the community dwelling sample. The authors relate the improvement in symptoms reported to the relief experienced by the children after an uncertain and often painful period preceding the death. The anticipatory grief associated with this situation was cited by the authors as a likely factor in the lower reported symptom rates. However no longer term follow up or parent observation data were presented in this study.

Worden and Silverman (1996) sampled 70 families with 125 bereaved school aged children. Fifty one per cent of the eligible families participated, with one child from each family randomly selected for study participation. Semi structured interviews with the children and surviving parent were complemented by the Child Behavior Checklist (parent rating) and child self rated locus of control. These evaluations were made at four months, one year and two years post death. A control group matched for age, gender, grade and SES was also utilized in this study.

At four months post death, responses of the bereaved group were more symptomatic than the non-bereaved group. These differences did decrease at one year post death. According to the normative data, ten per cent of the community sample could be expected to be doing poorly (have higher CBCL scores indicating higher level of depressive symptoms and more behavior problems). At one year 19% of the bereaved group were doing poorly and at two years 21% were doing poorly. This does represent a significant portion of bereaved children with longer term adjustment problems. Although many symptoms attenuate after the first year there is still a significant number of children with problems at two years post death. Worden and Silverman (1996) suggest that if these children could be identified earlier, possibly interventions to reduce the longer term grieving effects could be introduced. Unfortunately children self reported locus of control only, while parents were asked about depressive symptoms. Despite citing the lack of child self reports used in other studies, the authors did not use child self reports of depressive symptoms.

Tonkins and Lambert (1996) conducted a treatment outcome study with bereaved children, in their study along with certain non-standardized measures they also used the CDI and CBCL. They identified the use of multiple informants including children as a key issue. The study did not specifically compare different informant's ratings. However, changes post intervention did show an improvement in scores across informants. Sixteen subjects participated in their study, this was a response rate of 76%. A pretest post test design was used and a waiting list was

also used as a control group. The members of the waiting list had an eight week period before the intervention. Unfortunately the various measures were not compared with respect to severity ratings and no relationships between raters were described.

Sandler et al. (1992) reported a study of parentally bereaved children aged seven to seventeen. State health department death certificates were used to identify families with a recent death. Forty six families agreed to participate through this source. Twenty six further participants were gathered through referrals from community agencies. . An intervention and control group were randomly chosen with controls placed on a waiting list of six months. Although multiple measures were used, only the measures of depressive symptoms will be discussed here. The Child Assessment Schedule and the CDI were the child completed tools. A shortened version of the CBCL focusing on depressive symptoms was completed by parents. A significant discrepancy was found between the parents' and children's reports of child depressive symptoms. This difference between parents and children was most notable in reported changes post treatment. The changes post treatment indicated stronger agreement among older children and parents, and was judged to be part of the treatment effect. The authors hypothesized a variety of reasons for these discrepancies including parents having different exposure to behaviors and different thresholds for a behavior. However, the importance of parental perspective for referral to services was emphasized and although no conclusions about the cause of the discrepancy were possible from the data, further

study was recommended. The study results focused on treatment effect and did not allow for analysis of parent and child concordance.

Schilling, Koh, Abramovitz, and Gilbert (1992) studied children aged six to twelve who lost a caregiver within 30 months. Thirty-eight subjects were found through the Jewish Board of family and children's services. Areas of recruitment were in poor inner city neighborhoods of New York city. An uncontrolled pre-test post test design was used to evaluate the bereavement group.

Among other measurements the Bellevue Index of Depression was administered to the child and one parent to determine the depth of depressive symptoms. Of particular interest in this study was the relationship between self ratings and parent ratings. At pre-testing children self rated themselves as significantly more depressed than their caregivers rated them. Although these differences decreased at post testing this could be accounted for by a modest reduction in symptoms. Further explanations of the reduction in discrepancy could be an increased sharing of feelings with parents or a treatment effect.

Weller, Weller, Fristad and Bowes (1991) studied 38 parentally bereaved prepubertal (five to twelve year old) children. Families were selected from newspaper obituaries and contacted through the funeral directors or clergymen. A variety of stressors including financial stress, recent divorce, chronic psychiatric illness in family or medical illness other than that precipitating the death of the parent caused some subjects to be excluded from this study. Multiple structured interviews and rating scales were completed three to twelve weeks after the parent

death. The child and parent forms of the diagnostic interview for children and adolescents were complemented by parental completion of the psychiatric diagnostic interview genogram. In analyzing the results symptom endorsement was calculated in three ways: child report, parent report and combined parent and child reports. The combined format counted a symptom as present if endorsed by the parent or the child. Bereaved children and inpatient depressed children were compared in this study, but this will not be discussed outside of parent and child agreement. Common to depressed and bereaved children was the parental under reporting of symptoms in comparison to the child self reports. To assess the disagreement the mean number of symptoms endorsed by the parents and children was considered. This difference was significant for the bereaved but not the depressed group. Possibly the diminished severity of symptoms among the bereaved children compared to the depressed children is related to this finding. The severity of symptoms must be considered significant since approximately 37% of the bereaved children studied did meet the DSMIIIR criteria for a major depressive episode when the bereavement exclusion is not considered.

These studies point to some clear issues when studying bereaved children including the need to consider if the death was anticipated, the time since the death and the age of the child. In the two studies located that specifically consider concordance between parents and children, children reported higher levels of depressive symptoms than parents. However, the study conducted by Schilling et al (1992) focused on inner city children which limits the generalizability of these

results. The Weller et al (1991) study was conducted with children across a limited range of time post death (3-12 weeks). This comparison focused on mean number of symptoms for comparison, not considering the severity of symptoms and used a t test, instead of a paired t test to analyze the data, which limits this study's findings. Clearly these study results lead to further questions for research and the need to replicate their findings.

Studies of Concordance with Treatment Seeking Adults

Kashani, Orvaschel, Burk and Reid (1985) conducted a study with twenty-four adults with a major affective disorder and their fifty children (age 7-17). The study explored the effects of parental psychiatric disorder on the relationship between child self reported and parent reported depressive symptoms. The diagnostic interview for children and the complementary parent interview were used to determine child symptoms. This study found a high level of disagreement between the parent and the child interview findings. Child reports of depression and anxiety were higher than their parents, with parents tending to report more oppositional behavior. It is possible parents and children focused on different behavioral issues, or that parents view their children's concerns as not significant. One important consideration when applying this study is the use of parents with major affective disorders. Further limiting the usefulness of this study is the lack of a comparison group. The use of recently hospitalized patients for the parent sample also complicated interpretation of the finding due to the possibility that psychiatric

symptoms were at their peak and possibly did not reflect the parent's day to day perspective.

Angold et al. (1987) studied 91 families with children aged six to twenty-three years. Fifty-six families (125 children) with at least one parent treated for depression were included. The control group of 35 families had 95 children and neither parent had a diagnosis of depression. Controls were matched for child and parent ages, number of marriages, marital status, religion, social class, and number of children in family. Both groups were all white which does limit this study's findings. Measurement were completed by highly trained interviewers using the schedule for affective disorder and schizophrenia for school aged children .

Children reported more child depressive symptoms than parents and, overall the agreement between the two groups was weak. Parents were more sensitive to suicidality than other symptoms. Agreement between parents and sons was found to be higher. The authors hypothesize this correlation is related to the low reporting level of symptoms.

The authors suggest using child self assessment as the criterion due to the internal nature of depressive symptoms. From this perspective, the parent ratings could be considered specific (they identified the presence or absence of the same symptoms as the children) but lacking sensitivity (as the degree of symptom endorsement was lower for parents).

Weismann, Ovraschel, & Padian (1980) conducted a pilot study with 12 families, 28 children. One of the parents, six mothers and six fathers, were judged

psychiatrically ill (with an unspecified diagnosis). The children were all aged six to seventeen. The children's psychiatric status was determined through a structured interview (kiddie SADS). Forty-five per cent met the criteria for a psychiatric diagnosis. Children completed the CES-D (depression scale), the CDI (depression scale) and a social adjustment scale. Their Mother completed the CES-D, Achenbach Child Behavior Checklist and the Conners parent questionnaire (behavior problems) with respect to their child.

Measurements correlated significantly when the same informant reports are compared. The mother's reports about their children did not correlate with their children's reports. Agreement between mother and child was acceptable when symptoms were significant enough to warrant a psychiatric diagnosis. Maternal rating of overt symptoms may have been more sensitive than children's but maternal ratings were unable to identify internal feelings.

These studies found significant differences between child and parent ratings. Children, generally self reported higher rates of symptomatology. The authors suggest that external behaviors are easily identified by parents, whereas internal feelings and the extent of the symptom are rated as higher among children in this population. However, it is notable that all of these parents were seeking psychiatric services for themselves.

Studies of Concordance with Treatment Seeking Children

Renouf and Kovacs (1994) conducted a longitudinal study with 113 children and their parents to determine the influence of developmental change on

parent and child concordance. Data was a subset of data from a larger longitudinal study about adolescent onset of affective disorders. Children were selected only if they had some diagnosed degree of depression upon entry, had the same mother reporting symptoms and had multiple assessments. All the children were between ages eight and thirteen inclusive at the time of study initiation. Semi structured interviews, self report (Children's Depression Inventory – Kovacs 1992) and developmental and cognitive assessments were conducted. Assessments occurred four times in the first year and semi annually in the following years. First year quarterly followed by semi annual interviews with parents were complemented by annual parent checklist (Achenbach's Child Behavior Checklist) completion.

Concordance was related on a three point scale by coding seven similar items on these measures: CDI, CBCL and the semi structured interview. Maternal psychopathology was also scored to determine the effect of maternal depression on concordance.

Results indicated that as the child grew older, concordance increased. However, maternal depression negatively affected concordance. Using multivariate ANOVA's cognitive development, gender, verbal abilities and SES were ruled out as predictors of agreement. Agreement ranged from 45% (6.37/14 items) to 66% (9.22/14 items). Depressed mothers overemphasized their child's self reported depression.

The longitudinal design of this study is unique, however the authors do not account for testing effect or treatment effects that may attribute to the concordance

changes. Possibly through an effect of testing or as a part of the child's treatment parental awareness or effort to determine the child's affective state were made.

Application of this study is further limited by the use of clinically depressed children as the subjects. However, clearly the need to consider the parent's mental status and the child's age when weighing the validity of self reports versus parental reports of child depression data.

Kazdin, Esveldt-Dawson, Unis and Rancurello (1983) studied 120 inpatient children aged seven to thirteen. The average inpatient stay for children in the study was three months. The sample was biased toward males with over three quarters of the subjects being male. Parent respondents were mainly mothers but fathers and other parent figures were also used in this study.

Measures included two measures of depression and two of aggression. Parent and child completed all four instruments, the CDI, the semi structure interview (Bellevue Index), hostility-guilt inventory, and semi-structured interview (interview for aggression).

Analyses included the variables of age, race, gender, IQ, parent age, parent race, SES, welfare status. Mothers of white children were reported to rate their children as more depressed than mothers of African-American children. Children whose mother received welfare self rated depression higher. These results are difficult to interpret among a treatment seeking sample as race and welfare status may have been confounding factors among this group.

Contrary to other findings reported, mothers rated severity of depression and aggression higher than their children. The nature of the sample (children with identified mental health problems requiring inpatient treatment) may help to explain this effect. Correlation studies found child-parent agreement as low to moderate but parent-parent agreement with higher ranges. These findings of agreement did not vary with use of the evaluation format (rating scale vs. semi-structured interview) or with symptom type (aggression vs. depression).

Herjanic and Reich (1982) compared mother and child reporting through the use of 168 structured interview questions. Three hundred and seven children aged six to sixteen were interviewed. All the children presented for psychiatric services. The authors found the highest levels of mother-child agreement with concrete, outward, extreme and clearly defined symptoms. Lower levels of agreement were found in questions relating to the degree of a problem.

Problems mothers endorsed without child agreement tended to be common problems that children might not consider serious. Inner feelings whether psychological or somatic were frequently over-represented by child endorsement without maternal endorsement. Again limiting this study's application was the use of interviews, inclusion of symptoms beyond depression, and treatment seeking children.

Edelbrock, Costellok Dulcan, Conover, and Kala (1986) conducted a study of parent child concordance with 299 children and teens age six to eighteen and their parents. All of the youths had been referred to a large psychiatric clinic.

A structured interview, the diagnostic interview schedule for children (parent and child versions) was used. The focus in this study was on symptoms as opposed to diagnosis. Low to moderate agreement was found between parent and child reports. Agreement varied according to age and symptom. Observable and overt symptoms (behavior and conduct) had a higher level of agreement than less observable symptoms such as anxiety, psychosis, fear and affective disturbances. Age of the child impacted the degree of parent child agreement, not the direction.

Edelbrock et al. (1986) emphasized the need to value both informants input, identifying perspective and biases as contributors to disagreement of depressive symptoms. Awareness, sensitivity and tolerance of different symptoms were identified as significant variables between informants that would contribute to lack of agreement. The large sample size of this study was very valuable since it allowed for age group comparisons to be made because of the significant sample size. The sample was slightly skewed toward lower SES (26%) and toward male children (67%) however good racial diversity was represented. The use of highly structured interview format may have led to increased difficulty for younger children to respond adequately.

Stavrakaki, Vargo, Roberst, & Boodoosingh (1987) studied 130 child psychiatric in and outpatients. Their ages ranged from six to sixteen. Measurements included the CDI (completed by children), a revised children's manifest anxiety scale (completed by children) and the parent form of the CBCL

(completed by parents for outpatients and by child care workers for in patients) and a clinician completed tool the Brief Psychiatric rating scale for children.

Discrepancies in ratings were considered by pairs of raters and by groups. A low to moderate agreement was found between parent and child depressive symptom reporting. The degree of this agreement was found to vary by diagnostic group, age, and sex but not at a statistically significant level.

Moretti, Fine, Haley and Marriage (1985) studied 60 psychiatric (in and out) patients aged eight to seventeen. The CDI and Children's Depression Scale, both self rating measures were used to measure depressive symptoms. All children were referred for depression. Parents completed the Children's Depression Scale for parent and rated their own depressive symptoms on the Beck Depression Inventory. Separate interview sessions were used to assess the children and provide a DSM-III criteria diagnosis. Diagnoses included major depression, dysthymic disorder and conduct disorder.

Parent reports tended to underestimate symptoms in children with a diagnosis of major depression and overestimate in children with other diagnoses. The authors consider that discrepancies were related to psychiatric diagnosis. Another way to interpret these findings was to view parental ratings as inaccurate with respect to the severity of symptoms, which is consistent with other studies reported here. Parents tended to rate their child as moderately disturbed on most instruments, without considering the child's specific problems. Children were

rated as more depressed by parents with more depressive symptoms regardless of their child's level of depression.

Barrett, Berney, Famuyiwa, Kolvin and Tyrer (1991) conducted simultaneous blind interviews with 87 children and their parent. The sample selection was poorly detailed but did include clinically depressed and non depressed youths. The degree of agreement focused on symptom presence or absence and intensity.

Agreement was higher among the non-depressed group primarily with the absence of symptoms. Females showed higher agreement among suicidal symptoms, insight related questions and duration of symptoms than males. Males had higher agreement among observable symptoms such as weight gain, morning fatigue, aggressive behavior and obsessive-compulsive behaviors than females.

In these studies one considered parent mood and found that the more depressed the parent, the more highly they rated their child's depressive symptoms. The other finding supported across these studies was an increased agreement with concrete and outwardly observable symptoms. Another finding worth noting is the increased agreement when the number of symptoms was low, which in part can be considered a statistical artifact.

Studies of Concordance with Community Dwelling Children

Leon, Kendall, and Garber (1980) studied 138 children in grades three to six. Children who were categorized as depressed or non depressed based on the parent completed depression scale of the personality inventory for children. The

response rate was 45.6%. However, the rates were not considered detrimental due to the use of test norms to categorize the children. However this source of error cannot be ignored.

Parents completed the Personality Inventory for Children (depression and hyperactivity scales) and the Conners Parent Questionnaire (behavior disorder report). Children completed the Children's Depression Inventory, Peabody Picture Volcabulary Test, Porteus mazes and the cognitive processes inventory for children. A teacher measure was also completed but will not be discussed here.

Children and parents demonstrated moderate level of agreement between ratings of depression. Depressed children had a greater number of behavioral problems regardless of hyperactivity ratings. Notably, children identified as hyperactive did not also manifest depressive symptoms. These finding suggest sensitivity of parents to differentiating depressive and hyperactive symptoms. Unfortunately this finding needs to be interpreted very cautiously since the same parent ratings were used to categorize the child as to evaluate the comparisons. This study does point to increased agreement among samples with lower levels of symptoms, such as a community dwelling sample.

Summary

Overall the researchers have concluded that psychiatric clinic referred children exhibited more distress than was apparent to the parent as children reported more symptoms and severity than their parents. The studies also found higher levels of agreement when the overall level of symptoms was low. The

finding that parent's own higher depression scores tends to increase the parent's scoring of the child. The authors suggest that parental reports of childhood depression should be used as complements to child report and not as the primary source of information regarding their child's degree of depression.

Chapter III

Methodology

Purpose

The primary purpose of this study was to determine what relationships exists between parent reported depressive behavior to self reported child depressive symptoms among bereaved children.

Secondary purposes of this study were to determine what relationships exist between gender, relationship to the deceased, length of time since death, cause of death and age to parent and child reports of depressive symptoms among bereaved children.

Study Design

This is an exploratory study that uses the collection of quantitative data and non-parametric statistical procedures. The data was collected from a convenience sample using existing data sources.

Study Variables

The primary research hypothesis was to determine if a significant relationship existed between bereaved children's self reported depressive symptoms and parental report of observed depressive behavior among bereaved children.

The secondary hypotheses involved determining if a significant relationship exists between child age, gender, nature of the death, length of time since the death, and relationship to the deceased.

Subjects

The eligible subjects for the study were the 50 child campers (aged 5-13) who attended Camp Rainbow in 1998 and their parent or guardian. The study sample included all subjects with complete data sets (complete CBCL, complete CDI, and complete bereavement history).

Setting

Camp Rainbow is held at Camp Montvale, Blount County, Tennessee. The data was collected from Camp Rainbow records. During their stay at Camp Rainbow the children participated in a variety of activities which allowed them to express their feelings of grief. Campers were asked to complete the CDI as a part of camp activities. The data from the children was based on the child's day to day subjective experiences since the death of the family member. This data was used by the camp to provide feedback to parents and was stored apart from biographical data and was without identifying information.

The data collected from the parents was based on parent or guardian day to day observation of their child since the death of the family member. Parents were provided the shortened CBCL to complete as part of the parent education session. Parents who did not return the parent questionnaire did not receive feedback and were not contacted to complete this form. The parent CBCL forms were also stored separately from the biographical data and were without identifying information.

Instrumentation

The instruments used in this study included the Children's Depression Inventory (CDI) and a shortened version of the Achenbach's Child Behavior Checklist (CBCL). Both of these tools have good clinical utility, reliability, and validity. These instruments have also been used in other studies comparing parent and child depressive symptom reporting (Nilzon & Palmerus, 1997). Prichard and Epting (1992) have also documented the appropriateness of these tools for use with bereaved children. Using a highly structured evaluation such as a rating scale permits the maximizing of reliability (Herjanic & Reich, 1982).

The demographic data about the campers were gathered from the camp constructed bereavement history forms. These data included camper age, gender, nature of the of the family member's death, length of time since death, and relationship to the deceased.

Achenbach's Child Behavior Checklist (Achenbach & Edelbrock, 1983).

VALIDITY

The CBCL has good face validity and has been judged by three psychologists to represent the measurement of depressive symptoms (Sandler et al., 1992; Tonkins & Lambert, 96). Riggs, Baker, Mikulich, Young, Crowley, (1995) also analyzed the CBCL and found it to approximate the DSMIII-R criteria for major depressive disorder.

Construct validity has been evaluated for the entire instrument. Achenbach and Edelbrock (1983) related the behavior problem scales to the sub-tests in

different general ability tests, for example the Wechsler Intelligence Scale for Children (WISC-R). Studies comparing other similar tools have been completed including the Conners Parent Questionaire, and the Quay Peterson Revised behavior problem checklist. These studies are reported in the CBCL manual (Achnebach & Edelbrock, 1983). Although the analysis focused on entire instruments, there were also some comparisons of narrow band scales, including the depression scale. In a study of 34 mothers of 6-11 years old clinically referred children, the correlation with the Conners Parent Questionnaire depression rating found a significant correlation with r=.54. The criterion validity of the entire CBCL was also reported by Achenbach and Edelbrock (1983). Comparison of clinically referred children and a control group matched on SES, race and age did demonstrate discriminant validity (Achenbach & Edelbrock, 1983).

RELIABILITY

Test-retest reliability studies have been conducted by Achenbach (1979) with normal subjects. The CBCL was completed by the children's mother at a one week interval and Pearson correlation studies conducted to determine reliability across different age groups. The correlation coefficient ranged from 0.82-0.90, which is within an acceptable range. Inter-rater reliability studies compared mother to father ratings (Achenbach, 1979). All the children in the inter-rater comparison were being evaluated for psychiatric treatment and the correlation ranged from 0.54-0.79.

CLINICAL UTILITY

The entire CBCL behavior problems checklist is composed of 118 separate items. Parents rate their child from 0 (not true as far as you know), 1 (somewhat or sometimes true), or 2 (very true or often true). Prichard and Epting (1992) estimate that 15-20 minutes would be required for parents to complete the entire CBCL. Achenbach and Edelbrock (1983) report the entire behavior checklist to require 15-17 minutes to complete and that parents need to have a fifth grade reading level. Although the full CBCL does not require a long time to complete, it does require two sides of a legal sheet with small print to accomadate all of the items. Due to the nature of the data analysis and the specific focus of this study on depressive symptoms, the narrow band depressive score items were only presented. Since the normative data and the composition of the scales varies by age and gender, all items for depressive scale for males and females aged 6-11 were included. Achenbach (1979) does report when scoring groups that the norms and items for the majority of subjects could be used. When scoring the items for the female norm, only the items identified as significant for the females will be added and only the significant male items will be added only for the male norms.

NORMATIVE DATA

Achenbach (1979) reported sampling 450 parents of children referred to mental health services. They also sampled 1800 disturbed children and developed norms based on 1400 non-clinical children and clinical children matched age, sex, race and SES. This normative data is available and reported in the CBCL manual.

T-scores and normative data are available for both the broad and narrow band scales.

Children's Depression Inventory (Kovacs, 1983).

VALIDITY

Discriminant validity studies are reported in the instrument manual (Kovacs, 1983) and been conducted by a variety of authors. Studies have found the CDI to be more effective at discriminating between clinically referred and non referred children than between different diagnostic categories (Kovacs,1983). However, this has intuitive logic since many clinical disorders can have similar presentation such as dysthymic disorder and depression (Kovacs, 1983).

The CDI has face validity and was developed and based on a modification of Beck Depression Inventory (Kovacs, 1992)

RELIABILITY

Test-retest reliability determination requires the selection of an appropriate time interval between administrations due to the measurement of a changing state (Kovacs, 1992). Kovacs (1992) cites over 15 different studies of the test retest reliability of the CDI with r ranging from .38 to .87. However, a majority of the studies report an acceptable range (Kovacs, 1992). Internal consistency of the CDI was also studied by a variety of authors and reported by Kovacs (1992). The reliability coefficients ranged from .71-.89, which constitutes an acceptable range (Kovacs, 1992).

CLINICAL UTILITY

The CDI was developed for school aged children and it measures mood disturbance, hedonic capacity, vegetative function, self evaluation of interpersonal behavior (Tonkins & Lambert, 1996) . The CDI is comprised of 27 items that are keyed 0,1,2 for response scores with the total score ranging form 0-54. Items consist of three sentences from which the child selects the sentence that best describes him or herself. Kovacs (1983) reports that children need to be reading at a second grade reading level to complete the CDI, unless assistance is provided. The test can be administered in either group or individual settings and in a pencil and paper or interview format (Kovacs, 1983). Kovacs (1980) reports no negative effects noted in the children from completing the task. Kovacs (1980) suggests the tool is most helpful as a severity measure, and should not be used alone as a diagnostic tool.

NORMATIVE DATA

Kovacs (1980) reports the development of norms based on 875 school aged children living in Toronto. The children's ages ranged from 10-17, grade 4-8. Scores ranged from 0-51 for normal population.

Procedure

Following approval from the University of Tennessee Medical Center independent review board and the University of Tennessee independent review board access to the bereavement histories, parent reports and child reports was provided. These data were accessed at the University of Tennessee Homecare

Services office. No access to biographical or identifying data was provided to ensure confidentiality.

Analysis of Data

Study variables include shortened Achenbach's Child Behavior Checklist (CBCL) score, Children's Depression Inventory (CDI) score, child's age, child's gender, nature of the death, length of time since death of the relative, and relationship to the deceased. The data were entered into an SPSS 8.0 file. The CBCL and CDI raw and T scores were also entered. Age was entered as a continuous variable, gender a nominal two category variable, the nature of death a nominal two category variable (sudden or anticipated), time since the death a continuous variable, and relationship to the deceased a nominal three category variable (mother, father, uncle/aunt/grandparent).

The analysis began with descriptive statistics of the frequencies of these variables and utilized tables to illustrate the data. A Pearson product moment correlation between the CBCL and CDI raw scores was examined to determine if increases in parent scores were reflected by increases in child scores.

A partial correlation between parent and child scores was used to examine each of the secondary hypotheses variables (age, gender, nature of the death, length of time since the death and relationship to the deceased).

Upon examination of the data some post hoc analyses were conducted to further examine the data. Both the CDI and CBCL identify a cut off point T score of 65 (the 93rd percentile of normal children in the respective development

procedures). This cut point was deemed as useful in this study to allow an examination of the agreement in terms of high levels of severity of symptoms. A nominal variable of above or below the cut point was then assigned to each subject for each score.

A chi square test was run to look for a relationship between the frequency of CDI scores above and below the cut off point compared to the frequency of CBCL scores above or below the cut off point.

The CDI cut off variable was compared to the expected value (based on the standardization of the instrument) i.e. if the sample represented normal children, 93% of the children would be expected to score below the cut off point. A chi-square statistic was used for this comparison. The CBCL cut off variable was also compared to the expected value (based on 93 percentile on test development) using a chi-square test. To compare the nominal variable of the cut point scores on the CDI and CBCL a chi-square test was conducted.

Initially a child-parent nominal four category variable was created (CDI below- CBCL below; CDI above- CBCL below; CDI below-CBCL above; CDI above-CBCL above). Due to small cell counts a separate variable called agreement was then created that collapsed the variable into only two categories to ensure all cells had adequate numbers for analysis. Agreement will refer to this two category variable in the following sections.

When considering the influence of the nominal variables (gender, nature of the death, and relationship to the deceased) on agreement chi-square tests were used.

The continuous variables (age and time since the death) required a different test for the agreement, the Mann-Whitney U Test.

Upon inspection of the data the large number of parents who scored their child above the cut off (relative to the expected value and the child scoring) led to a further question for the data analysis. The question was whether any of the variables under study were related to this high score range.

To examine this the CBCL cut off score was compared to the gender of the child, nature of the death, and relationship to the deceased using chi-square tests. The Mann-Whitney U test was used to compare the continuous variables age and time since death with the CBCL cut off scores.

Summary

This chapter has described the study variables, subjects, setting and sampling procedure. The instruments, data collection procedure and analysis of data techniques have also been outlined.

Chapter IV

Analysis of Data

Initially the data were examined for frequency and descriptive information. The primary research hypothesis of this study was to determine if a relationship existed between parent reports and child self reports of the bereaved child's depressive symptoms. Secondary hypotheses sought to determine if this relationship was related to child age, child gender, nature of the death, length of time since the death, or relationship to the deceased. Upon examination of the data a further question of the expected number of scores above the cut off point and the relationship of the frequency of CDI and CBCL scores above the cut off point was raised. In addition, questions about the possible influence of the variables (age, gender, nature of death, time since death and relationship to the deceased) on agreement of score (above or below the cut off point) was raised. Further questions about factors that were related to parent scores above the cut off point of the CBCL were also raised.

A Pearson product moment correlation coefficient was calculated to examine the primary research question. Partial correlation coefficients were calculated to examine the secondary research questions. The post hoc analyses were examined using chi-square analysis, and the Mann-Whitney U test. Chi-square analysis were also used to determine agreement with respect to the cut off points on the two tools and compare to the normative data. Chi-square and Mann-Whitney U test were used to compare agreement with respect to the cut off point

and the variables of interest (child age, child gender, nature of the death, time since the death and relationship to the deceased). Chi-square analysis and the Mann-Whitney U test were used to determine if any relationship existed between CBCL scores above the cut point and the variables of interest (child age, child gender, nature of the death, time since the death and relationship to the deceased).

Frequencies and Descriptions

Of the 50 campers who attended Camp rainbow in 1998, 30 complete data sets were obtained.

The time since death ranged from ten days to approximately six and one quarter years. This wide range brought the average higher however, more commonly, the death occurred within one year. See table one.

All ages of campers (five to thirteen inclusive) were represented in the data. One subject was aged five and one aged eleven. Ages six, nine and twelve also were represented at a low level with only two complete data sets per category. See table two.

Males and females were relatively evenly represented with sixteen females and fourteen males having complete data sets. See table three.

Relationship of the deceased was classified as mother, father or grandparent, uncle, or aunt. The mother category had only three subjects but otherwise the subjects were relatively evenly split with fourteen with father and thirteen with an aunt, uncle or grandparent. See table four.

Table 1 Time Since Death (reported in days)

Time since death in days	N	Minimum	Maximum	Mean	Std. Deviation
time since death	28	10.00	2309.00	433.1429	593.8498
Valid N (listwise)	28				

Table 2 Age

age		Frequency	Percent	Cumulative Percent
Valid	5.00	1	3.3	3.3
	6.00	2	6.7	10.0
	7.00	7	23.3	33.3
	8.00	4	13.3	46.7
	9.00	2	6.7	53.3
	10.00	7	23.3	76.7
	11.00	1	3.3	80.0
	12.00	2	6.7	86.7
	13.00	4	13.3	100.0
	Total	30	100.0	

Table 3 Gender

gender		Frequency	Percent	Cumulative Percent
Valid	male	14	46.7	46.7
	female	16	53.3	100.0
	Total	30	100.0	

Table 4 Relation to the deceased

relation to deceased		Frequency	Percent	Cumulative Percent
Valid	mum	3	10.0	10.0
	dad	14	46.7	56.7
	aunt/uncle/ grandparent	13	43.3	100.0
	Total	30	100.0	

The nature of the death was classified as sudden or anticipated with a higher representation of anticipated cases, nineteen and eleven sudden cases. Sudden cases included a variety of situations including gun shot wound, suicide, and sudden heart attack. Anticipated death also reflected a variety with cancers and liver disease. The frequencies are outlined on the table 5.

Primary Research Hypothesis

The correlation of the CDI and the CBCL raw scores are represented in the illustration in figure 1. No significant correlation was found between these two set of scores ($p=0.595$, $r=-0.101$).

Table 5 Nature of the Death

nature of death		Frequency	Percent	Cumulative Percent
Valid	sudden	11	36.7	36.7
	anticipated	19	63.3	100.0
	Total	30	100.0	

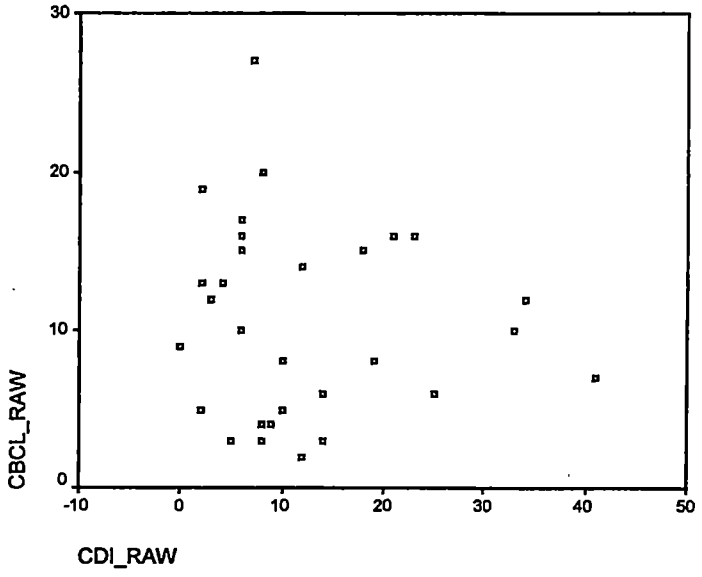


Figure 1 Correlation of Child (CDI) and Parent (CBCL) Rating

Secondary Research Hypothesis

Partial correlations controlling for each of the variables of interest were calculated to answer the secondary questions.

Child age did not significantly affect the relationship between parent and child scores ($r=-0.0965$, $p=0.619$).

Child gender did not significantly affect the relationship between parent and child scores ($r=-0.1023$, $p=0.598$).

Nature of the death did not significantly affect the relationship between parent and child scores ($r=-0.1014$, $p=0.601$).

Time since the death did not significantly affect the relationship between parent and child scores ($r=-0.0357$, $p=0.860$).

Relationship to the deceased did not significantly affect the relationship between parent and child scores (r=-0.1548, p=0.423).

Post Hoc Analysis Questions

The-chi square test with the CDI and CBCL cut points also found no correlation between the two score sets with respect to above or below the cut point (chi-square=0.833, p=0.651, df=1). See table six.

The CDI cut point grouping comparison to the normative data with chi-square analysis found the sample closely reflecting the expected value. The expected value below the cut point was 22.9 the sample revealed 24 and the expected value above the cut point was 7.1 the sample observed was 6. The chi-

Table 6 Child Rating (CDI) above the Cut and Parent Rating (CBCL) above the Cut

			CBCL Cut 65		
			Below 65	Above Cut	Total
CDI cut point	Below Cut (65)	Count	13	11	24
		% within cdi cut point	54.2%	45.8%	100.0%
		% within cbcl cut 65	86.7%	73.3%	80.0%
		Adjusted Residual	.9	-.9	
	Above Cut	Count	2	4	6
		% within cdi cut point	33.3%	66.7%	100.0%
		% within cbcl cut 65	13.3%	26.7%	20.0%
		Adjusted Residual	-.9	.9	
Total		Count	15	15	30
		% within cdi cut point	50.0%	50.0%	100.0%
		% within cbcl cut 65	100.0%	100.0%	100.0%

Pearson Chi-Square-.833, df=1, Exact Sig=.651

square analysis again found no significant difference (chi-square=0.218, df=1, p=0.640). See table seven.

On the other hand, the CBCL cut point comparison to the normative data with chi-square analysis did find a significant difference (chi-square=11.570, df=1, p=0.001). The expected values were the same, 22.9 below the cut and 7.1 above however the observed values were 15 above and below the cut point. See table eight.

Two variables based on the cut points were established to examine factors that may influence agreement between the two sets of scores. Child-parent agreement was established as a four category nominal variable (below-below;

Table 7 Child Rating (CDI) above the Cut and Expected Value

	Observed N	Expected N	Residual
below cut (65)	24	22.9	1.1
above cut	6	7.1	-1.1
Total	30		

Pearson Chi-Square .218, df =1, Asymp. Sig=.640

Table 8 Parent Rating (CBCL) above the Cut and Expected Value

	Observed N	Expected N	Residual
below 65	15	22.9	-7.9
above cut	15	7.1	7.9
Total	30		

Pearson Chi Square 11.570, df=1, Asymp. Sig.=.001

below-above; above-below; and above-above). The smallest cell contained n=2 with CDI above, CBCL below. The other cell with a low number, n=4, was above-above. Due to the small counts a second variable created measured agreement and had two categories of the nominal variable (below-below and above-above; or above-below and below-above).

The Mann-Whitney U tests compared age and agreement (two category), finding no significant association (z=-1.190, p=0.245). See table nine.

Child gender and child parent agreement (two category) was tested separately with chi square tests and found no significant relationship (z=2.330, df=1, p=0.127). See table ten.

Chi-square tests compared parent child agreement two category agreement to the nature of the death. No significant association was found (z=0.344, df=1, p=0.708). See table eleven.

The agreement (two category) variable was compared to time since death using the Mann-Whitney U test. No significant association was found (z=-0.353, p=0.724). See table twelve.

Relation to the deceased was compared to parent child agreement (four category) and two category agreement through chi-square tests. No significant relationship was found (z=2.590, df=2, p=0.338). See table thirteen.

Table 9 Agreement and Age

	AGREE	N	Mean Rank	Sum of Ranks
Age	.00	13	13.35	173.50
	1.00	17	17.15	291.50
	Total	30		

Table 10 Agreement and Gender

			AGREE		
			.00	1.00	Total
Gender	Male	Count	4	10	14
		% within gender	28.6%	71.4%	100.0%
		% within AGREE	30.8%	58.8%	46.7%
		Adjusted Residual	-1.5	1.5	
	Female	Count	9	7	16
		% within gender	56.3%	43.8%	100.0%
		% within AGREE	69.2%	41.2%	53.3%
		Adjusted Residual	1.5	-1.5	
Total		Count	13	17	30
		% within gender	43.3%	56.7%	100.0%
		% within AGREE	100.0%	100.0%	100.0%

z=2.330, df=1, p=0.127

Table 11 Agreement and Nature of the Death

			AGREE		
			.00	1.00	Total
Nature of Death	Sudden	Count	4	7	11
		% within cause of death	36.4%	63.6%	100.0%
		% within AGREE	30.8%	41.2%	36.7%
		Adjusted Residual	-.6	.6	
	Anticipated	Count	9	10	19
		% within cause of death	47.4%	52.6%	100.0%
		% within AGREE	69.2%	58.8%	63.3%
		Adjusted Residual	.6	-.6	
Total		Count	13	17	30
		% within cause of death	43.3%	56.7%	100.0%
		% within AGREE	100.0%	100.0%	100.0%

z=0.344, df=1, p=0.708

Table 12 Agreement and Time Since Death

	AGREE	N	Mean Rank	Sum of Ranks
Time Since Death	.00	11	13.82	152.00
	1.00	17	14.94	254.00
	Total	28		

z=0.353, p=0.724

Table 13 Agreement and Relationship to the Deceased

			AGREE		
			.00	1.00	Total
Relation to Deceased	Mum	Count	0	3	3
		% within relation to deceased	.0%	100.0%	100.0%
		% within AGREE	.0%	17.6%	10.0%
		Adjusted Residual	-1.6	1.6	
	Dad	Count	7	7	14
		% within relation to deceased	50.0%	50.0%	100.0%
		% within AGREE	53.8%	41.2%	46.7%
		Adjusted Residual	.7	-.7	
	Aunt/Uncle/ Grandparent	Count	6	7	13
		% within relation to deceased	46.2%	53.8%	100.0%
		% within AGREE	46.2%	41.2%	43.3%
		Adjusted Residual	.3	-.3	
Total		Count	13	17	30
		% within relation to deceased	43.3%	56.7%	100.0%
		% within AGREE	100.0%	100.0%	100.0%

z=2.590, df=2, p=0.338

A high number of CBCL scores above the cut off point compared to the expected value and CDI values was identified. Tests were conducted to determine if any of the variables measured in the study were significantly related to the higher CBCL scores.

Gender and CBCL score above the cut off point showed no significant relationship using chi-square test (z=0.000, df=1, p=1.000). See table fourteen.

Table 14 Parent Rating (CBCL) above the Cut and Gender

			CBCL Cut 65		
			Below 65	Above 65	Total
Gender	Male	Count	7	7	14
		% within gender	50.0%	50.0%	100.0%
		% within cbcl cut 65	46.7%	46.7%	46.7%
		Adjusted Residual	.0	.0	
	Female	Count	8	8	16
		% within gender	50.0%	50.0%	100.0%
		% within cbcl cut 65	53.3%	53.3%	53.3%
		Adjusted Residual	.0	.0	
Total		Count	15	15	30
		% within gender	50.0%	50.0%	100.0%
		% within cbcl cut 65	100.0%	100.0%	100.0%

z=0.000, df=1, p=1.00

Chi-square tests between nature of the death and CBCL score above the cut off point found no significant relationship (z=1.292, df=1, p=0.450). See table fifteen.

Chi-square test with relationship to the deceased and CBCL scores above the cut off did not find an association at 0.05 level. However chi-square tests did find a marginal but significant association at the 0.10 level. Scores that were above the CBCL cut off showed a tendency to be scores with an aunt or grandparent who died (z=5.209, df=2, p=0.072). See table sixteen.

The Mann-Whitney U test found no significant relationship between age or time since the death (z=0.400, p=0.713) and CBCL scores above the cut point (z=-0.138, p=0.892). See table seventeen.

Table 15 Parent Rating (CBCL) above the Cut and Nature of the Death

			CBCL Cut 65		
			Below 65	Above cut	Total
Nature of Death	Sudden	Count	7	4	11
		% within cause of death	63.6%	36.4%	100.0%
		% within CBCL cut 65	46.7%	26.7%	36.7%
		Adjusted Residual	1.1	-1.1	
	Anticipated	Count	8	11	19
		% within cause of death	42.1%	57.9%	100.0%
		% within CBCL cut 65	53.3%	73.3%	63.3%
		Adjusted Residual	-1.1	1.1	
Total		Count	15	15	30
		% within cause of death	50.0%	50.0%	100.0%
		% within CBCL cut 65	100.0%	100.0%	100.0%

z=1.292, df=1, p=0.450

Table 16 Parent Rating (CBCL) above the Cut and Relation to the Deceased

			CBCL Cut 65		
			Below 65	Above 65	Total
Relation to Deceased	Mum	Count	3	0	3
		% within relation to deceased	100.0%	.0%	100.0%
		% within cbcl cut 65	20.0%	.0%	10.0%
		Adjusted Residual	1.8	-1.8	
	Dad	Count	8	6	14
		% within relation to deceased	57.1%	42.9%	100.0%
		% within cbcl cut 65	53.3%	40.0%	46.7%
		Adjusted Residual	.7	-.7	
	Aunt/Uncle/ grandparent	Count	4	9	13
		% within relation to deceased	30.8%	69.2%	100.0%
		% within cbcl cut 65	26.7%	60.0%	43.3%
		Adjusted Residual	-1.8	1.8	
Total		Count	15	15	30
		% within relation to deceased	50.0%	50.0%	100.0%
		% within cbcl cut 65	100.0%	100.0%	100.0%

p=5.209, df=2, p=0.072

Table 17 Parent Rating (CBCL) above the Cut and Age and Time Since Death

	CBCL Cut 65	N	Mean Rank	Sum of Ranks
Age[a]	Below 65	15	14.87	223.00
	Above Cut	15	16.13	242.00
	Total	30		
Time Since Death[b]	Below 65	15	14.30	214.50
	Above Cut	13	14.73	191.50
	Total	28		

a. z=-.400, p=0.713

b. z=-0.138, p=0.892

Summary

Chapter four analyzed the data results. This chapter answered the research questions posed in chapter one. Descriptive data and frequencies described the complete data sets. A Pearson product moment correlation coefficient was calculated to compare the child and parent scores. Partial correlation coefficients were calculated to compare the child and parent scores. Questions that arose from the data were analyzed with chi-square tests and the Mann-Whitney U test. Chapter five presents a summary, findings, conclusion and recommendations to this study.

Chapter V

Summary, Findings, Conclusions and Recommendations

This chapter summarizes the present study. Findings are reported based on the research questions and a post hoc analysis. The conclusions are based on the findings. Recommendations for interventions with this population (Camp Rainbow) and for future research are presented in the final section.

Summary

The purpose of this study was to examine the relationship between bereaved child self reports and parental reports of child depressive symptoms among a group of bereaved children. Data was collected from data files of Camp Rainbow, a camp for bereaved children sponsored by University of Tennessee Homecare Services . Thirty complete data sets were identified from a group of fifty children. Data included parent rated shortened Achenbach's Childhood Behavior Checklist (CBCL), child rated Children's Depression Inventory (CDI), age of the child, gender of the child, nature of the death, time since the death, and relationship to the deceased. A Correlation coefficient compared parent and child scores. Partial correlations were calculated between CBCL, CDI scores and the variables of interest age, gender, nature of the death, time since death and relationship to the deceased to determine if these variable affected the correlation.

The primary research hypothesis was: There is no significant relationship between parental report of their child's depressive symptoms and child self reported depressive symptoms among a group of bereaved children. The secondary

hypotheses were: Age does not have any effect on the strength of the relationship.;Gender does not have any effect on the strength of the relationship.; Nature of the death does not have any effect on the strength of the relationship.; Time since death does not have any effect on the strength of the relationship.; Relationship to the deceased does not have any effect on the strength of the relationship

Post hoc analyses were conducted to consider questions that arose from the data. Parent and child scores were compared to the expected number above the cut off (93rd percentile) based on the normative data. A chi-square statistic was used to compare sample values and the expected values for both the CBCL and CDI scores. An agreement a variable (agree or disagree) classifying parent and child scores based on the test cut off points was created for this analysis. Mann-Whitney U tests and chi-square tests were used to compare the other five variables to the agreement between parent and child scores. Further questions examined the sets with CBCL scores above the cut off point and related to the variables of interest (age, gender, nature of the death, time since the death and relationship to the deceased). Chi-square tests were used for the discrete variables and Mann Whitney U tests for the continuous variables.

Findings

The sample characteristics and the research hypotheses posed in chapter one are presented with their findings. Further research questions that arose from examination of the data follow the primary and secondary hypotheses.

Sample characteristics.

Of the 50 campers who attended Camp rainbow in 1998, 30 complete data sets were obtained.

The time since death ranged from ten days to approximately six and one quarter years. The average time since death was fourteen and one half months.

All ages of campers were represented in the data. One subject age five and one age eleven were identified with complete data sets. Ages six, nine and twelve were represented with two complete data sets per category.

Males and females were represented with sixteen females and fourteen males having complete data sets.

Relationship of the deceased was classified as mother, father or grandparent, uncle or aunt. The mother category had three subjects but otherwise the subjects were split with fourteen with father and thirteen with a grandparent, uncle, or aunt.

The nature of the death was classified as sudden or anticipated sudden cases included a variety of situations including gun shot wound, suicide, and sudden heart attack. Anticipated death reflected a variety with cancers and liver disease. The frequencies are outlined on the table and included 11 sudden and 19 anticipated.

Primary research hypothesis.

There is no relationship between parental report of their child's depressive symptoms and child self reported depressive symptoms among a group of bereaved children.

No significant relationship was found between the child and parent reports with correlation coefficient.

Secondary research hypotheses.

Age does not have any effect on the strength of the relationship.

No significant association between age and parent and child agreement was found.

Gender does not have any effect on the strength of the relationship.

No significant relationship between gender and parent child agreement was found.

Nature of the death does not have any effect on the strength of the relationship.

No significant relationship was found between nature of the death and parent child agreement.

Time since the death does not have any effect on the strength of the relationship.

No significant association was found between length of time since the death and parent-child agreement.

Relationship to the deceased does not have any effect on the strength of the relationship.

No significant relationship was found between length of time since the death and parent child agreement.

Questions arising from the data.

Is there a relationship between the CDI and CBCL scores above the cut off point?

There is not a significant relationship between the CDI and CBCL scores above the cut off points.

Do the CDI scores above the cut off point reflect the expected value based on the normative data?

The number of CDI scores above the cut off point are related and reflect the expected value based on the normative data.

Do the CBCL scores above the cut off point reflect the expected value based on the normative data?

The number of CBCL scores above the cut off point are not related to and do not reflect the expected value based on the normative data.

Is agreement (ratings of above or below the cut point) altered by the age of the child?

No significant relationship existed between agreement and age of the child.

Is agreement (ratings of above or below the cut point) altered by the gender of the child?

No significant relationship existed between agreement and the gender of the child.

Is agreement (ratings of above or below the cut point) altered by the nature of the death?

No significant relationship existed between agreement and the nature of the death.

Is agreement (ratings of above or below the cut point) altered by the time since death?

No significant relationship existed between agreement and the time since death.

Is agreement (ratings of above or below the cut point) altered by the relationship to the deceased?

No significant relationship existed between agreement and the relationship to the deceased.

Does a relationship exist between a CBCL score above the cut point and the age of the child?

No significant association existed between child age and CBCL score above the cut point.

Does a relationship exist between a CBCL score above the cut point and gender of the child?

No significant relationship existed between child gender and CBCL score above the cut point.

Does a relationship exist between a CBCL score above the cut point and the nature of the death?

No significant relationship existed between nature of death and CBCL score above the cut point.

Does a relationship exist between a CBCL score above the cut point and time since the death?

No significant association existed between time since death and CBCL score above the cut point.

Does a relationship exist between a CBCL score above the cut point and the relationship to the deceased?

A marginal relationship was found between relationship to the deceased and CBCL scores above the cut point. Loss of an aunt or grandparent was marginally associated with a CBCL score above the cut point probability level of 0.10.

Conclusions

The conclusions report the acceptance or rejection of the research hypotheses and the post hoc analysis.

Primary research hypothesis.

There is no significant relationship between parental report of their child's depressive symptoms and child self reported depressive symptoms among a group of bereaved children.

This hypothesis was not rejected since no significant relationship was found between the child and parent reports with correlation coefficient.

Secondary research hypotheses.

Age does not have any effect on the strength of the relationship.

This hypothesis was not rejected since no significant association between age and parent and child agreement was found.

Gender does not have any effect on the strength of the relationship.

This hypothesis is accepted since no significant relationship between gender and parent child agreement was found.

Nature of the death does not have any effect on the strength of the relationship.

This hypothesis is accepted since no significant relationship was found between nature of the death and parent child agreement.

Time since the death does not have any effect on the strength of the relationship.

This hypothesis is accepted since no significant association was found between length of time since the death and parent-child agreement.

Relationship to the deceased does not have any effect on the strength of the relationship.

This hypothesis is accepted since no significant relationship was found between length of time since the death and parent child agreement.

Questions arising from the data.

Is there a relationship between the CDI and CBCL scores above the cut off point?

There was no significant relationship between the CDI and CBCL scores above the cut off points.

Do the CDI scores above the cut off point reflect the expected value based on the normative data?

The number of CDI scores above the cut off point were related and reflect the expected value based on the normative data.

Do the CBCL scores above the cut off point reflect the expected value based on the normative data?

The number of CBCL scores above the cut off point were not related to and do not reflect the expected value based on the normative data.

Is agreement (ratings of above or below the cut point) altered by the age of the child?

There was no significant relationship between agreement and age of the child.

Is agreement (ratings of above or below the cut point) altered by the gender of the child?

There was no significant relationship between agreement and the gender of the child.

Is agreement (ratings of above or below the cut point) altered by the nature of the death?

There was no significant relationship between agreement and the nature of the death.

Is agreement (ratings of above or below the cut point) altered by the time since death?

There was no significant relationship existed between agreement and the time since death.

Is agreement (ratings of above or below the cut point) altered by the relationship to the deceased?

There was no significant relationship existed between agreement and the relationship to the deceased.

Does a relationship exist between a CBCL score above the cut point and the age of the child?

No significant association exists between child age and CBCL score above the cut point.

Does a relationship exist between a CBCL score above the cut point and gender of the child?

No significant relationship exists between child gender and CBCL score above the cut point.

Does a relationship exist between a CBCL score above the cut point and the nature of the death?

No significant relationship exists between nature of death and CBCL score above the cut point.

Does a relationship exist between a CBCL score above the cut point and time since the death?

No significant association exists between time since death and CBCL score above the cut point.

Does a relationship exist between a CBCL score above the cut point and the relationship to the deceased?

A marginal relationship was found between relationship to the deceased and CBCL scores above the cut point. Loss of an aunt or grandparent was marginally associated with a CBCL score above the cut point.

The study conclusions are in part surprising since the study data pointed to a number of questions and findings that were not anticipated.

Recommendations for Camp Rainbow and Future Research

Based on the findings and literature review recommendations have been formulated for Camp Rainbow sessions and for future research.

Camp Rainbow recommendations.

The significant number of parents who reported higher symptom ratings presents a variety of considerations for camp planners. In the current camp structure there is an educational session for parents that focuses on general information about bereavement and the role of parents in role modeling grief and bereavement uses a social learning theory approach.

Information about what the parents identify as key concerns or learning needs would also be helpful for camp planners. Camp registration forms could include a brief survey that might allow planners to address specific concerns or direct the session to generally recurring themes.

Planners may want to consider activities, handouts, or educational sessions for parents about strategies to help parents talk to their child about his or her feelings. Strategies for parents to role model this kind of expression may be helpful. Interactive parent and child sessions might allow for the kind of communication. Camp leaders do have an opportunity to role model this type of communication when the parents pick up their child. Typically the parents retrieve art work completed by their child and are shown the quilt that includes a square created by each camper. During small group sessions the children make these items to serve as exercises to help talk about grief reactions. Available small group leaders could be used to facilitate or role model communication about grief reactions while the parents are shown the artwork by their child.

The camp planners may want to expand and replicate this study to include a follow up with children and parents. This follow up could be used to determine if camp activities helped to increase parent awareness of their child's feelings (possibly through increased communication).

Educating the parents about normal grief reactions especially among children may be helpful in increasing parent understanding of their child's grief reactions. Education about how the parent's own grief experience may influence their capacity to parent or interpretation of their child's behavior may also prove helpful. Based on the literature review, parents who self rate as depressed (but are not presenting clinically) do tend to rate their child with a higher depressive score (Renouf & Kovacs, 1994). Sessions with parents should emphasize the need for

parents to consider their own need for support or assistance. Parents should be asked to consider the importance of the relationship of the deceased to themselves. As an extension of camp activities parents might benefit from sharing their own experiences with other parents in similar situations. This could serve as a social learning experience for parents in a difficult situation.

Recommendations for future study.

This study explored the initially posed research questions and explored other questions that could be addressed with the available data. However, a number of other research questions and considerations for studies with bereaved children were raised. The importance of using a variety of informants is clearly demonstrated in this study. Further research in this area reporting child depressive symptoms or bereavement experiences of children should always include the child's self report. Parental reports can be helpful and should be interpreted cautiously. If parent and child reports are used the concordance between the two should be included in the analysis and discussion.

This study did not examine the question if parents' own mood or grief reaction that may be contributing to their interpretation of their child's grief reaction. Renouf and Kovacs (1994) and others have found that increased parental self reported depressive symptoms are related to higher reports from the parents of the child's symptoms. This finding was among non-clinically referred parents. Further study is required to establish and determine the nature of this relationship among bereaved children and their parents. The marginal relationship between

higher CBCL scores and relationship to the deceased may reflect a higher degree of closeness of the parent to the deceased and the parent's own grief experience clouding their view of the child's feelings.

This study was limited by the use of children who were being presented to a bereavement support setting. Since the group of interest was children it was important to consider that the parents are the ones identifying this need or concern. Further study comparing child and parent concordance among bereaved children who were not being presented to a bereavement support setting would be helpful in understanding the possible unmet needs of this group. Although these parents were apparently identifying a need for their children the study failed to document if the parents sought the same support for themselves. The variable of wether the parents also were seeking or participating in bereavement would be useful for planning.

A further variable that could provide useful information is sibling or family groupings. This study did not collect information about children relationships between each other. It would be interesting to determine if caregivers tend to rate all their children similarly regardless of possible variations.

A further limitation of this study is the narrow definition of the relationship to the deceased. The nature and quality of interaction ie. frequency of contact, nature of contact or feelings of closeness to deceased were not explored. Despite blood relationship, emotional connection can vary considerably, from daily caregiver contact to occasional or emotionally distant contact only. This study did find marginal effects of relationship to the deceased with higher CBCL scores.

This leads to further questions about the specific effects of the relationship Further study quantifying this variable would be informative. This study was limited by the lack of information about specifically who is the custodial caregiver. Perhaps mothers, fathers, grandparents, aunts or other custodial guardians communicate differently with the child and this could impact the concordance or high CBCL ratings.

The subjective experience of bereavement among children has been described based on theoretical models, assumption and some research. Further exploratory research would be helpful for developing bereavement support sessions and education for the parents.

REFERENCES

Achenbach, T. & Edelbrock (1983). Manual for the Child Behavior Checklist and Revised Child Behavior Profile. University of Vermont: Burlington.

Achenbach, T. (1979). The child behavior profile: an empirically based system for assessing children's behavioral problems and competencies. International Journal of Mental Health, 7, 24-42.

Aldrich, L. (1995). Children adjusting to new situations (CANS) a grief support group. Caring(4), 82-3.

Angold, A., Weisman, M. John, K., Merikangas, K., Prusoff, B., Wickramarantne, P., Gammon, G., & Warner, V. (1987). Parent and child reports of depressive symptoms in children at low and high risk of depression. Journal of Child Psychiatry and Psychology, 28(6), 901-915.

Barrett, M., Bhate, B., Famuyiwa, O., Fundudis, T., Kolvin, I., & Tyrer,, S. (1991). Diagnosing childhood depression who should be interviewed- parent or child? British Journal of Psychiatry, 159(suppl 11), 22-27.

Bell-Dolan, D., Reavaen, N., & Peterson, L. (1993). Depression and Social Functioning: a multidimensional study of linkages. Journal of Clinical Child Psychology, 22(3), 306-315.

Bennett, J., & Peterson, C. (1995). The touch Inventory for elementary school aged children: Test-restest reliability and mother child correlations. American Journal of Occupational Therapy, 49(8), 795-801.

Corr, C. (1995). Children's Understanding of death- striving to understand death In K. Doka (Ed.), Children mourning, mourning children. (pp. 3-16). Hospice Foundation of America: Washington.

Edelbrock, C., Costello, A., Dulcan, M., Conover, N., & Kala, R. (1986). Parent-child agreement on child psychiatric symptoms assessed via structured interview. Journal of Child Psychology and Psychiatry, 27(2), 181-190.

Gersten, J., Beals, J., & Kallgren, K. (1991). Epidemiological and preventive interventions: Parental death in childhood as a case example. American Journal of Community Psychology, 19, 481-500.

Grollman, A. (1995). Grieving Children: can we answer their questions. In K. Doka (Ed.), Children mourning, mourning children. (pp. 17-27). Hospice Foundation of America: Washington.

Hemmings, P. (1995). Social work intervention with bereaved children. Journal of Social Work Practice, 9(2), 109-130.

Herjanic, B., & Reich, W. (1982). Development of a structured psychiatric interview for children: Agreement between child and parent on individual symptoms. Journal of Abnormal Child Psychology, 10(3), 307-324.

Kashani, J., Orvaschel, H., Burk, J., & Reid, J. (1985). Informant variance: The issue of Parent- child disagreement. Journal of the American Academy of Child Psychiatry, 24(4), 437-441.

Kazdin, a., Esveldt-Dawson, K., Unis, A., & Rancurello, M. (1983). Child and Parent Evaluations of Depression and aggression in psychiatric inpatient children. Journal of Abnormal Child Psychology, 11(3), 401-413.

Kazdin, A., French, N., Unis, A., & Esveldt-Dawson, K. (1983). Assessment of Childhood Depression: Correspondence of Child and Parent Ratings. Journal of the American Academy of Psychiatry, 22(2), 157-164.

Kovacs, M. (1980). Rating scales to assess depression in school aged children. Acta Paedopsychiatrica, 46, 305-315.

Kovacs, M. (1992). Children's Depression Inventory Manual. Multi Health Systems Inc.: North Tonawanda.

Leaman, O. (1995). Death and Loss Compassionate Approaches in the Classroom Cassell: New York.

Kubler-Ross, E., (1983). On Children and Death. MacMillan Publishing Co.: New York.

Leon, G., Kendall, P., & Garber, J. (1980). Depression in children: Parent, teacher and child perspectives. Journal of Abnormal Child Psychology, 8(2), 221-235.

Lonetto, R. (1980). Children's Conception of Death. Springer Publishing Co.: New York.

Moretti, M., Fine, S., Haley, G., & Marriage, K. (1985). Childhood and Adolescent Depression: Child-reports versus Parent report information. Journal of the American Academy of Child Psychiatry, 24(3), 298-302.

Nilzon, K., & Palmerus, K. (1997). Anxiety in depressed school children. School Psychology International, 18(2), 165-177.

Orvaschel, H., Weismann, M., Padian, N., & Lowe, T. (1981). Assessing psychopathology in children of psychiatrically disturbed parents a pilot study. Journal of the American Academy of Child Psychiatry, 20, 112-122.

Papadatou, D., & Papadatos, C. (eds.) (1991). Children and Death. Hemisphere Publishing Co.: New York.

Prichard, S & Epting, F. (1992). Children and Death: New Horizons in Theory and Measurement. Omega, 24(4), 271-288.

Riggs, P., Baker, S., Mikulich, S., Young, S., & Crowley, T. (1995). Depression in substance-dependent delinquents. Journal of the American Academy of Child and Adolescent Psychiatry, 34(6), 764-771.

Rotatori, A., Fox, R., Sexton, D., Miller, J. (1990). Comprehensive assessment in special education. Charles C. Thomas Publishers: Springfield.

Sanders, C. (1995). Grief of children and parents. In K. Doka (Ed.), Children mourning, mourning children. (pp. 69-83). Hospice Foundation of America: Washington.

Sandler, I. et al. (1992). Linking Empirically Based Theory and Evaluation: The Family Bereavement Program. American Journal of Community Psychology, 20(4), 491-521.

Schilling, R., Koh, N., Abramovitz, R., & Gilbert, L. (1992). Bereavement Groups for Inner-City Children. Research on Social Work Practice, 2(3), 405-419.

Siegel, K., Karus, & Raveis, V. (1996). Adjustment of children facing the death of a parent due to cancer. Journal of the American Academy of Child and Adolescent Psychiatry, 35(4), 442-450.

Smith, S., & Pennells, M. (eds.) (1995). Interventions with Bereaved Children. Jessica Kingsley Publishers: London.

Stavrakaki, C., Vargo, B., Roberts, N., Boodoosingh, L. (1987). Concordance among sources of information for ratings of anxiey and depression in children. Journal of the American Academy of Child and Adolescent Psychiatry, 26(5), 733-737.

Tonkins, S., & Lambert, M. (1996). A Treatment Outcome Study of Bereavement Groups for Children. Child and Adolescent Social Work Journal, 13(1), 3-21.

Wass, H. and Corr, C. (ed.) (1984). Childhood and death. Hemisphere Publishing co.: New York.

Wass, H., & Corr, C. (eds.) (1984). Helping Children Cope with Death Guidelines and Resources. (2nd ed.). Hemisphere publishing co.: New York.

Weisman, M., Orvaschel, H., & Padian, N. (1980). Children's symptoms and social functioning self report scales comparison of mothers' and children's reports. The Journal of Mental and Nervous Disease, 168(12), 736-740.

Weismann, M., Wickramaratne, P., Warner, V., John, K., Prusoff, B., Merikangas, K., & Gammon, D. (1987). Assessing psychiatric disorders in children discrepancies between mothers' and children's reports. Archives of General Psychiatry, 44, 747-753.

Weller, R., Weller, E., Fristad, M., & Bowes, J. (1991). Depression in Recently Bereaved Prepubertal Children. American Journal of Psychiatry, 148(11), 1536-1540.

Worden, W. & Silverman, P. (1996). Parental death and the adjustment of school age children. OMEGA, 33(2), 91-102.

APPENDICES

Appendix A
UTMC homecare letter

THE UNIVERSITY OF TENNESSEE
MEDICAL CENTER AT KNOXVILLE

• *University Memorial Hospital*
• *Graduate School of Medicine*

Home Care Services
Cherokee Place, Suite 102
2200 Sutherland Avenue
Knoxville, Tennessee 37919
1-800-284-8224
(423) 544-6200

November 6, 1998

To: Lisa Paton
From: Mary Ann Butler, Associate Director
UTK Home Care Services

This letter is being written to inform you of the approval of Home Care Services allowing you to access the bereavement histories, child surveys and parent surveys from Camp Rainbow 1998 for use in your thesis. The data can be accessed at the home care office and will not leave the site. Data that identifies individuals by name or address will not be provided or collected. The submitted data collection form may be used to collect the appropriate data.

Sincerely,

Mary Ann Butler,
Associate Director Home Care Services,
University of Tennessee Knoxville

Anderson County
3310 Andersonville Hwy., Suite B
Norris, Tennessee 37828
1-800-494-7890
(423) 494-8221

Jefferson County
683 E. Broadway Blvd.
Jefferson City, Tennessee 37760
1-800-400-0556
(423) 475-3559

Loudon County
1101 E. Broadway St.
Lenoir City, Tennessee 37771
1-800-874-6442
(423) 988-9037

An EEO/AA/Title IX/Section 504/ADEA/ADA Employer.

Appendix B
UT Department Approval Letter

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

Department of Health and Safety Sciences
College of Human Ecology
1914 Andy Holt Avenue
Knoxville, TN 37996-2710
(423) 974-5041
FAX (423) 974-6439

December 1, 1998

Title: The Relationship Between Parental Observation of Child Depression and Child Self Reported Depressive Symptoms in Bereaved Children Aged 5-13.

Lisa Paton
3700 Oangewood Road
Knoxville, TN 37921

Dr. Jack Ellison
Department of Health & Safety Sciences
1914 Andy Holt Avenue
Knoxville, TN 37996-2710

The project listed above has been reviewed and has been certified as APPROVED by the department for submission to UT Office of Research Compliances for EXPEDITED review.

Unless there are major changes in the experimental methods or project design, no further reporting to this committee is required. The responsibility for oversight of this project will be that of the Principal Investigator and Student Advisor (if any). Please be advised at the end of the project a Form D for completion is required.

We wish you success in your research endeavors.

Sincerely,

Paula Zemel

Paula Zemel, PhD
Chair, Departmental Review Committee

PZ/kw

Appendix C
Form B

FORM B

FORM B

IRB # _____

Date Received in OR _____

THE UNIVERSITY OF TENNESSEE, KNOXVILLE

Application for Review of Research Involving Human Subjects

I. IDENTIFICATION OF PROJECT

A.Principal Investigator Co-Principal Investigator

Lisa Paton advisor: Dr J. Ellison

Lisa Paton 3700 Orangewood Rd. Knoxville, TN 37921 phone: 522-9071 email: jamco@utk.edu

Dr. J. Ellison 1914 Andy Holt Ave. University of Tennessee, Knoxville, TN 37996-2701

Department/Unit: Health and Safety Sciences

B.Project Classification: Thesis

C.Title of Project: The relationship between parental observation of child depression and child self reported depressive symptoms in bereaved children aged 5-13.

D.Starting Date: Upon IRB Approval

E.Estimated Completion Date: May 1, 1998

F.External Funding: N/A

II. PROJECT OBJECTIVES

Objective(s) of Project :

- To provide analysis of data relating parent observed depressive behavior to self reported child depressive symptoms in a group of 5-13 year old bereaved children
- To relate gender, relationship to deceased, cause of death, length of time since the death and age to patterns of parent and child ratings.

III. DESCRIPTION AND SOURCE OF RESEARCH PARTICIPANTS

- The data will be collected from exiting records of University of Tennessee home care services, Camp Rainbow. Upon UTMCK IRB and UTK IRB approval the data will be collected from the records on the attached data collection form. This data will not include child or parent names, phone numbers or addresses. The data will be collected from camp surveys and questionnaires that were completed as a part of camp activities. Limited access to camp data will be provided and access to biographical information will not be available to the primary investigator for this project. The investigator will be provided with the required sets of data only, not to complete camp files.

FORM B

IRB # _____

Date Received in OR _____

IV. METHODS AND PROCEDURES

The attached data collection form will be used to organize the data and match child surveys, parent surveys and bereavement histories. The data will be collected at the UT homecare office, where it is stored. This will be to ensure identifying data is not inadvertantly disclosed or lost. This data will then be analyzed by comparison of small group means and t tests.

V. SPECIFIC RISKS AND PROTECTION MEASURES

The risk in this project is limited since an existing source of data is to be used. Anonymity and confidentiality of data will be safeguarded by limiting data collection and recording of non identifying data only.

VI. BENEFITS

The risks of this study to participants are minimal. This assessment is made due to the use of existing data. The benefit of this study is the contribution it will make to generalizable knowledge about bereaved children and of their parent's observations of their bereaved behavior. This could contribute to the development of educational and support programs for bereaved children and their families.

VII. METHODS FOR OBTAINING "INFORMED CONSENT" FROM PARTICIPANTS

As a component of Camp Rainbow parents and children participate in activities including the surveys. A written consent from UT homecare director, Carolyn Foster is attached to indicate permission to access the data upon IRB approval.

VIII. QUALIFICATIONS OF THE INVESTIGATOR(S) TO CONDUCT RESEARCH

The primary investigator is a registered and licensed occupational therapist. The primary investigator has professional experience working in a mental health setting and working with children. The primary investigator has also completed the required volunteer training for Camp Rainbow volunteers.

IX. FACILITIES AND EQUIPMENT TO BE USED IN THE RESEARCH

The research will be conducted at UT homecare services. The equipment and facility needs are limited, due to the limited nature of the data collection. Pen and possibly a clip board are the only required supplies beyond the actual data collection tool and data files.

X. RESPONSIBILITY OF THE PRINCIPAL/CO-PRINCIPAL INVESTIGATOR(S)

By compliance with the policies established by the Institutional Review Board of The University of Tennessee, Knoxville, the principal investigator(s) subscribe to the principles stated in "The Belmont Report" and standards of professional ethics in all research, development, and related activities involving human subjects under the auspices of The University of Tennessee, Knoxville. The principal investigator(s) further agree that:

a. Approval will be obtained from the Institutional Review Board prior to instituting any change in this research project.
b. Development of any unexpected risks will be immediately reported to the Compliances Section.
c. An annual review and progress report (Form R) will be completed and submitted when requested by the Institutional Review Board.

FORM B

IRB # _____

Date Received in OR _____

d. Signed informed consent documents will be kept for the duration of the project and for at least three years thereafter at a location approved by the Institutional Review Board.

XI. SIGNATURES

Principal Investigator Lisa Paton

Signature Lisa Paton Date _____

Co-Principal Investigator NA

Signature _____ Date _____

Student Advisor (if any) JACK S. ELLISON

Signature Jack S. Ellison Date 11-9-98

XII. DEPARTMENT REVIEW AND APPROVAL

The application described above has been reviewed by the IRB departmental review committee and has been approved. The DRC further recommends that this application be reviewed as:

[✓] Expedited Review -- Category(ies): 8

OR

[ ] Full IRB Review

Chair, DRC Paula Jensel

Signature _____ Date _____

Department Head Charles B. Hamilton

Signature Charles B. Hamilton Date 11-23-98

Protocol sent to Compliance Section for final approval on (Date) _____

Approved: Compliance Section
Office of Research
404 Andy Holt Tower

Signature _____ Date _____

AGE	GENDER	RELATION TO DECEASED	CAUSE OF DEATH	DATE OF DEATH	CHILD RAW	CHILD T	PARENT RAW	PARENT T

Appendix D
Routing Sheet for IRB approval

IRB #_____
(Leave Blank)

See Page Two of the Instructions for the Appropriate Number of Copies of the Completed Application Which Must Be Submitted.

ROUTE SHEET
FOR
NEW APPLICATIONS AND PROCEDURAL CHANGES
ON CURRENTLY APPROVED APPLICATIONS
(EXPEDITED AND FULL IRB REVIEW)

Brief Title: The relationship of child reported and parent-observed depressive symptoms in bereaved children
Type of Project (Check one):
Expedited Review including possible exemption ✓ Full IRB Review _____ Revision Change _____

Principal Investigator: Lisa Paton

Lisa Paton — Signature
Nov. 5 1998 — Date

Department: health and safety sciences - UTK. Telephone. No. 544-6211 day
522 9071 eve

Name and Tel. No. of person to contact should questions arise during review:

Name: Lisa Paton Tel. 544-6211 or 522-9071
or email jamco@utk.edu

Awards/Applications TITLE	Award No. (If known)	Sponsoring Agency

APPROVAL (Use a supplemental page if needed; Please type names beneath all signatures)

Lisa Paton — Co-principal Investigator Lisa Paton
Nov. 5 1998 — Date

Co-principal Investigator — Date

Collaborating Investigator — Date

Jack Ellison — Section or Division Chief of P.I. Dr. Jack Ellison
11-9-98 — Date

Paula Zeimel — Departmental ~~Chairman of P.I. Dr. Jo Parsley~~ P. Zeimel
Date

Appendix E
Letter to UTMC IRB (Dr. Fuhr)

3700 Orangewood Rd.,
Knoxville, TN
37921

phone: 522-9071
email: jamco@utk.edu

Chairman of IRB
IRB at UTMCK
Box 116
UTMCK
1924 Alcoa Hwy.
Knoxville, TN

Attention: Dr. J. Fuhr
Re: Expedited IRB approval

I am writing to you to request an expedited review of my proposed thesis project that involves use of existing data that is held by UTMCK - homecare services division. Please find attached the routing form that I was instructed to send. A brief outline of the project is also included. I have also attached the letter from the director of homecare services granting her permission to access the records from camp pending IRB approval. The data are not actual medical records, they are surveys and questionnaires that were completed by the campers and their guardian as part of camp activities or registration. These surveys and questionnaires are stored separately from the biographical data, and identifying information such as addresses etc. will not need to be seen by the primary investigator.

If further documentation or clarification is required, please do not hesitate to contact me at the above number, or email.

Sincerely,

Lisa Paton

Lisa Paton

Appendix F
Letter from UTMC IRB (Dr. Fuhr)

THE UNIVERSITY OF TENNESSEE
MEDICAL CENTER AT KNOXVILLE

• *University Memorial Hospital*
• *Graduate School of Medicine*

Office of Institutional Review Board
1924 Alcoa Highway
Knoxville 37920-6999
(423) 544-9781

December 7, 1998

Lisa Paton, OTR
Home Care Services
The University of Tennessee Medical Center
At Knoxville
1924 Alcoa Highway
Knoxville, TN 37920

RE: IRB #0955 Chart Review: "Relationship of Child Reported and Parent Obsessed Depressive Symptoms in Bereaved Children"

Dear Ms. Paton,

Your above referenced research study has been administratively reviewed and approved. Your research application will be reviewed in one year.

Any further alterations/adverse events in the protocol must be promptly reported to and approved by the University of Tennessee Medical Center at Knoxville Institutional Review Board.

In addition, annual reapproval is required by the IRB, and it is the Responsibility of the Principal Investigator to initiate the request for reapproval regardless of the time the activity has been approved by the sponsoring agency.

We appreciate your informing us of this project.

Sincerely,

Joseph E. Fuhr, PhD
Chairman
Institutional Review Board

JEF: rl

Appendix G
Letter from UT IRB (Brenda Lawson)

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

Office of Research
404 Andy Holt Tower
Knoxville, Tennessee 37996-0140
PHONE: (423) 974-3466
FAX: (423) 974-2805
URL: http://www.ra.utk.edu/ora

01/08/99

IRB # : 5664 B

Title : The relationship between parental observation of child depression and child self reported depressive symptoms in bereaved children aged 5-13

Paton, Lisa
Health & Safety Sciences
3700 Orangewood Rd.
Knoxville, TN 37921

Ellison, Dr. Jack
Health & Safety Sciences
1914 Andy Holt Ave.
Campus

Your project listed above was reviewed. It qualified for expedited review and has been approved.

This approval is for a period ending one year from the date of this letter. Please make timely submission of renewal or prompt notification of project termination (see item #3 below).

Responsibilities of the investigator during the conduct of this project include the following:

1. To obtain prior approval from the Committee before instituting any changes in the project.
2. To retain signed consent forms from subjects for at least three years following completion of the project.
3. To submit a Form D to report changes in the project or to report termination at 12-month or less intervals.

The Committee wishes you every success in your research endeavor. This office will send you a renewal notice (Form R) on the anniversary of your approval date.

Sincerely,

Brenda Lawson

Brenda Lawson
Compliances

cc: Charles Hamilton

VITA

Lisa Paton was born in Barrie, Ontario, Canada. She attended public schools in Simcoe County where she graduated in June, 1987. She entered Mc Master University in Hamilton, Ontario, Canada. She completed her B.Sc. with a mathematics major in May, 1990. The following fall she entered the B.H.Sc.(O.T.) at Mc Master University and graduated summa cum laude in November, 1992. She worked as an occupational therapist in a variety of settings and locations including the following: Inpatient acute psychiatric unit in Saskatoon, Saskatchewan; inpatient and outpatient psychiatry department in Red Deer, Alberta; inpatient subacute and outpatient psychiatry unit in Calgary, Alberta; inpatient rehabilitation hospital in Erie, Pennsylvania; skilled nursing facility consultation in Beaumont, Texas; homecare and outpatient physical rehabilitation in Kane, Pennsylvania; and homecare services in Knoxville, Tennessee. During her employment with the University of Tennessee homecare services she enrolled in the M.Sc. in health education and health promotion in May 1997 at the University of Tennessee.

Lisa is presently working with University of Tennessee homecare services as an occupational therapist.