Factors Related to Posttraumatic Stress Syndrome as a Sequelae of Parental Bereavement Following the Traumatic Death of a Child

by Linda L. Tillery, R. N.

A Master's Research Project

Presented to

Oregon Health Sciences University

School of Nursing

in partial fulfillment

of the requirements for the degree

Master of Science

May, 1995

APPROVED:

[redacted]

{Name, credentials, title}, Research Advisor

[redacted]

{Name, credentials, title}, Committee Member

{Name, credentials, title}, Committee Member

{Name, credentials, title}, Department Chairperson

ACKNOWLEDGMENTS

This project was one of my most valuable and enjoyable learning experiences, although overwhelming at times. The support I received from my committee advisor, Dr. Gail Houck, and committee member, Dr. Beverly Hoeffer, as well as colleagues and friends helped me to continue and follow through with the process. The support and encouragement of Dr. Shirley Murphy at the University of Washington were instrumental in my choosing to carry out Master's Research Project. Thank you to all those who have been by my side the past 2 years. These nursing scholars, Gail, Beverly, and Shirley, are inspiring role models and mentors.

My most humble thank you goes to the parents who participated in the Parent Bereavement Stress and Intervention Project. Their participation took courage to discuss and answer our questions about the painful death of their children.

ABSTRACT

Parents whose children had died by means of sudden accident, suicide, and homicide were studied to develop a predictive profile of bereaved parents at risk for development of PTSD symptoms after the death of their child. Participants were in the Parent Bereavement Stress and Nursing Intervention Program. Parental scores on the Traumatic Experiences Scale and other variables were examined. Although a predictive profile was not developed some variables were found to have an association with higher distress scores. One-hundred and fifty parents participated in this study. On average they were in their mid-forties, married, and well-educated, and their children were deceased at twenty years of age. Mothers and fathers were found to have a high degree of distress, with mothers' distress level significantly higher than fathers. Cause of death was related to higher distress scores: homicide and undetermined causes of death were associated with higher distress levels. Single motherhood was also linked to more distress. Religious affiliation, partnered status, and education were associated with lower distress levels. Findings were supportive of previous work revealing PTSD as a sequelae of parental bereavement following the traumatic, violent death of a child.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION / 7

Introduction / 7

Statement of the Problem / 8

Conceptual Framework / 9

Research Question / 10

CHAPTER II: REVIEW OF THE LITERATURE / 16

Introduction / 16

Central Concepts / 17
- Attachment / 17
- Loss / 18
- Bereavement / 19
- Grief / 20
- Mourning / 20
- PTSD / 20

Normal versus Pathologic Grief / 21

Normal Mourning versus Parental Mourning / 22

Syndromes of Dysfunctional Grief / 25
- Dependent Grief Syndrome / 25
- Unexpected Loss Grief Syndrome / 26
- Conflicted Grief Syndrome / 28

Comorbidity / 28
- Depression / 31
- PTSD in Survivors of Suicide / 32
- PTSD in Survivors of Homicide / 34
- PTSD in the Kindling Effect / 35
- PTSD in Pathologic Grief / 35
- PTSD in the General Population / 36

Summary / 37

CHAPTER III: METHODS / 39

Overview / 39

Parent Bereavement Project / 39

Design / 40
Sample / 40
Protection of Human Subjects / 41
Procedures / 42

Measurement Instruments / 43
Traumatic Experiences Scale / 43
Parent Demographic Data Sheet / 44
Child Data Card / 45

CHAPTER IV: RESULTS / 46

Overview / 46

Demographic Characteristics / 46

Traumatic Experiences Scores / 48

Parental Characteristics in Relation to TES Scores / 51
Mothers / 51
Fathers / 52

Nature of Child's Death in Relation to TES Scores / 54

CHAPTER V: DISCUSSION / 58

Overview / 58

Limitations / 65

Conclusion / 66

REFERENCES / 67

APPENDIX A : OHSU Protection of Human Subjects Approval / 77

APPENDIX B: Principal Investigator Permission for Secondary Analysis / 78

APPENDIX C: Informed Consent Form / 79

APPENDIX D: Parent Bereavement Project Program Orientation / 80

APPENDIX E: Traumatic Experiences Scale / 81

APPENDIX F: Parent Demographic Data Sheet / 82

APPENDIX G: Child Data Card / 83

APPENDIX H: Table 1 / 84

APPENDIX I: Table 2 / 85

APPENDIX J: Table 3 / 86

APPENDIX K: Figure 1 / 87

APPENDIX L: Figure 2 / 88

APPENDIX M: Figure 3 / 89

APPENDIX N: Figure 4 / 90

APPENDIX O: Figure 5 / 91

APPENDIX P: Figure 6 / 92

Chapter I: INTRODUCTION

Parents whose children have died because of suicide, homicide, or sudden accidental death verbally report symptoms of Posttraumatic Stress Disorder (PTSD). The parents who verbalized PTSD symptoms did not seem to move through the bereavement process in the same manner as the other participants in the Parent Bereavement Project. The vivid, intrusive thoughts about the death of their son or daughter were disruptive to their bereavement. This study will develop empirical evidence to support the anecdotal testimony and identify characteristics of those parents at highest risk for developing PTSD symptomatology.

Violence has been recognized as a major public health problem in the United States (Rinear, 1987). Murder is a violent act that leaves unrecognized victims, the surviving family members. The National Organization for Victim Assistance, (n. d.), has referred to these unrecognized victims as "covictims". There is very little research about the covictims, specifically parents. PTSD symptomatology has been found to begin within one week of the child's murder and persist for as long as 1-2 years after, thus not only distorting the bereavement process of the surviving parents, but prolonging it as well (Rinear, 1987). Death of a child by homicide is both symbolic and actual in nature. It is imperative that educational and treatment approaches for reducing the

secondary injury experienced by the covictims of homicide be developed because of the increasing numbers of victims.

Anticipatory bereavement literature shows that higher levels of distress occur with sudden loss (Lundin, 1984; Parkes & Weiss, 1983). The participants in the Parent Bereavement Project are at increased risk for high distress because of the sudden traumatic nature of the death irregardless of other factors that may be present. The area of bereavement after the loss of adult children is a relatively unexplored area and one with preventive implications. Death of a child impacts the individual parent, the marital dyad, the family system, and society.

Statement of Problem

The leading causes of death among adolescents and young adults in the U. S. are (in descending order): accidents, homicide, and suicide (National Center for Health Statistics, 1991). These modes of death account for 80% of all deaths in this age group. Whereas accidents have decreased in number, suicides and homicides have increased significantly over the past 20 years. On the basis of these statistics, the clinician may expect to encounter increased numbers of parents who have experienced exposure to the violent death of a child. These parents may not seek health care with loss as the presenting problem; rather, health care may be sought for other more physical

complaints. These include such complaints as difficulty sleeping, digestion problems, headaches, and low energy. This complication of bereavement is a public health concern given the prolonged effects on the social, health, and economic status of these parents when all the issues are not recognized nor addressed effectively.

Studies of children and adolescents have shown the considerable likelihood of psychiatric sequelae after exposure to violent death. It seems likely that parental bereavement would in turn be similarly complicated by the exposure to the traumatic, violent death of a child with subsequent psychiatric sequelae. Howeer, parent bereavement data concerning sudden violent death is lacking. The proposed study will explore whether the same kind of phenomena exists in parents whose adolescent and young adult children have died by suicide, homicide, or sudden accident as has been found in studies of children and adolescents.

Conceptual Framework

The transition phase of bereavement may be understood using a stress and coping model. The transition phase is a period during which the PTSD symptoms can be diagnosed (time requirement to make DSM-IV diagnosis of PTSD). The parent cannot move through the bereavement process until the PTSD is treated. The bereavement

transition may be intense and prolonged because the deaths are unexpected, premature, and violent (Weisman, 1973).

Wortman and Silver (1989) noted three patterns in their empirical review of coping with irrevocable loss from the most common to the least common: (a) initial high distress that decreases over time; (b) distress lasting longer than would be expected; and (c) less distress than would be expected. There is little known about the differentiation of high distress from low distress persons.

The concept of stress has been defined by Hinkle (1977), drawing from the work of Wolff (1953) as a "dynamic state" involving adaptation to demands. Selye (1956) in contrast, described stress as an orchestrated physiological response pattern. These conceptualizations of stress are important for four reasons: (a) in the physical sciences an inactive or passive body is strained by environmental loads, such that the body engages in adaptational efforts crucial to restoration and maintenance of equilibrium; (b) as a biological process of defense, stress is analogous to the psychological process of coping, in which a person engages to manage psychological stress; (c) as a dynamic state, important stress processes, such as resources available for coping, their costs, and their benefits, are recognized; and (d) viewed as a dynamic state, attention is toward the ongoing relationship between the organism and the

environment (Lazarus & Folkman, 1984). In the 1960's, stress became accepted as an inevitable aspect of the human condition and coping was recognized as making the difference in adaptational outcome (Lazarus & Folkman, 1984). The shift from stress to coping began with Lazarus' work in Psychological Stress and the Coping Process (1966).

Preventive intervention studies of widows, newly separated women, and those experiencing other traumatic losses, suggest that stress is both cognitively and affectively mediated by support strategies (Dracup, Meleis, Baker, & Edlefsen, 1984; Gillis, 1984; Osterweis, Solomon, & Green, 1984; Weiss, 1975). Support consists of both professional intervention, and family and friend support. The stress-recovery process involves effective support but, because of the lack of differentiation between professional and non-professional support, it is difficult to evaluate when and under what circumstances each is appropriate.

Two broad dimensions of support, problem-focused and emotion-focused support have been described by Murphy and Moriarty (1976), Pearlin and Schooler (1978), House (1981), Lazarus and Folkman (1984), and Thoits (1986). Problem-focused support is said to consist of direct actions that alter circumstances appraised as threatening or alter the meaning of the situation by offering information or

advice that may motivate one to engage in adaptive behaviors (Lazarus & Folkman, 1984; Murphy, 1989). Emotion-focused support is thought to consist of actions or thoughts used to control negative feelings, alter one's mood, and foster beliefs in affected individuals that they are respected and loved (Lazarus & Folkman, 1984; Murphy, 1989). The traumatic, violent death of a child is an excessive threat in the world of a parent. When excessive threat occurs, decreased cognitive functioning and ability to process information result (Lazarus & Folkman, 1984). Janis and Mann (1977) describe this ineffective information processing as hypervigilance. Hypervigilance is characterized by obsessive thoughts, constricted cognitive functioning, and premature closure (Easterbrook, 1959; Hamilton, 1975; Korchin, 1964; Sarason, 1975). These characteristics are common in bereaved parents.

Transition following traumatic loss is a lengthy period of personal and relational change often lasting one to three years. Central to the concept of transition is that: (a) one's assumptions or structures of meaning enable one to understand the world and to interpret his or her experiences in it; (b) these assumptions shape behavior; (c) events, especially uncontrollable and unpredictable ones, challenge or change these assumptions, undermining meaning, leading to perceptions of stress; (d) change encompasses not only external circumstances, but

more importantly, self-perceptions; and (e) stresses associated with loss and change require passage of time to cope with change, incorporate role and identity change, and require several kinds of support (Parkes, 1971; Schlossberg, 1984; Weiss, 1976; Wethington & Kessler, 1986; Worden, 1982).

Many factors come together to complicate the bereavement process. Frequently parents believe the death was preventable; there may be multiple deaths; potentially stigmatizing apsects may be associated with the death; the stage of the family life cycle; unresolved parent and child conflicts at the time of death; and, the deaths are contrary to the natural order of life cycle events (Murphy, 1989)

Exposure to the traumatic, violent death of their child is a factor for parents who are already vulnerable because of psychiatric history, coping skills, and close relationship to the victim. The intent of this project is to help the clinician be aware of the complications to bereavement that would indicate more intensive treatment strategies. Bereavement cannot be transcended until the more severe PTSD responses are addressed. Bereaved parents are at risk for PTSD because of: (a) the unexpected and irrevocable nature of the loss of their child; (b) the societal expectations that within a relatively brief period of time people are expected to resolve their loss and resume previous

levels of functioning; and (c) although grief is an important affective component of bereavement particularly when the loss is irrevocable, role commitments and lifestyle behaviors may interfere with its expression (Murphy, 1989).

The loss of adult children seems to produce more difficulty for parents whose adult children die in traffic accidents in contrast to parents who lose children from natural causes (Shanfield, Swain, & Benjamin, 1986). There are individual, family, and societal expectations that are violated; individual factors that contribute to the way in which a parent may grieve; the mode of death; and the uniqueness of the parent-child attachment contribute to the complexity of parental bereavement.

Research Question

The proposed study is an exploratory secondary analysis of the Parent Bereavement Stress and Nursing Intervention Project data. The Parent Bereavement Stress and Nursing Intervention Project data set is derived from parents who have experienced the violent, traumatic death of an adolescent or young adult child by means of suicide, homicide, or sudden accident.

The data will be analyzed to answer the following research questions:

1. What is the range of parents' scores on the Traumatic Experiences Scale (TES) at baseline?

2. What are the characteristics from the demographic questionnaire of those parents with high TES scores in contrast to those with low TES scores at baseline?

3. What is the relationship between the nature of the child's death and parents' TES scores at baseline?

CHAPTER II: REVIEW OF THE LITERATURE

Introduction

Sander's Tampa Study (1979-80) compared adult bereavement in response to the death of a spouse, child, and parent. Bereaved parents showed more intense grief reactions of somatic types and greater depression, as well as anger and guilt, than did those who had lost either a spouse or parent (Sanders, 1984). Sudden death compounds these reactions with feeling a loss of control, having a sense of unpredictability in the world, and inability to know who to trust. The primary task of mourning entails both relinquishing the attachment to the deceased and resolving the meaninglessness of the event (Sanders, 1984).

In the traumatic, violent death of a child, the question "Why?" is not often answerable. Parents typically have difficulty resolving the meaninglessness of the death of their child. Finding meaning in the death of a child is a personal endeaver that may require professional assistance to move through the bereavement process. Successful relinquishment of the attachment is a part of the process that does not mean that the memory of the child will be forgotten yet will allow the parent to move forward in a positive way.

How does a clinician recognize and predict pathological responses? One way is to use the research reported surrounding children and traumatic events and generalize to the adult population. Although there is little information about PTSD and parental exposure to traumatic death there are many studies of PTSD among children and adolescents exposed to traumatic events, such as death of peers or siblings. Factors found to predict pathology in children and adolescents' response to traumatic violent death may extend to adults' response to traumatic violent death. These factors include: (a) the extent of the exposure; (b) the relationship to the deceased; and (c) the coping skills of the survivor.

Review of the literature on parental grief and bereavement will be presented in four areas: (a) central concepts that define the field of study; (b) discussion of normal and pathologic bereavement; (c) discussion of normal mourning and parental mourning; and (d) discussion of comorbidity.

Central Concepts

The following concepts are used to define the field of study for this project.

Attachment. Attachment refers to the propensity of human beings to develop strong affectional bonds to a particular other (Bowlby, 1980;

Osterweis, Solomon, & Green, 1984). The parent-child attachment begins once the conception is known. The parental feelings are a mixture of his and her feelings about themselves, others, and the child from past and present experiences. The child is not only an extension of the parents biologically; he or she is an extension of them psychologically (Rando, 1984). The child may signify many things to the parents: (a) projection of their feelings about themselves and others onto the child; (b) hopes for resolution of intrapsychic conflict; (c) fulfilment of something missing for the parent in some way such as, provide someone who will love and need them, replace someone who has been lost, or compensate their own deprived childhood, and (d) any number of other conscious and unconscious needs of the parent. The child concretely represents the parents' continuity and immortality (Rando, 1984).

Loss. Loss is a state of being deprived of something that was once available and important and now is gone (Benoliel, 1982). Loss may be tangible or psychosocial. According to Bowlby (1969), attachment behavior does not disappear with childhood but persists throughout life, for "old or new figures are selected and proximity and communication maintained with them". Bowlby's work in relation to parental bereavement links ongoing and new attachments to

experiencing loss, for without attachment, there cannot be loss (Rando, 1984).

Parents believe that they should be able to unequivocally love, nurture, and protect the child in all situations, and they are haunted with guilt whenever these expectations are unmet (Rando, 1984). The successful caring for the child defines the parents' senses of self, role, and reality, cementing the unparalled closeness of the parent-child relationship (Rando, 1984). These are the very factors that intensify and complicate the bereavement process for parents. The incomparable closeness of the relationship causes the parent to be particularly vulnerable to the loss, which constitutes a failure to sustain the basic function of parenthood (Rando, 1984). Given the importance of attachment relationships and the significance of the parent-child attachment, the loss of a child represents a profound assault on the parent's sense of self and immortality.

Bereavement. Bereavement is the fact of loss through death (Osterweis et al., 1984) or the state of having suffered a loss (Rando, 1984). Thus, bereavement specifies loss through death and clarifies the experience of loss as a state. Bereavement further entails ongoing change and adjustment. Bereavement is a process that affects every

aspect of life, including role relationships, social interactions, and economic factors (Murphy, 1983).

Grief. Grief, in contrast to bereavement, pertains to the feelings (affect) and their certain associated behaviors. Grief is expressed by crying, sorrow, anxiety, agitation, sleeplessness, lack of interest in things, frequent gastrointestinal complaints, loss of appetite, and seriously impaired social functioning (Osterweis et al., 1984). Grief is the intrapersonal reaction to loss; it is an affective process, not a problem (Murphy, 1983). Although grief is an essential and healthy coping response to loss, it is difficult to describe "typical" grief because of the diversity of behaviors among individuals.

Mourning. Mourning is the social expression of grief. It is exemplified by mourning rituals and associated behaviors. Worden's model (1982) identifies four tasks of mourning that if accomplished lead to successful recovery from grief. The four tasks of mourning are: (a) accepting the reality of the loss; (b) experiencing the pain of grief; (c) adjusting to the environment in which the deceased is missing; and (d) withdrawing emotional energy and reinvesting it in another relationship.

Posttraumatic Stress Disorder. According to the DSM-IV (1994), Posttraumatic Stress Disorder (PTSD) entails the development of characteristic symptoms following exposure to an extreme, traumatic

stressor. An extreme, traumatic stressor includes direct personal experience of an event that involves actual or threatened death or injury to one's physical integrity; witnessing an event that involves death, injury, or threat to another person; or learning about the unexpected violent death or threat experienced by a family member or other close associate. The characteristic symptoms resulting from the exposure to the trauma include: (a) persistent reexperiencing of the traumatic event; (b) persistent avoidance of stimuli associated with the trauma; (c) numbing of general responsiveness; and (d) persistent symptoms of increased arousal. The full symptom picture must be present for more than one month and contribute to significant distress that impairs social, occupational, or other areas of functioning (DSM-IV, 1994).

Normal versus Pathologic Grief

Differentiating between normal and pathologic grief is difficult. The bereavement process and the grief response are very diverse, vague, and individualized. When there is abnormal grief (affect), the process of bereavement (change and adjustment in life) is affected. Bereavement then, is normal or abnormal depending on the grief response. Frequency and intensity of symptoms seem to be the common markers cited in the literature that distinguish between normal and pathologic grief. Worden's model (1982) of mourning is a poor fit for

parental grief and leads to a diagnosis of unresolved, pathological, or abnormal grief. According to Rando (1984), a new model of parental mourning must be constructed that takes into consideration the particular difficulties encountered when mourning the loss of a child, and reevaluation of the criteria for pathological grief because of the intensification and prolongation of symptoms typically evidenced in grief over the loss of a child.

Normal Mourning versus Parental Mourning

The first task of normal mourning utilizing Worden's model (1982) is accepting the reality of the loss. It is difficult for parents to accept the loss of a child because of the violation of the natural order of life, the guilt surrounding the expection of being able to protect their child, their failure as a parent as a result, and the assault on the parents' sense of self. Bereaved parents can deny the loss of a child depending on the family life cycle: (a) if there are are other children, displacing their affection, hopes, and dreams onto their surviving children; and (b) if the deceased child is an adult, there is not the expectation of the child being in the home, therefore the absence does not have to be confronted (Murphy, 1989; Rando, 1984).

The second task of mourning according to Worden (1982) is to experience the pain of grief. This is especially difficult for bereaved

parents because they not only grieve for the loss of the child, but also for the hopes and dreams invested in that child, as well as the parts of themselves and their immortality that are represented in that child (Rando, 1984). The parent-child attachment with the subsequent premature separation creates great trauma. It is theorized that this traumatic event leads to the severity and length of parental grief as compared to other types of losses. In addition, bereaved parents must deal with society's unrealistic expectations which further decreases their support. The lack of support leaves the bereaved parent without the compassion, nurturance, and reality testing needed to handle the emotions and confrontations necessary for grief work (Rando, 1984).

Worden's (1982) third task of mourning, adjusting to the environment in which the deceased child is missing, is complicated when parents must continue to operate in the very same environment, performing the same roles for surviving children (Rando, 1984). There is not a change in role definition or functioning unless the deceased child was an only child.

The fourth task of mourning (Worden, 1982), is a combination of decathexis and reinvestment. This fourth task requires multually incompatible tasks, that of holding on and letting go. According to Rando (1984):

> It is difficult for the bereaved parent to differentiate the child from the self, identifying those qualities that solely belong to the child or solely belong to the parent. Thus decathexis is exceptionally hard for parents because detaching hopes and feelings from the child seems tantamount to giving up on part of oneself. As the child represents an extension of the parent's self in more than just the interactional sense of self that is usually defined in a relationship between two individuals, the loss of a child is more of a personal loss of self than any other loss (p. 49).

Grief has many dimensions and parental grief specifically is misunderstood if one applies the general concepts of grief (Rando, 1984). Early grief reactions to four modes of death (natural, suicide, homicide, and accident) were investigated by Vargas, Loya, and Hodde-Vargas (1989). They found four features that characterized pathological grief: (a) depressive symptoms; (b) preservation of lost object; (c) suicidal ideations; and (d) decedent-directed anger (Vargas, Loya, Hodde-Vargas, 1989). The extent of pathology is reflected in the frequency and intensity of these responses. These responses of pathologic grief are common in parental bereavement.

Syndromes of Dysfunctional Grief

Often characteristics of relationships result in unresolved grief. The parent-child relationship is particularly vulnerable to unresolved grief. Specific factors in the parent-child relationship that are associated with unresolved grief are discussed in conjunction with typologies of Parkes and Weiss (1983) and Raphael (1983). Preliminary prospective research of Parkes and Weiss (1983) and Raphael (1983) identified three syndromes of dysfunctional grief. Because of the lack of standard measures, the research presents problems in predictive power and cross validation, nonetheless, the typology is of clinical importance because it links syndromes of non-recovery with premorbid conditions (Rynearson, 1990). Following are descriptions of these three types of grief based on Parkes and Weiss and Raphael by Rynearson (1990). Raphael's terminology is in parentheses.

Dependent (chronic) grief syndrome. Dependent grief syndrome links clinging or over-reliant attachment to responses of immediate pining and chronic grief. Dependence in this instance refers to a relationship of relative nondifferentiation in which one's image of self is contingent upon the availability of another. This dependence demands continuing interchange as a requisite in

> maintaining an image of the self as whole and acceptable. The death of the dependent figure initiates a pathogenic shift in the self-image of being weak, uncaring, and incompetent. These pathologic self-images are potent and compelling organizers of perception, and they independently deform the thoughts, feelings, and behavior of the pathologic grief syndrome. (p. 299)

These characteristics are consistent with the parent-child relationship. The parent also lives with the loss of their child throughout their life as each milestone of what would have been their child's life is passed (i. e. graduation, marriage, birth of children) bringing an emergence of grief and thereby predisposing the bereaved parent to chronic dependent grief syndrome.

Unexpected loss (distorted) grief syndrome. Unexpected loss grief syndrome links unexpected loss to responses of immediate disbelief, avoidance, and anxiety, leading to chronic anxious withdrawal. The explanatory model for this syndrome proposes that the mode and onset of the dying itself has pathogenic effects. In assuming this focus, the model does not disregard the pathogenicity of premorbid ambivalence or dependency, but cites the specific effects of sudden and often unnatural dying. Unexpected loss commonly qualifies as a traumatic stressor that

would evoke signs and symptoms of distress in almost everyone. The close identification with the lost person may commit the bereaved to the task of adjusting to a highly traumatized, internalized precept. For example, the dysfunctional syndrome that results will reflect the incomplete and fragmentary resolution: the posttraumatic stress syndrome of hyperreactivity and recurrent intrusive recollections of the dying, alternating with a compensatory psychic numbing, constriction of affect and social functioning, as well as the loss of sense of control over one's destiny. These phenomena are commonly observed with the initial adjustment to death from any cause. However, these phenomena are intensely preoccupying and enduring following unexpected loss.

When the unexpected loss is associated with accidents, suicide, or homicide, the bereaved is further traumatized by the obligatory involvement in the investigation and media coverage of the dying. With death by accident and homicide there is a continuing obligation of trial and punishment that bears the social stigma of transgression.

Other elements of unnatural dying that catalyze a prolonged traumatic bereavement include violence, violation, and volition.

> Preliminary research findings have suggested that specific syndrome effects are associated with these "three V's". Violence, the physical force used to damage or injury, is linked with posttraumatic stress; violation which refers to the injury or damage, is associated with victimization; and volition, which refers to the power of choosing, has been linked with a compulsive inquiry to establish blame and punish the perpetrator. (p. 299)

The sudden violation of the natural order of life taxes the adaptive and coping strategies of the bereaved parent. Bereaved parents are extremely susceptible to unexpected loss grief syndrome.

> Conflicted (delayed) grief syndrome. Conflicted grief syndrome links conflicted ambivalent attachment to minimal immediate response with delayed responses of anxiety and pining. This syndrome follows the death of an ambivalently valued figure in which ambivalence cannot be psychologically tolerated. Bereaved parents who are unable to accept the loss of their child may develop conflicted grief syndrome (p. 300).

Comorbidity

The signs and symptoms of pathologic grief would not be recognized if one considered only the patterns associated with the DSM-

IV's classification of affective and anxiety disorders without recognizing the event precipitating the symptomatology. Another problem with differential diagnosis is the lack of consensus on how to define pathologic grief, and clear conceptualization of the psychiatric complications of bereavement. For these reasons, complications are underestimated and therefore, untreated.

Nearly half of all people with uncomplicated bereavement will meet the diagnostic criteria for depressive disorder during the first year of bereavement. One third will meet the criteria for anxiety disorder as well (Rynearson, 1990). Although most will recover within 4-6 months, a significant minority remain depressed or anxious for many years. When bereavement is associated with such refractory affective and anxiety disorders, more aggressive treatment with psychotherapy and pharmacotherapy is required.

Schwarz and Kowalski (1991) suggest that the concept of exposure include not only physical nearness but emotional states as well. These investigators examined PTSD and associated symptomatology in children and adults exposed to a school shooting. One aim of their research was to document the influence of exposure and recalled experience on malignant memory formation and expression, and PTSD symptomatology. Malignant memories is a term

that expands the concept of PTSD by linking psychological with biological mechanisms. Malignant memories couple affective, cognitive, and arousal functions in stable toxic configurations that continue to torment victims and chronically distort their subjective experience and cognitive, affective, and social functioning (Schwarz & Kowalski, 1991). Schwarz and Kowalski did not find proximity or exposure (closeness to the event) to have a strong relationship between PTSD as Pynoos et al. (1987) did. Rather, in adults, the viewing of media coverage was associated with reeperiencing symptoms; and the sensory experience of having had smell or touch exposure to blood was associated with avoidant reactions (Schwarz & Kowalski, 1991). Notably, recalled feeling states (arousal and numbness), were highly associated with a PTSD diagnosis.

Pynoos and Nader's (1990) clinical and research experience provided strong evidence that acute posttraumatic stress symptoms are common in children exposed to violence. Further, symptoms persist for children who were highly exposed and do not receive treatment. Four central features were identified by Pynoos and Nader (1990) as shared by both adults and children: (a) the extent of exposure to life threat, or the witnessing of injury or death is related to the severity of response; (b) the whole range of responses that define PTSD in the DSM-IV are exhibited;

(c) reexperiencing the event and changes in emotional responsiveness differentiate individuals with severe posttraumatic responses from those with mild responses; and (d) states of increased arousal are prominent.

Depression. Three factors are associated with development of depression following suicide. Exposure to suicide is defined by the circumstances of the death, what was witnessed, visit to the scene of the death, discovery of the body, what was heard, and events after the death such as a wake or funeral. After exposure to adolescent suicide the three factors leading to increased risk for depression were:

1. A previous personal or family history of depression was found to predispose friends, acquaintances, and siblings of adolescent suicide victims to develop a major depression after exposure to the suicide (Brent, Perper, Moritz, Allman, Friend, Schweers, Roth, Balach, & Harrington, 1992; Brent, Perper, Moritz, Allman, Liotus, Scheers, Roth, Balach, & Canobbio, 1993; Brent, Perper, Moritz, Allman, Schweers, Roth, Balach, Canobbio, & Liotus, 1993; Brent, Perper, Moritz, Liotus, Schweers, Roth, Balach, & Allman, 1993).

2. A close relationship with the victim predisposed friends and siblings of the adolescent suicide victim to depression (Brent, Perper, Moritz, Allman, Friend et al., 1992; Brent, Perper, Moritz, Allman, Liotus et al., 1993; Brent, Perper, Moritz, Schweers, 1993; Brent, Perper, Moritz,

Liotus, Schweers, Roth et al., 1993). The closer the emotional relationship the survivor had to the victim the more likely depressive symptoms would result.

3. The witnessing of the suicide or finding the body resulted in more depressive symptoms for friends, acquaintances, and siblings (Brent, Perper, Moritz, Allman, Friend et al., 1992; Brent, Perper, Moritz, Allman, Liotus et al., 1993; Brent, Perper, Moritz, Schweers, 1993; Brent, Perper, Moritz, Liotus, Schweers, Roth et al., 1993).

Siblings are likely to have had a closer relationship with the adolescent suicide victim but also a greater exposure to the suicide, a greater sense of loss, and shared familial loading for psychiatric disorder and suicidality (Brent et al., 1993). It is not surprising then, that Brent, Perper, Moritz, Liotus et al. (1993) found a seven-fold increase in the incidence of major depression in siblings over matched community controls. A similar excess of depressive disorders in the mothers of suicide victims over the mothers of community controls was also found by Brent et al. in the same study.

PTSD in survivors of suicide. PTSD symptomatology may be explained by traumatization that attends the degree of exposure to the suicide. The degree of exposure varies according to what was experienced by the survivior surrounding the death. Exposure to suicide

is defined by the circumstances of the death, what was witnessed, visit to the scene of the death, discovery of the body, what was heard, and events after the death such as a wake or funeral. Brent, Perper, Mortitz, Allman, Friend et al. (1992) found a correlation between PTSD symptom severity and the degree of exposure to the suicide. However, the incidence of diagnosable PTSD was not significant in the exposed group. A very small proportion of those persons in the study had actually witnessed the suicide or found the body which is thought to account for the low incidence of diagnosable PTSD. Another investigation (Brent, Perper, Moritz, Allman, Friend et al., 1992), however, established the incidence of diagnosable anxiety disorders and PTSD as significantly higher in a group exposed to suicide than a group of matched, unexposed controls. This lead to the conclusion that the traumatization of exposure contributes to diagnosable pathology, particularly in those who actually witnessed the suicide or discovered the body (Brent, Perper, Moritz, Allman, Friend et al., 1992; Rudestam, 1977). These findings for a link between exposure and the occurrence of PTSD have been validated in samples of mothers (Brent, Perper, Moritz, Liotus et al., 1993). Mothers of suicide victims were found to have higher rates of PTSD compared to demographically matched control mothers. This finding for an excess rate of PTSD among mothers of suicide victims is

consistent with other descriptions of the impact of suicide upon suicide survivors, especially those who witnessed the suicide or found the body (Brent, Perper, Moritz, Liotus et al., 1993; Rudestam, 1977).

PTSD in survivors of homicide. Abundant anecdotal material suggests that bereavement subsequent to homicide is specifically influenced by the mode of death. Even the indirect exposure to homicide creates acute, and sometimes chronic, signs and symptoms of posttraumatic stress phenomena (Rynearson, 1993). The therapeutic inference drawn from clinical studies is that treatment of posttraumatic stress phenomena specifically associated with homicide takes precedence over the treatment of the grief associated with the death (Rynearson, 1993). Although the subjects in Rynearson's study were not a representative normative sample, the findings do help the clinician to attend unique aspects of bereavement due to homicide and promote more effective early intervention. Rynearson found the recurring, intrusive imagery of the traumatic event to be involuntary, stereotypic, and similar to the neurological model of kindling. The low level of anxiety that these intrusive images produce links the biological with the psychological as described by the term, malignant memories, and to the neurological model of kindling.

PTSD in the kindling effect. The limbic lobe of the brain is associated with emotions such as rage, arousal, and fear. The limbic system is implicated in the ability of panic attacks to produce generalized anxiety by the mechanism of kindling. The kindling phenomena refers to the repeated stimulation of the limbic neurons by brainstem discharge lowering the threshold to excitatory postsnaptic stimulation in the limbic lobe maintaining the "kindled" anticipatory anxiety (Gorman, Liebowitz, Fryer, & Stein, 1989). The lowered threshold for response to various stressors is the kindling phenomena.

Thoughts and images of the deceased can produce the stimulus for the kindling phenomena in bereaved parents. One of the most common intrusive, disturbing images concerns the victim's last thoughts. Parents imagine their child as overwhelmed by terror and helplessness during the moments before death. This image can produce the kindling phenomena and cause anxiety in the bereaved parent. It is important for the survivor to eventually replace these images with positive images of the deceased and thereby regain autonomy.

PTSD in pathologic grief. Sudden, unexpected and untimely death, and multiple deaths are risk factors regardless of other prior vulnerability (Parkes, 1990). Sudden, unexpected is associated with a higher risk of pathologic or persistent grief in adults and results in a

higher incidence of psychiatric and occupational morbidity (Pynoos & Nader, 1990; Lundin, 1984). The typical reaction to unexpected untimely death entails high anxiety, hyperalertness, haunting memories of the death, and a tendency to avoid or deny the full reality of the loss. The set of symptoms has much in common with the syndrome described as Posttraumatic Stress Disorder (DSM-III R, 1987) and should be classified and treated as PTSD (Parkes, 1990). According to Parkes (1990), understanding pathologic grief has an impact on our prevention and treatment of other types of mental illness.

PTSD in the general population. An epidemiological study of Posttraumatic Stress Disorder (n=2493), part of a larger nationwide general population survey of psychiatric disorder, found a prevalence rate for a history of PTSD in 1% of the total population; about 3.5% rate among civilians exposed to physical attack; a 3.5% rate among Vietnam veterans who were not wounded; and a 20% prevalence among veterans wounded in Vietnam (Helzer, Robins, & McEvoy, 1987). The symptoms of hyperalertness and sleep disturbance were the most common reported by the general population.

Breslau, Davis, Andreski and Peterson (1991) studied the prevalence of PTSD and risk factors associated with it. Young adults from a large health maintenance organization in the Detroit, Michigan

area (n=1007) were found to have a 23.6 % prevalence rate of PTSD among those exposed to traumatic events, yielding a lifetime prevalence rate of 9.2% in the sample. Persons with PTSD were also at increased risk for other psychiatric disorders. In particular, a PTSD diagnosis had stronger associations with anxiety and affective disorders than with substance abuse or dependence (Breslau et al., 1991). Several factors were found that put one at risk for exposure to a traumatic event. These included low education, male sex, early conduct problems, extraversion, and family history of psychiatric disorder or substance abuse problems. Once exposed to a traumatic event, the presence of certain risk factors were found to contribute to the development of PTSD: (a) separation from parents at an early age; (b) neuroticism; (c) preexisting anxiety or depression; and (d) family history of anxiety. The ability to predict PTSD among those who were exposed was found to be greater than the ability to predict exposure to a traumatic event.

Summary

The relationship between the degree of exposure to the traumatic, violent death of a sibling or peer and symptoms of PTSD in children and adolescents is well documented in the literature. A previous personal or family history of psychiatric illness, a close relationship with the victim, and number of interpersonal losses are predisposing factors affecting

psychiatric sequelae in those exposed to traumatic, violent death in children and adults (Breslau et al., 1991; Helzer et al., 1987; & Pynoos et al., 1987). One would expect that parents who have a high degree of emotional as well as physical exposure to the traumatic, violent death of their child would have similar responses as siblings or peers, and because of the closeness of the parent-child relationship.

Risk factors are those predictors that can be identified at the time of bereavement and that are associated with good or bad outcome (Parkes, 1990). Identifying risk factors (characteristics) is important in order to identify at risk persons and focus care for the prevention and treatment of pathologic grief.

The studies reviewed had similar limitations: (a) data is retrospective with the attendant variability associated in recall; (b) recruitment and selection may have been non-representative if not biased due to self selection; (c) lack of control groups; (d) small sample size; and (e) interviewer bias due to knowledge of the exposure status of subjects.

Chapter III: METHODS

Overview

The current study draws from the larger Parent Bereavement Stress and Nursing Intervention Project (PBP) funded by the National Institute of Health (1RO1NR01 926-01A1). The PBP is an intervention program for parental bereavement that utilizes both problem-focused support and emotion-focused support. The current study is a secondary analysis of data obtained from the PBP. Secondary analysis is a form of research in which the data collected by one researcher are reanalyzed by another investigator, usually to test new research hypotheses (Polit & Hungler, 1991). The following description of the PBP is based on the research proposal by Murphy (1989).

Parent Bereavement Project (PBP)

The PBP is a longitudinal study testing the effectiveness of a 10 - week preventive intervention for bereaved parents following the homicide, suicide, or sudden accidental death of their adolescent or young adult children. Parent is defined as the natural, step, or adoptive parent of the deceased child, currently living in the same or separate households (Murphy, 1989).

The study's basis is derived from the logic of preventive intervention with propositions about stress and support, and their

sequential nature in the bereavement process. These propositions suggest that stressful concerns, linked with changes resulting from bereavement, may be temporally ordered and therefore require different dimensions of support at different times (Murphy, 1989).

A randomized experimental design with pretest and repeated posttest observations was used. Parent dyadic participants were randomly assigned to intervention and control conditions. Baseline data was collected, the treatment administered, and post-intervention data was collected immediately; post-intervention data was again collected at 6 months post-intervention (Murphy, 1989). The current study employed data from questionnaires completed at baseline.

Design

Sample. The entire population of bereaved parents who met inclusion criteria and resided in the Seattle, Washington Metropolitan area, Clark County Washington, and Clackamas, Washington and Multnomah Counties in Oregon were contacted by the Parent Bereavement Project staff. The sample was recruited from the public records (Death Certificates) of the areas cited. Approximately 50% of the Oregon and 40% of the Washington potential participants were recruited for the PBP.

The sample of the larger project and the current study consisted of parents whose: (a) child was between 12 and 28 years of age at the time of death; (b) death occurred at least two but not more than seven months prior to recruitment; (c) death occurred within 3 days of injury; (d) death was due to suicide, homicide, or sudden accident; and (e) child was single at the time of death. The data set consisted of 150 participants, 104 mothers and 46 fathers.

Protection of Human Subjects. The PBP was reviewed for protection of human subjects according to the policies of the University of Washington and the National Institute of Health. The current project was submitted to the Oregon Health Sciences University Office of Research Services for review. It qualified for the fourth exemption category listed in the OHSU Protection of Human Subjects Initial Review Questionnaire (see Appendix A). The exemption applies because of the secondary analysis nature of the study. Given the secondary analysis nature of the study, permission to use the PBP data set was obtained from the Principal Investigator (see Appendix B). Informed consent was obtained from each participant prior to data collection for the PBP (see Appendix C). In addition, each parent received an orientation information letter outlining the program and expectations (Appendix D).

Anonymity of the participants was preserved under the procedures of the PBP protocol: participant numbers were the only identification on the questionnaires. The completed questionnaires were routed to the University data entry staff and not seen by research assistants that facilitated data collection. The questionnaires were stored in the PBP office after data entry was completed.

Procedures. Parents meeting the study criteria were contacted by letter describing the study. A consent card was enclosed; parents returned the card to the PBP office if they wanted to participate. A PBP staff member then contacted the parent and gave instructions for participation in the project. Participants were paid $25.00 for each testing session. Baseline testing was conducted in a group setting. The purpose of the group setting was: (a) to discuss the project and answer any questions that a participant had; (b) to obtain the signed informed consent form; (c) to administer the baseline questionnaire and be available to answer questions; and, (d) to examine the answer to the suicidality question as each participant completed the questionnaire so that appropriate intervention and referral could be made if someone was suicidal. The location for testing and the intervention were the same, a conference room in a public building.

The Principal Investigator and the Research Assistant administered the questionnaires. The baseline questionnaires were administered one week before the intervention began and one week after the 10 - week intervention was completed. Participants were contacted two weeks before the 6 - month test date and advised of the site, date, and time for the 6 month follow-up questionnaire. The questionnaires took approximately 2 - 1/2 hours for participants to complete. Three instruments contained in the questionnaires were used in the analysis for this study.

Measurement Instruments

Traumatic Experiences Scale (TES). The TES measures current reactions to the sudden, violent death that the participant is continuing to experience. This measure was developed by Murphy (1989) for the PBP based on the Impact of Events Scale by Horowitz, Wilner, and Alvarez (1979) and DSM III-R criteria for PTSD diagnosis. The instrument is appended to this document (see Appendix E). Psychometric properties of the Traumatic Experiences Scale (TES) yielded reliability coefficients of: (a) Reexperiencing the Event (α = .71); (b) Avoidance (α = .80); and (c) Hyperarousal (α = .74), indicating adequate internal consistency.

The TES consists of eighteen statements about stressful experiences that are rated on a six-point Likert type scale. Sample items include: "thoughts about how my child died come to mind even when I am doing other things"; "I am especially alert and watchful of danger since my child's death." Symptom frequency is rated for presence during the past 7 days (i. e. 0 = Never; 1 = Rarely; 2 = Sometimes; 3 = Often; 4 = Very often; and 5 = Almost always). The total score on the three subscales may range from 0 - 90. Three subscale scores were derived: Reexperiencing the Event (0 - 15), Avoidance or numbing (0 - 55), and Hyperarousal (0 - 15). A high score on these scales reflects the intensity of symtomatology reported by the respondent. In the present study, maternal subscales were intercorrelated. Hyperarousal and Avoidance scores (n = 101) yielded r = .66, p < .001. Hyperarousal and Reexperiencing the Event (n = 103) yielded r = .61, p < .001 as well. In addition, the Avoidance and Reexperiencing the Event subscales were correlated (n = 100) at r = .56, p < .001. Paternal scores were also significantly correlated between the Hyperarousal subscale and the Avoidance subscale (n = 45; r = .62, p < .001). Hyperarousal and Reexperiencing the Event (n = 46; r = .62, p < .001) subscales were also correlated. The Avoidance and Reexperiencing the Event subscale scores (n =45) yielded a coefficient of r = .61, p < .001 as well.

Parent Demographic Data Sheet. The Parent Demographic Data Sheet was used to collect background information about the parent (see Appendix F). The items that were used in this study include: (a) gender; (b) marital status; (c) education (highest grade completed); (d) date of birth; (e) child's date of birth; (f) religious affiliation; (g) employment status; and (h) range of yearly family income. These items address variables identified in the literature as potential predictors of parental responses to their child's death.

Child Data Card. The Child Data Card was used to collect information about the deceased child (see Appendix G). The items used in this investigation include: (a) date of death; (b) age at time of death; and (c) cause of death. Date of death was used to compute the parent's age at the time of birth (birthage).

Chapter IV: RESULTS

Overview

This exploratory study used data collected from the participating mothers (n = 104) and fathers (n = 46). Secondary analysis of the data was carried out using the Statistical Package for the Social Sciences (SPSS). A combination of non-parametric and parametric statistical tests were performed on the data.

Demographic Characteristics

On average the mothers (n = 104) who participated in the study were 45 years of age (M = 44.98; SD = 5.96). The fathers (n = 46) who participated were a little older with an average age of 48.46 years (SD = 6.13). The mean age of the deceased children of mothers in the study was 19.72 years (SD = 4.20). The mean age of deceased children for fathers in the study was 20.22 years (SD = 3.97). The mean age of mothers (n = 104) at the time of birth of the deceased child was 25.28 years (SD = 4.55). Fathers (n = 46) had a mean age of 28.24 years (SD = 5.53) at the time of birth of the deceased child.

Approximately three-fourths (70.9%) of the participants in the PBP (N = 151) were married; two-thirds (69.5%) were mothers and one-third (30.5%) were fathers. When the marital status of the parent was examined, one-fourth (20.5%) of the unmarried mothers reported living

with a partner and one-tenth (12.1%) of the married mothers reported not living with a partner. The data were analyzed using the terms 'partnered' and 'not partnered' which is more reflective of the participants' relationship involvement than the legal terms of married and not married. The data revealed that 90% of the fathers who participated in the PBP were participating in conjunction with their wives. Therefore, approximately 41 of the 46 father participants were married to mother participants. Necessitating separate analyses of maternal and paternal data.

One-third (31.8%) of the participants (N = 151) were high school graduates, two-fifths (37.8%) had some college and one-fifth (13.3%) were college graduates or had some graduate education. In this well-educated sample, mean education level for mothers was 13.42 years (SD = 2.27) and for fathers was 14.46 years (SD = 2.49). With respect to religious affiliation, 14.3% of the participants (N = 147) reported no religious affiliation, 51.0% were Protestant, and 34.7% reported affiliation with other religions.

Full time employment was related to the gender of the participant with four-fifths (84.8%) of the male participants and one-half (58.1%) of the female participants employed full time. The overall participant full time employment rate was 66.2%. The annual family income for one-

fourth (23.4%) of the participants was greater than $60,000; one-third (32.4%) had an annual income less than $30,000. The other family income categories were fairly evenly distributed.

Traumatic Experience Scores

The first research question asked about the range of parents' scores were on the Traumatic Experiences Scale (TES) baseline. Descriptive statistics were assessed to answer this question and t-tests for unequal groups were employed to assess mean differences between mothers and fathers on the TES subscales. Descriptive statistics of the sample are exhibited in Tables 1, 2, and 3 (see Appendices H, I, and J).

The range of all parents' scores on the TES was 0 to 84. Mother's scores ranged from 0 - 84. Fathers' scores ranged from 0- 61. The minimum and maximum scores were the same on Reexperiencing the Event and the Hyperarousal subscales. The maximum score was different on the Avoidance subscale. Fathers had a maximum score of 36 whereas, mothers' maximum score was 49. The highest possible total score on the TES was 90 (Reexperiencing, 0 - 15; Avoidance, 0 - 55; and Hyperarousal, 0 - 15). The parents' TES scores were separated by gender and the distributions of each of the three subscales of the TES instrument were examined. Bar graphs illustrating the frequency and

scores on the TES subscales are appended (see Appendices K, L, M, N, O, and P for Figures 1, 2, 3, 4, 5, and 6).

According to the DSM-III-R, endorsement of one of the items on the Reexperiencing the Event subscale, three items of the Avoidance subscale, and two items of the Hyperarousal scale, as well as persistence of the symptoms for one month and the experience of an event outside the range of usual human experience are diagnostic of PTSD. These minimum criteria would correspond to a total score of 30 on the TES: (a) endorsement of one of items 2, 3, or 4 on the Reexperiencing the Event subscale; (b) three of items 1, 6, 7, 8, 9, 10, 11, 16, 17, or 18 on the Avoidance subscale; and (c) two of items 12, 13, 14, or 15 on the Hyperarousal subscale.

Frequency distributions of mothers showed that 64.4% had a score of 5 or more on Reexperiencing the Event subscale, 76.2% had a score of 15 or more on the Avoidance subscale, and 54.8% had a score of 10 or more on the Hyperarousal subscale. Frequency distributions of fathers showed that 28.3% had a score of 5 or more on Reexperiencing the Event subscale, 55.6% had a score of 15 or more on the Avoidance subscale, and 17.4% had a score of 10 or more on the Hyperarousal subscale. The overrall frequency distribution of parents whose total score on the TES was thirty or more was 83.6%.

For the Reexperiencing the Event subscale, maternal scores ranged from 0 to 15 with mode and median scores of 5 and a mean score of 6.17 (SD = 4.01). Paternal scores also ranged from 0 to 15 but yielded mode and median scores of 3 and a mean of 3.93 (SD = 2.86). The means between mothers and fathers differed significantly, t (118.15) = 3.88, $p < .001$.

Mothers also reported more distress than fathers on the Avoidance subscale with scores ranging from 5 to 49. The maternal sample yielded a mode of 21, a median of score of 22, and a mean of 22.70 (SD = 9.20). Fathers reported considerably lower Avoidance scores, ranging from 0 to 36, with a modal score of 14, a median score of 15 and mean score of 17.22 (SD = 8.57). The mean scores on the Avoidance subscale differed significantly for mothers and fathers, t (90.28) = -3.49, $p < .001$.

Finally, mothers and fathers differed with respect to Hyperarousal scores. Maternal scores ranged from 0 to 20, with a modal score of 12, a median score of 10.00, and a mean score of 10.25 (SD = 4.54). Although paternal scores also ranged from 0 to 20, the mode was 8.00 and the median was 5.00, with a mean score of 6.11 (SD = 4.27). Mothers in this study experienced significantly more Hyperarousal than did fathers, t (91.33) = -5.37, $p < .001$.

Parental Characteristics in Relation to TES Scores

The second research question asked what were the characteristics of the parents with higher TES scores. Since a significant difference was found for gender on all TES subscale, maternal and paternal characteristics were analyzed separately.

Mothers. Education level, age of mother at child's birth, religious affiliation, and partner status were assessed in relation to maternal TES subscale scores. Using Pearson's r, no significant relationships were found between maternal education (in years) and scores (n = 104) on the Avoidance (r = -.002, n. s.), and Hyperarousal (r = -.097, n. s.) subscales. Significant relationships were not found between the mothers' age at the child's birth and the Reexperiencing the Event (n = 103; r = -.017, n. s.), Avoidance (n = 100; r = .077, n. s.), and Hyperarousal (n = 103; r = -.068, n. s.) subscales. However, a trend was found with education and Reexperiencing the Event (r = -.117, p < .12). A relationship trend was also found between partnered status (n = 100) and scores on the TES subscale of Reexperiencing the Event (r = -.141, p < .08). A slight trend is noted in the relationship between partnered status and the subscales of Avoidance (r = -.114, p < .13) and Hyperarousal (r = -.104, p < .15). Religious affiliation (yes or no) was not significant (n = 100) in relation to Reexperiencing the Event (r = -

.015, n. s.) and Hyperarousal (r = -.038, n. s.). There is a trend for a relationship between religious affiliation and the Avoidance subscale (r = -.114, p < .13). Although the relationships were weak, education, having a partner, and having a religious belief system the strength of the relationships were associated with less symptomatology.

Partnership status for mothers served as a grouping variable (partnered versus not partnered) to assess differences on the TES subscale scores. No significant differences were found for Reexperiencing the Event (F (1, 102) = 2.06, MSE = 32.74, p = .15), for Avoidance (F (1, 99) = 1.31, MSE = 110.90, p = .25), and for Hyperarousal (F (1, 102) = 1.11, MSE = 22.90, p = .29). When religious affiliation was employed as a grouping variable (religious versus no religious affiliation) for mothers, no significant difference was found for Reexperiencing the Event (F (1, 100) = .024, MSE .386, p = .88), Avoidance (F (1, 98) = 1.28, MSE = 108.03, p = .26), or for Hyperarousal (F (1, 100) = .144, MSE = 2.999, p = .71).

Fathers. Education level, age of father at child's birth, religious affiliation, and partner status were assessed in relation to paternal TES subscale scores. No relationship was found between education and Hyperarousal scores (n = 46; r = -.176, n. s.) but trends for relationships were found between education and the Reexperiencing the Event (n =

45; r = -.198, p < .09) and Avoidance (n = 45; r = -.23, p < .07) subscale scores. Higher education was linked to less symptomatology. The age of the fathers at the birth of their deceased children was unrelated to scores on the TES subscales; (a) Reexperiencing the Event (n = 46; r = -.04, n. s.); (b) Avoidance (n= 45; r = -.07, n. s.); and (c) Hyperarousal (n = 46; r = -.10, n. s.). No relationships were found between partnership status and Reexperiencing the Event (n = 45; r = -.146, n. s.) and Hyperarousal (n = 45; r = -.143, n. s.) subscales , however a trend was found between partnership and the Avoidance (n = 45; r = -.244, p < .05) subscale. Religious affiliation (yes or no) was not significant in relation to the subscales of Reexperiencing the Event (n = 44; r = -.11, n. s.), Avoidance (n = 43; r = -.097, n. s.), or Hyperarousal (n = 44; r = -.13, n. s.).

Partnership status (partnered versus not partnered) was used as a grouping variable to assess paternal differences on the TES subscales. No significant differences were revealed for Reexperiencing the Event (F (1, 44), = .95, MSE = 7.83, p = .33), Avoidance (F (1, 43) = 2.73, MSE = 192.84, p = .11) and Hyperarousal (F (1, 44) = .92, MSE = 16.75, p = .34). Religion as a grouping variable (religious versus no religious affiliation) yielded no significant differences in the groups on the subscales: Reexperiencing the Event (F (1, 42) = .51, MSE 4.22, p =

.48), Avoidance (F (1, 41) = .39, MSE 28.95, p = .54), and Hyperarousal (F (1, 42) = .76, MSE = 13.91, p = .39).

Nature of Child's Death in Relation to TES Scores

The third research question asked to what extent parental Traumatic Experiences Scale scores were differentiated by the cause of the child's death. For two-thirds (68.2%) of the parents (68% of mothers and 72% of fathers), the child's death was by accident. One-third (27.8%) (n = 42) of the parents' children died by suicide or homicide. Of this latter group, 11 were fathers of suicide victims (23.9% of the paternal sample) and 19 were mothers of suicide victims (18.1% of the maternal sample). The 12 mothers of victims of homicide represented 100% of the parents of homicide victims and 11.4% of the bereaved mothers. This latter maldistribution contributed to a trend for association between cause of death and parental gender, X^2 (4, N = 151) = 5.95, p < .11. For mothers, there was a trend for association between partnership status and cause of death, X^2 (3, N = 105) = 5.96, = 105) = 5.96, p < .11, with homicide linked to single status and accidents and suicides linked more to partnered mothers. There was no significant association between paternal partnership status and child's cause of death X^2 (2, N = 46) = .58, n. s.).

The cause of death served as grouping variable to assess parental differences on the Traumatic Experiences Subscales. Scores were analyzed separately by gender. Maternal differences on the Reexperiencing the Event subscale were not significant (F (1, 145) = .71, MSE = 10.06, p = .55). A significant maternal difference was found for the Avoidance subscale (F (3, 142) = 2.57, MSE = 223.58, p = .06) and for the Hyperarousal subscale (F (3, 145) = 3.17, MSE = 64.77, p = .03).

Mothers' mean scores for each of the subscales were examined by the cause of death. When the child's death was due to sudden accident, Reexperiencing the Event subscale mean score was 6.02 (SD = 3.95); Avoidance subscale mean score was 22.55 (SD = 9.59); and Hyperarousal subscale mean score was 9.98 (SD = 4.68). When the death was due to suicide, Reexperiencing the Event subscale mean score was 5.45 (SD = 2.56); Avoidance subscale mean score was 21.93 (SD = 8.29); and Hyperarousal subscale mean score was 9.16 (SD = 4.08). When the death was due to homicide, Reexperiencing the Event subscale mean score was 7.13 (SD = 4.35); Avoidance subscale mean score was 28.75 (SD = 8.01); and Hyperarousal subscale mean score was 13.31 (SD = 4.09). There were several deaths (9) where the cause was undetermined. The mean score for Reexperiencing the Event subscale was 6.13 (SD = 4.61); Avoidance subscale mean score 26.63

(SD = 12.14); and Hyperarousal subscale mean score 10.13 (SD = 5.08).

Paternal differences on the subscales of Reexperiencing the Event (F (3, 61) = .96, MSE = 10.54, p = .42) and Avoidance (F (3, 59) = .93, MSE = 82.36, p = .43) were not found to be significant. A trend was found for paternal differences for the Hyperarousal subscale (F (3, 61) = 2.29, MSE = 52.33, p = .09).

Fathers' mean scores for each of the subscales were examined by the cause of death. When the child's death was due to sudden accident, Reexperiencing the Event subscale mean score was 4.64 (SD = 3.35); Avoidance subscale mean score was 17.34 (SD = 9.50); and Hyperarousal subscale mean score was 7.50 (SD = 5.38). When the death was due to suicide, Reexperiencing the Event subscale mean score was 3.61 (SD = 3.20); Avoidance subscale mean score was 18.71 (SD = 9.50); and Hyperarousal subscale mean score was 5.39 (SD = 2.79). When the death was due to homicide, Reexperiencing the Event subscale mean score was 7.00 (SD = 1.41); Avoidance subscale mean score was 28.50 (SD = 9.19); and Hyperarousal subscale mean score was 14.00 (SD = 1.41). There were a few deaths (3) where the cause was undetermined. The mean score for Reexperiencing the Event

subscale was 5.67 (SD = 4.04); Avoidance subscale mean score 18.67 (SD = 7.57); and Hyperarousal subscale mean score 8.00 (SD = 6.00).

Chapter V: DISCUSSION

Overview

The purpose of this study was to develop empirical evidence to support anecdotal testimony of bereaved parents and identify characteristics of bereaved parents at increased risk for the development of Posttraumatic Stress Syndrome symptoms as a complication of bereavement. Partner status, education, religion, parental age at the time of deceased child's birth (birthage), and cause of death were variables that were examined in relation to parent's scores on the Traumatic Experiences Scale in order to assess Posttraumatic Stress Syndrome symptomatology. The findings substantiated work of previous researchers who have found no relationships between the variables of partnered status, education, religion, cause of death, and birthage and PTSD, although some trends were found. However, data analysis revealed significant differences between mothers' and fathers' level of PTSD symptomatology. Further, a high degree of distress was found for all parents.

In general, parents were in their mid-forties and their deceased child twenty years of age. They were married, well educated, and with religious beliefs. Mothers' and fathers' mean scores on the TES differed significantly on the subscale of Reexperiencing the Event. Fathers'

mean scores differed significantly from mothers' on the Avoidance and Hyperarousal subscales. Therefore, the conclusion could be drawn that mother's level of distress was greater than father's. Gender is a factor in PTSD symptomatology in this population. Because of the small sample of father participants and the liklihood that fathers were a non-biological parent, attachment may be the issue that contributes to the gender difference. In addition, mothers' may have a different attachment relationship with the child than both biologic and non-biological fathers'.

The violent, traumatic death of a child is an event outside the range of usual experience. These data illustrate that parents are in significant clinical distress, a finding consistent with previous research that reports anxiety is underestimated and undertreated in parental bereavement (Rynearson, 1990). The higher distress level for mothers as compared to fathers is consistent with previous findings for the closeness of the relationship as predictive of PTSD in children and adolescents (Brent et al. 1992, 1993).

When a parent is involved in a loving and trusting relationship with a partner before the death of their child and has a religious belief system, the sense of unpredictability and inability to know who to trust as found by Sanders (1984) may be lessened. Unpartnered parents are particularly vulnerable to the loss of the intense sense of self, especially

in circumstances where the parent and child have a high degree of enmeshment, thus leading to the higher distress scores. Parents may also be afraid of loosing the memory of their child, thus having more reexperiencing of the event thoughts, and difficulty relinquishing their attachment to the deceased child. These ideas related to parental bereavement draw from the works of Worden (1982) and Rando (1984) and were supported by findings in this current study.

The predictive factors for PTSD may be related to the level of psychological functioning prior to the death of the child. One of the predictive factors found in children and adolescents were coping skills. In this study, higher education was linked to lower distress. Education may be related to distress through an increase in the level of coping skills the parent has acquired. The larger study will more directly address the coping skills that participants have. Further study should include examination of psychological factors and family functioning prior to the death of the child.

Affiliation with a religious belief system needs further study to evaluate the extent of active participation in the religion. Active participation in religion may have an effect on the coping mechanisms that a parent uses. Different religions may be associated with the type of parental distress.

The primary cause of death (COD) in the sample was due to sudden accident. There was a tendency for COD to be associated with gender. There was a higher percentage of mother participants whose child had died because of suicide or homicide in this sample. Mothers had a trend for association between partnership and cause of death (homicide to single status and suicide to partnered status). There was no association that could be found with fathers in this sample. The relationship of non-partnered status and a lower socio-economic status that thereby increases the child's environmental exposure where homicide is more likely to occur may account for this finding.

A strong relationship was found for fathers between partnered status and lower TES scores. This finding may be a result of fathers receiving support from their wives and thus a lower distress level. Single fathers were not well represented in this sample. Given the distress scores of the participants, it is likely that single fathers have an equal if not higher distress level. Many reasons could account for the non-participation of single fathers. Societal expectations of men to be strong and deny distress could be the predominate factor. Further investigation of father bereavement and participation in support systems would define this area more clearly.

Cause of death was related to higher distress scores for mothers and fathers particularly when the cause of death was due to homicide or was undetermined. Deaths that were undetermined were either suicide or homicide. Mothers had their highest mean scores on the Avoidance subscale by cause of death in descending order: homicide, undetermined, suicide, and accident. Their next highest mean scores were on the Hyperarousal subscale by cause of death in descending order: homicide, undetermined, accident, and suicide. The mean scores for Reexperiencing the Event subscale followed the same order as Hyperarousal but were not as high. Mothers and fathers differed in the order of of the highest mean scores only on the Avoidance subscale. These findings of an association of cause of death and the high level of PTSD symtomatology are consistent with Rynearson's (1993) work. The mode of death and even the indirect exposure to homicide frequently results in PTSD symptomatology. A conclusion to be drawn from this study is that treatment for PTSD takes precedence over treatment for grief in parents whose child died as a result of homicide.

No definitive predictive profile could be developed from the specific research questions of this study. However, by examination of the TES score on each of the subscales in relation to the DSM-III-R (now DSM-IV) criteria for diagnosis, a guideline can be drawn as to the level of

distress of the parent. If the TES could be validated as a clinical scale by administering it in conjunction with a clinical interview for intensity of PTSD, an optimal score could be established for predicting the diagnostic status of PTSD. The psychometric properties of the scale support face validity, construct validity, and reliability of internal consistency.

The findings for more participants to report a partnered status than to report themselves as married suggests that participants may not be in a relationship with the biological parent of the child. The biological versus non-biological parent and the degree of emotional relationship or attachment of the parent to the child would be of interest in further research.

Another factor found to be predictive of PTSD in children and adolescents (Brent et al., 1992, 1993; Pynoos & Nader, 1990) is that of the extent of the exposure to the event. Delineating the extent of exposure the parent has to death of the child would be helpful in future research. Higher PTSD symptomatology has been linked by others to greater exposure (i. e. finding the body, or witnessing the event). Schwarz and Kowalski (1991) suggest that exposure be defined not only by physical nearness but emotional states as well. This notion requires further exploration for parental bereavement. Assessment of the extent

of the parent's exposure defined as finding the body or witnessing the event is hypothesized to be a factor in parental distress. The greater the parent's exposure to the death of the child, the higher the distress score on the Traumatic Experiences Scale. Further investigation asking this specific question would be enlightening in parental bereavement.

Exploration of the neurobiological changes that occur in the brain and study of the limbic system's involvement in PTSD would be highly fascinating as medical technology advances and more techniques and knowledge are gained in these areas. The kindling phenomena may be a factor in the frequency, intensity, and prolonged anxiety symptomatology that bereaved parents experience.

Whereas the partner status, education, religion, and birthage data were not predictive of parental risk status for PTSD after the violent, traumatic death of a child, other factors warrant investigation. Vulnerability to PTSD in bereaved parents may be predicted by: (a) coping skills and family function prior to the death of the child, (b) the quality of attachment in the parent-child relationship, and (c) the extent of the parent's exposure to the event.

Limitations

There are many unexplored areas of parental bereavement but, because of the lengthy bereavement period and nature of the subject, it

is a difficult area of study. Limitations of this study include self-selection of participants. Although the whole group of possible participants were contacted, the parents chose to participate creating a bias of self-selection that needs to be taken into account. Another outstanding bias was the participation of fathers. Ninety percent of the fathers who participated were participating with their wives whereas sixty percent of the mothers participated alone.

Conclusion

Findings from this study of 150 bereaved parents revealed that single mothers of children who died from homicide or unknown causes were at risk for greater distress. Parents who had less education, perhaps an indicator of coping skills, also were at risk for greater distress. For mothers and fathers, having a child die from accidental death, although distressing was less so than death by violence. In addition, religious affiliation and education, both perhaps reflective of coping strategies, seemed to be protective factors for distress or reduced distress levels. Finally, partnered parents seem to have social support previously found to mitigate against PTSD.

Understanding the impact that sudden, violent, traumatic death has on a parent will help professionals in all disciplines work more effectively with bereaved parents. The parent whose child has died by

suicide, homicide, or sudden accident demonstrates a high level of distress that requires treatment before they can move forward in the bereavement process, thereby, decreasing the long term effects on the individual parent, the marital dyad, the family system, and society.

References

American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington DC: Author.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington DC: Author.

Amick, A., Kilpatrick, D. G., & Resnick H. S. (1991). Homicide as a risk factor for PTSD among surviving family members. Behavior Modification, 15, 545-559.

Benoliel, J. Q. (1982). Women and loss: The many faces of grief. In: G. Hongladarom, R. McCorkle, N. F. Woods (Eds.). The complete book of women's health (pp. 221-233). Englewood Cliffs: Prentice Hall Publishers.

Bloom, B. L., & Hodges, W. F. (1981). The predicament of the newly separated. Community Mental Health Journal, 17, 277-293.

Bowlby, J. (1969). Attachment and loss : Vol. 1. Attachment. New York: Basic Books.

Bowlby, J. (1980). Loss, sadness and depression. New York: Basic Books.

Bowlby, J. (1983). Pathological mourning and childhood mourning. Journal of American Psychoanalytic Association, 11, 500-540.

Brent, D. A., Perper, J. A., Moritz, G. M., Allman, C., Friend, A.,Schweers, J., Roth, C., Balach. L., & Harrington, K. (1992). Psychiatric effects of exposure to suicide among the friends and acquaintances of adolescent suicide victims. Journal of the American Academy of Child and Adolescent and Adolescent Psychiatry, 31, 629-640.

Brent, D. A., Perper, J. A., Moritz, G. M., Allman, C., Liotus, L., Scheers, J., Roth, C., Balach, L., & Canobbio, R. (1993). Bereavement or Depression? The impact of the loss of a friend to suicide. Journal of the American Academy of Child and Adolescent Psychiatry, 32, 1189-1197.

Brent, D. A., Perper, J. A., Moritz, G. M., Allman, C., Schweers, J., Roth, C., Balach, L., Canobbio, R., Liotus, L. (1993). Psychiatric sequelae to the loss of an adolescent peer to suicide. Journal of the American Academy of Child and Adolescent Psychiatry, 32, 509-517.

Brent, D. A., Perper, J. A., Moritz, G. M., Friend, A., Schweers, J., Allman, C., McQuiston, L., Boylan, M. B., Roth, C., & Balach, L. (1993). Adolescent witnesses to a peer suicide. Journal of the American Academy of Child and Adolescent Psychiatry, 32, 1184-1188.

Brent, D. A., Perper, J. A., Moritz, G. M., Liotus, L., Schweers, J., Roth, C., Balach, L., & Allman, C. (1993). Psychiatric impact of the loss of an adolescent sibling to suicide. Journal of Affective Disorders, 28, 249-256.

Breslau, N., Davis, G. C., Andreski, P., & Peterson, E. (1991). Traumatic events and posttraumatic stress disorder in an urban population of young adults. Archives of General Psychiatry, 48, 216-222.

Brom, D. & Kleber, R. J. (1989). Prevention of posttraumatic stress disorder. Journal of Traumatic Stress, 2, 335-351.

Cain, A. C. & Fast, I. (1966). The legacy of suicides pathogenic impact on marital partners. Psychiatry, 29, 873-880.

Dracup, K., Meleis, A., Baker, K., & Edlefsen, P. (1984). Family-focused cardiac rehabilitation. Nursing Clinics of North America, 19, 113-123.

Easterbrook, J. A. (1959). The effect of emotion on cue utilization and the organization of behavior. Psychological Review, 66, 183-201.

Gillis, C. (1984). Reducing family stress during and after coronary artery bypass surgery. Nursing Clinics of North America, 19, 103-112.

Gorman, J. M., Liebowitz, M., Fryer, A. J., & Stein, J. (1989). A neuroanatomical hypothesis for panic disorder. American

Journal of Psychiatry, 146, 148-161.

Hamilton, V. (1975). Socialization anxiety and information processing: A capacity model of anxiety-induced performance deficits. In: I. G. Sarason & C. D. Spielberger (Eds.), Stress and anxiety (Vol. 2). Washington, DC: Hemisphere.

Helzer, J. E., Robins, L. N., & McEvoy, L. (1987). Posttraumatic stress disorder in the general population: Findings of the epidemiologic catchment area survey. New England Journal of Medicine, 317, 1630-1640.

Hinkle, L. E., Jr. (1977). The concept of "stress" in the biological and social sciences. In Z. J. Lipowski, D. R. Lipsitt, & P. C. Whybrow (Eds.). Psychosomatic medicine: Current trends and clinical implications. New York: Oxford University Press.

Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of event scale: A measure of subjective stress. Psychosomatic Medicine, 41, 209-218.

House, J. (1981). Work stress and social support. Reading, PA: Addison-Wesley.

Jacobs, S. & Kim, K. (1990). Psychiatric complications of bereavement. Psychiatric Annals, 20, 314-317.

Janis, I. L. & Mann, L. (1977). Decision making. New York: The Free Press.

Korchin, S. J. (1984). Anxiety and cognition. In: C. Scheerer (Ed.), Cognition: Theory, research, promise. New York: Harper & Row.

Lazarus, R. S. (1966). Psychological stress and the coping process. New York: McGraw-Hill.

Lazarus, R. S. & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.

Lundin, T. (1984). Morbidity following sudden and unexpected bereavement. British Journal of Psychiatry, 144, 84-88.

Murphy, S. A. (1983). Theoretical perspectives on bereavement. In: P. Chinn (Ed.). Advances in Nursing Theory Development (pp. 191-206). Rockville, MD: Aspen Systems.

Murphy, L. B. & Moriarty, A. E. (1976). Vulnerability, coping, and growth: From infancy to adolescence. New Haven: Yale University Press.

Murphy, S. A. (1989). Parent bereavement stress and nursing intervention. (National Institute of Health Grant No. 5 R01 NR01926-03). Seattle, Washington: University of Washington Department of Psychosocial Nursing.

Murphy, S. A. & Osband, B. A. (1991). Loss. In: J. L. Cresia & B. Parker

(Eds.). Conceptual foundations of professional nursing practice (pp. 593-607). St. Louis: C. V. Mosby Press.

National Center for Health Statistics. (1968-1991). Vital statistics of the United States: Vol. 2. Mortality Part A [for the year 1966-1988]. Washington DC: U. S. Government Printing Office.

National Organization of Victim Assistance (No date). Families and friends: The co-victims. Washington, DC: Author.

Osterweis, M., Solomon, F., & Green, M. (1984). Bereavement--Reactions, consequences, and care. Washington, DC: National Academy Press.

Parkes, C. M. (1965). Bereavement and mental illness. British Journal of Medical Psychology, 38, 13-26.

Parkes, C. M. (1990). Risk factors in bereavement: Implications for the prevention and treatment of pathologic grief. Psychiatric Annals, 20, 308-313.

Parkes C. M. & Weiss, R. S. (1983). Recovery from bereavement (pp. 171-214). New York: Basic Books Inc.

Pearlin, L. I. & Schooler, C. (1978). The structure of coping. Journal of Health and Social Behavior, 19, 2-21.

Polit, D. F. & Hungler, B. P. (1991). Nursing research: Principles and methods (3rd ed.). Philadelphia: Lippincott.

Pynoos, R. S., Frederick, C., Nader, K., Arroyo, W., Steinber, A., Eth, S., Nunex, F., & Fairbanks, L. (1987). Life threat and posttraumatic stress in school-age children. Archives of General Psychiatry, 41, 1057-1063.

Pynoos, R. S. & Nader, K. (1990). Children's exposure to violence and traumatic death. Psychiatric Annals, 20, 334-344.

Rando, T. A. (1984). The unique issues and impact of the death of a child. In: T. A. Rando (Ed.), Parental loss of a child (Ch. 1). Champaign, Illinois: Research Press.

Rando, T. A. (1984). Parental bereavement: An exception to the general conceptualizations of mourning. In: T. A. Rando (Ed.), Parental loss of a child (Ch. 2). Champaign, Illinois: Research Press.

Raphael, B. (1983). The anatomy of bereavement (pp. 375-388). New York: Basic Books.

Rinear, E. E. (1988). Psychosocial aspects of parental response patterns to the death of a child by homicide. Journal of Traumatic Stress, 1, 305-322.

Rudestam, K. E. (1977). Physical and psychological responses to

suicide in the family. Journal of Consulting Clinical Psychology, 45, 162-170.

Rynearson, E. K. (1987). Psychological adjustment to unnatural dying. In: S. Zisook (Ed.), Biopsychosocial aspects of bereavement (pp. 77-93). Washington DC: American Psychiatric Press Inc.

Rynearson, E. K. (1990). Pathologic grief: The queen's croquet ground. Psychiatric Annals, 20, 295-303.

Rynearson, E. K. & McCreery, J. M. (1993). Bereavement after homicide: A synergism of trauma and loss. American Journal of Psychiatry, 150, 258-261.

Sanders, C. M. (1979-1980). A comparison of adult bereavement in the death of a spouse, child and parent. Omega, 10, 303-322.

Sanders, C. M. (1984). Accidental death of a child. In: T. A. Rando (Ed.), Parental loss of a child (Ch. 9). Champaign, Illinois: Research Press.

Sarason, B. R., Sarason, I. G., & Pierce, G. R. (Eds.). (1990). Social support: An interactional view (1st ed.). New York: John Wiley & Sons.

Sarason, I. G. & Spielberger, C. D. (Eds.). (1975). Stress and anxiety (Vol. 1). New York: Wiley.

Schlossberg, N. K. (1984). Counseling adults in transition (pp. 67-152). New York: Springer.

Schwarz, E. D. & Kowalski, J. M. (1991). Malignant memories: PTSD in children and adults after a school shooting. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 936-944.

Selye, H. (1956). The stress of life. New York: McGraw-Hill.

Shanfield, S. B., Swain, B. J., & Benjamin, G. A. (1987). Parents' responses to the death of adult children from accidents and cancer: A comparison. Omega, 17, 289-296.

Thoits, P. (1986). Social support as coping assistance. Journal of Consulting and Clinical Psychology, 54, 416-423.

U. S. Department of Health and Human Services (1980). Bureau of health statistics report. Washington, DC: U. S. Government Printing Office.

Vargas, L. A., Loya, F., & Hodde-Vargas, J. (1989). Exploring the multidimensional aspects of grief reactions. American Journal of Psychiatry, 146, 1484-1488.

Weiss, R. S. (1976). Transition states and other stressful situations: Their nature and programs for their management. In: G. Caplan

& M. Killilea (Eds.), Support systems and mutual help--Multidisciplinary explorations (pp. 213-232). New York: Grune & Stratton.

Weisman, A. (1973). Coping with untimely death. Psychiatry, 36, 366-379.

Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. Journal of Health and Social Behavior, 27, 78-89.

Wolff, H. G. (1953). Stress and disease. Springfield, IL: Thomas.

Worden, J. W. (1982). Grief counseling and grief therapy: A handbook for the mental health practitioner. New York: Springer.

Wortman, C. & Silver, R. (1989). The myths of coping with loss. Journal of Consulting and Clinical Psychology, 57, 349-357.

APPENDIX A

Oregon Health Sciences Protection of Human Subjects Approval

IMPORTANT: Answers MUST be typed

Date Received: _____
IRB I.D. #: _____

OREGON HEALTH SCIENCES UNIVERSITY
Committee on Human Research

PROTECTION OF HUMAN SUBJECTS

EXEMPTION REVIEW QUESTIONNAIRE

Please allow 6-8 weeks for the review process. For information and assistance call 494-7887.

RESEARCH PROJECT TITLE: Factors Related to Posttraumatic Stress Syndrome as a Sequelae of Parental Bereavement Following the Traumatic Death of a Child

FUNDING SOURCE OR SPONSOR: ~~Parent Bereavement Stress and Nursing Intervention Project~~
GRANT/CONTRACT/PROTOCOL I.D. #: ~~R01NR0192603 National Institute of Health~~
University of Washington

PRINCIPAL INVESTIGATOR AND ASSOCIATES (application will be filed under the name of the first person listed):

NAME	DEGREE	POSITION	DEPT/DIVISION	MAIL CODE	PHONE
Linda L. Tillery	RNBS	Graduate Student	Psychiatric/ Mental Health Nrsg.	SNMH	4-3888 (H) 245-0876

Exemption claimed based upon 45 CFR 46.101 (b) # 4.

I, the undersigned, will be responsible for the ethical conduct of this project, and for protecting the rights and welfare of the subjects.

Linda L. Tillery
Principal Investigator

3-20-95
Date

Gail M. Houck
Signature of Advisor
(If P.I. is a student)

3-20-95
Date

OREGON
HEALTH SCIENCES UNIVERSITY
3181 S.W. Sam Jackson Park Road, Portland, OR 97201-3098
Mail Code L106, (503) 494-7887 Fax (503) 494-7787
Institutional Review Board/Committee on Human Research

DATE: April 14, 1995

TO: Linda Tillery, RNBS SN-MH

FROM: Heidi Moore, Administrative Assistant HMoore
Committee on Human Research, OHSU L-106

RE: Project Title: Factors Related to Posttraumatic Stress Syndrome as a Sequelae of Parental Bereavement Following Traumatic Death of a Child.

This confirms receipt of the above mentioned research study proposal. It is my understanding that this study involves the study of existing data, documents, records, pathological specimens, or diagnostic specimens that are publically available or recorded in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It therefore falls under category #4 of the federal regulations (45 CFR Part 46.101 (b)) and is considered to be exempt from review by the Committee on Human Research.

This study has been put into our exempt files, and you will receive no further communication from the Committee concerning this study. However, if the involvement of human subjects in this study changes, you must contact the Committee on Human Research to find out whether or not those changes should be reviewed. If possible, please notify the Committee when this project has been completed.

Thank you for your cooperation.

APPENDIX B

Principal Investigator Permission for Secondary Analysis

UNIVERSITY OF WASHINGTON
SCHOOL OF NURSING

DEPARTMENT OF PSYCHOSOCIAL NURSING

February 21, 1995

Linda Tillery, RN, BS, Masters Degree Student
Department of Mental Health Nursing
School of Nursing
Oregon Health Sciences University
Portland, OR.

Dear Ms. Tillery

You have my permission to use data from my study entitled Parent Bereavement Stress and Nursing Intervention for your Master's Research Project. I am delighted that you are interested in conducting a secondary analysis of Post-Traumatic Stress Disorder symptoms reported by mothers and fathers in the study sample.

Sincerely,

Shirley A. Murphy

Shirley A. Murphy, RN, PhD, FAAN
Professor and Principal Investigator

APPENDIX C

Informed Consent Form

University of Washington

STUDY TITLE: Parent Bereavement Stress and Nursing Intervention

INVESTIGATOR: Shirley A. Murphy, RN, Ph.D., Professor
School of Nursing, SC-76, 543-8569

PURPOSE AND BENEFIT:

This study is being conducted to learn what kinds of help are most useful to parents whose 12-28 year old children have died by accident, homicide, or suicide. The knowledge gained from this study is expected to be of substantial help to bereaved parents and to those who plan bereavement programs for parents following sudden, violent death. Both mothers and fathers are urged to participate. If you want to talk directly with parents who have completed the program, some of them have agreed to have you call them. You can obtain names from our office.

You will be assigned to either an early or late bereavement program. The early program is conducted by two health professionals for 10 weeks in small meeting format by two health professionals. The groups are kept small--6 to 9 parents per group. The groups meet one evening a week for two hours. During the first hour, parents are given information and skill-building exercises on aspects of bereavement that apply to your unique circumstances. Topics include, but are not limited to, managing grief and loss, preventing health problems, parenting other children, managing blame and anger, and dealing with others who think you should "get on with your lives". In the second hour, parents discuss whatever feelings and issues are on their minds.
Sessions are tape recorded so that we can identify important themes and topics that parents talk about. The tapes will be listened to only by research staff and will be destroyed when themes and issues have been clarified. The data from the tapes will be kept as themes only; comments will not be attributable to individual parents.

The later program is conducted by health professionals for three weeks in small group meeting format. The groups are kept small -- 6-9 parents per group. Groups meet for two hours a week with the focus on information and skill building. The third session will be used to put parents in contact with ongoing community support. Information obtained from the later program will help the project better understand how parents manage intense, early loss, which most parents do on their own, since few community resources are available.

All parents who agree to participate are asked to fill out questionnaires three times: 1) before the program begins, 2) 10 weeks later, and 3) 6 months after the program ends. Your responses to the questionnaire items help us learn more about what you are going through and how you are managing your loss. The questionnaires take about an hour and a half to complete. A stipend of $25 is offered to compensate you for each time you answer the surveys. You can contribute the stipend money to a memorial fund or charity if you prefer. We want you to be aware that reading and answering some items may be painful. The most sensitive information being requested will be found in such items as: "Describe

pressing problems you have encountered since your child's death." You will also be asked about health habits and lifestyle changes since your loss, such as changes in patterns of exercise, leisure, eating, sleeping, drinking, drug use and smoking. You are free not to respond to any items you find too sensitive or personal.

BENEFITS AND RISKS:

The potential benefits to participants include the provision of information expected to lessen the stress of bereavement transition, and the opportunity to share your experiences with others who have had the same loss. You are completely free to say no if you wish, or to drop out of the study at any time. However, we hope that if you make a commitment to participate, you will not drop out unless absolutely necessary. We do not anticipate any risk to you. You may, however, experience some discomfort in responding to some of the questionnaire items. All information received will be kept strictly confidential and will not be released to anyone except the project staff. The data from the study will not be available to anyone nor for any purpose other than the research project. The paper and pencil tests will also be destroyed as soon as the data are entered into computer files and verified for accuracy. Your name will not appear on any computer data files. These data will be kept for two years after the study is completed. We are expected to publish the study results. The results will be presented in such a way that keeps your identity confidential.

OTHER INFORMATION:

Your participation, then, is entirely voluntary. We are available to answer any further questions about the research and your rights as a participant. You may want to refer to this form at a later time. Please feel free to ask questions about the study at any time. We can be contacted at (206) 685-8494.

Shirley A. Murphy 9/21/94
Signature of Investigator Date

PARTICIPANT'S AUTHORIZATION:

The study described above has been explained to me. I understand that my participation is purely voluntary, that I will bear no costs associated with this project, and that I may withdraw at any time. I have had the opportunity to ask questions, and I understand that my identity will remain confidential. Finally I understand that future questions I may have about the research or about my rights will be answered by the investigator listed above.

_____
Signature of Participant Date

cc: Participant, Investigator's file
Instruments/Consent.doc94

APPENDIX D

Parent Bereavement Projet Parent Orientation

UNIVERSITY OF WASHINGTON
SCHOOL OF NURSING

DEPARTMENT OF PSYCHOSOCIAL NURSING

PARENT BEREAVEMENT PROJECT PARENT ORIENTATION

DESCRIPTION:

The Parent Bereavement Project is funded by the National Institutes of Health for four years. This is the fourth year of the project. The purpose of the project is to lessen the negative effects of violent deaths of young people on you, the parents. Nurses are very interested in learning about the effects of traumatic loss and what we can do to help. The program is uniquely designed for parents who have experienced the sudden, violent deaths of their adolescent and young adult children. Even though the sessions will be painful for you at times, parents tell us the program is of great benefit to them.

The Parent Bereavement Project is a community service provided by professionals free of charge. The project is also a research contract with the federal government. We are required to stringently test the effects of the program. That includes randomly placing parents in immediate and delayed intervention groups.

The format is the same each week. Two types of support, information/skill-building and mutual/emotional, are provided in small group settings once a week for 10 weeks. Information is provided for 50 minutes, followed by a break, then group discussion of topics of your choice follows for another 50 minutes. Weeks 1 and 12 are used to fill out study questionnaires.

The program is implemented by professional clinicians (psychologists and/or nurses), with bereavement expertise. A monitor (usually a graduate student in nursing) is present to assure consistency in the program over time by recording sessions to provide feedback to the clinicians. The monitor also takes notes during the emotional support segment. The issues raised by parents are summarized so that we can better understand your losses and adjust later programs accordingly. All research products, i.e. tape recordings and notes, are **completely confidential**. Tapes are archived after the Principal Investigator listens to them. Notes are analyzed for themes, which are part of the study results. When the study is finished, results will be published in a way that your privacy is completely protected.

EXPECTATIONS:

All groups who want to accomplish certain things also have a few "ground rules". Here are the ones the staff and parents who have completed the program have found to be the most useful thus far:

1. Make a commitment to come every week. We realize there might be times you absolutely cannot come. If you find you cannot come, please call one of the group clinicians, whose names and phone numbers are provided. You might have to leave a message. One of the clinicians will call you before the next session to update you.

2. All of the information topics are designed for this study. We provide an outline and space to make notes each time, so you can take the information home with you. Because we are expected to test **differences** in how parents respond to two different types of support, you can ask questions at any time, but save discussion and sharing your experiences until the second half of the evening.

3. The mutual/emotional support group will be successful only if parents assist and support each other by discussing topics **of your choice**. Other parents have reported that the program provides a warm, supportive place to explore painful experiences and unresolved feelings and that **common bonds develop.** In the special environment that you yourselves create, parents resolve some issues and come to some acceptance of those that cannot be changed. Because of the bonds that develop, outsiders may change the group cohesion. Therefore, we have found that the program works best if parents do not bring guests. If you know parents looking for help and who do not meet study criteria, ask the clinicians to recommend resources for them.

4. We are aware that sometimes prescription medications, alcoholic drinks, and other substances may be used temporarily to manage overwhelming loss. However, do not use alcohol before coming to the sessions. Past experience has shown us that this may be very upsetting to others.

5. Keep us informed of your current address, phone number and best times to reach you. A reminder about the six-month follow-up session will be mailed to you. The follow-up will give you an opportunity to visit with group members and complete the questionnaires. You are paid to complete the questionnaires. A check will be sent as you specify (i.e. memorial fund in your deceased child's name or to you).

6. The project clinicians are both competent and caring. You may decide to ask them for a referral for yourself or a member of your family. However, because the clinicians are part of the project team, they cannot accept any study participants as private clients.

In summary, we want to make the program as convenient for you as possible. Group sessions are held as close to your homes as possible. We would like to provide coffee, but have been unable to find a way to do so. You are welcome to bring coffee and any other snacks you'd like.

APPENDIX E

Traumatic Experiences Scale

Traumatic Experiences Scale

Below is a list of statements frequently made by people who have had recent stressful experiences. Read each of the items, then circle the numer to the right of each item that indicates how frequent the comments were true for you DURING THE PAST SEVEN DAYS. There are no right or wrong answers.

0	Never
1	Rarely
2	Sometimes
3	Often
4	Very often
5	Almost always

Statements about Stressful Experiences	Frequency in Past 7 Days					
1. Thoughts about the accident come to mind even when I am doing other things.	0	1	2	3	4	5
2. I have dreams about the accident.	0	1	2	3	4	5
3. At times it seems like the accident has happened over again.	0	1	2	3	4	5
4. Other events remind me of the accident.	0	1	2	3	4	5
5. I make deliberate efforts not to think about the accident.	0	1	2	3	4	5
6. I try to control my feelings about the accident.	0	1	2	3	4	5
7. I try to avoid people, things or activities that remind me of the accident.	0	1	2	3	4	5
8. I have forgotton about parts of the accident.	0	1	2	3	4	5
9. Things that were important to me before the accident are not important now.	0	1	2	3	4	5
10. I have feelings of guilt because I am alive and my child is dead.	0	1	2	3	4	5

0 Never
1 Rarely
2 Sometimes
3 Often
4 Very often
5 Almost always

Statements about Stressful Experiences	Frequency in Past 7 Days					
11. I am not as close to people I use to be fond of since the accident.	0	1	2	3	4	5
12. I have trouble falling asleep and/or staying asleep.	0	1	2	3	4	5
13. I get irritable and more angry since the accident.	0	1	2	3	4	5
14. I am especially alert and watchful of danger since the accident.	0	1	2	3	4	5
15. I become shaky, nervous, or sweaty when reminded of the accident.	0	1	2	3	4	5
16. I am unable to feel emotions since the accident.	0	1	2	3	4	5
17. I try to remove the accident from my memory.	0	1	2	3	4	5
18. I am less interested now in things that others think are important.	0	1	2	3	4	5

APPENDIX F

Parent Demographic Data Sheet

Parent Demographic Data Sheet

1. Gender
   1. Male 2. Female

2. Marital Status (circle appropriate number)
   1. Single 2. Married 3. Divorced
   4. Widowed 5. Separated

3. If you have been divorced or separated since your child's death, do you attribute this to difficulties experienced as a result of your child's death?
   ____ Yes ____ No ____ Not applicable

4. Education (circle highest grade completed)

   1 2 3 4 5 6 7 8 9 10 11 12
   Technical or college: 13 14 15 16 or more
   Graduate: 17 18 19 20 or more

5. Ethnic Identity (circle number)
   1. Afro-American
   2. Asian-American
   3. Native American
   4. Hispanic American
   5. Caucasian
   6. Other:_____

6. Your date of birth:_____

7. Your deceased child's date of birth:_____

8. Religious Affiliation
   1. None
   2. Protestant
   3. Jewish
   4. Catholic
   5. Other (specify)_____

9. Indicate your employment status (circle number)
   1. Employed full-time
   2. Employed part-time
   3. Not employed and seeking work
   4. Not employed and not seeking work
   5. Other (specify) _____
      (i.e. retired, going to school, on leave from work,etc.)

10. What is your usual occupation when employed? (Please specify)

10. What is your usual occupation when employed? (Please specify)

11. Range of your yearly family income (circle number)

1. Under $9,999
2. $10,000 - $19,999
3. $20,000 - $29,999
4. $30,000 - $39,999
5. $40,000 - $49,999
6. $50,000 - $59,999
7. over $60,000

12. For each person **living in your household**, please list the following information, indicating the nature of each person's role in the house (e.g. husband, wife, son, daughter, sister, friend, grandmother, stepchild, adopted child, or foster child)

Initials	Relationship	Age	Sex
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

13. For each child (biological, stepchild, adopted or foster child) **not living in the home**, list the following:

Initials	Relationship	Age	Sex	#of contacts per/wk
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

APPENDIX G

Child Data Card

CHILD DATA CARD:

1. Child's name: _____

2. Date of Death: _____ 3. Age at time of death: _____

4. Cause of death: _____

_____

5. Were emergency personnel contacted and on the scene at the time of your child's death? _____

6. Was your child hospitalized after the accident?
____ Yes ___ No (If no, please go to question 10.)

7. How was he/she transported to the hospital?

_____

8. How long was your child in the hospital before he/she died? _____

9. Could you briefly describe the hospital circumstances?

_____

_____

_____

10. Did you receive any bereavement counseling from hospital staff, or any information on sources of help? If yes, please describe.

_____

_____

_____

11. Did you receive bereavement counseling or support from the funeral director? If yes, please describe.

_____

_____

_____

APPENDIX H

Table 1

Table 1

Descriptive Statistics: Reexperiencing the Event Subscale for Mothers and Fathers

	Mean	SD	Mode	Median
Mothers				
Sample (n = 101)	6.17	4.01	5.00	5.00
Partnered (n = 65)	5.74	3.89	-----	5.00
Not Partnered (n = 39)	6.90	4.16	-----	6.00
Religious (n = 87)	6.24	4.17	-----	5.00
Not Religious (n = 15)	6.07	3.28	-----	6.00
Fathers.86				
Sample (n = 46)	3.94	2.86	3.00	3.00
Partnered (n = 40)	3.78	2.43	-----	3.00
Not Partnered (n = 6)	5.00	5.10	-----	3.50
Religious (n = 38)	3.87	2.89	-----	3.00
Not Religious (n = 6)	3.00	2.86	-----	3.00

APPENDIX I

Table 2

Table 2

Descriptive Statistics: Avoidance Subscale for Mothers and Fathers

	Mean	SD	Mode	Median
Mothers				
Sample (n = 101)	22.70	9.20	22.70	22.00
Partnered (n = 64)	21.91	8.40	-----	21.00
Not Partnered (n = 37)	24.08	10.42	-----	24.00
Religious (n = 85)	23.19	9.36	-----	23.00
Not Religious (n = 15)	20.27	8.33	-----	21.00
Fathers				
Sample (n = 45)	17.22	8.57	17.22	15.00
Partnered (n = 39)	16.41	8.01	-----	15.00
Not Partnered (n = 6)	22.50	11.00	-----	25.50
Religious (n = 37)	16.95	8.02	-----	15.00
Not Religious (n = 6)	14.67	10.15	-----	15.00

APPENDIX J

Table 3

Table 3

Descriptive Statistics: Hyperarousal Subscale for Mothers and Fathers

	Mean	SD	Mode	Median
Mothers				
Sample (n = 104)	10.25	4.54	10.25	10.00
Partnered (n = 66)	9.89	4.39	-----	9.00
Not Partnered (n = 38)	19.87	4.79	-----	11.50
Religious (n = 87)	10.29	4.70	-----	10.00
Not Religious (n = 15)	9.8	3.84	-----	11.00
Fathers				
Sample (n = 46)	6.19	4.27	6.11	5.00
Partnered (n = 40)	5.88	6.98	-----	5.00
Not Partnered (n = 6)	7.67	6.98	-----	5.50
Religious (n = 38)	6.12	4.27	-----	5.00
Not Religious (n = 6)	4.50	3.62	-----	4.00

APPENDIX K

Figure 1

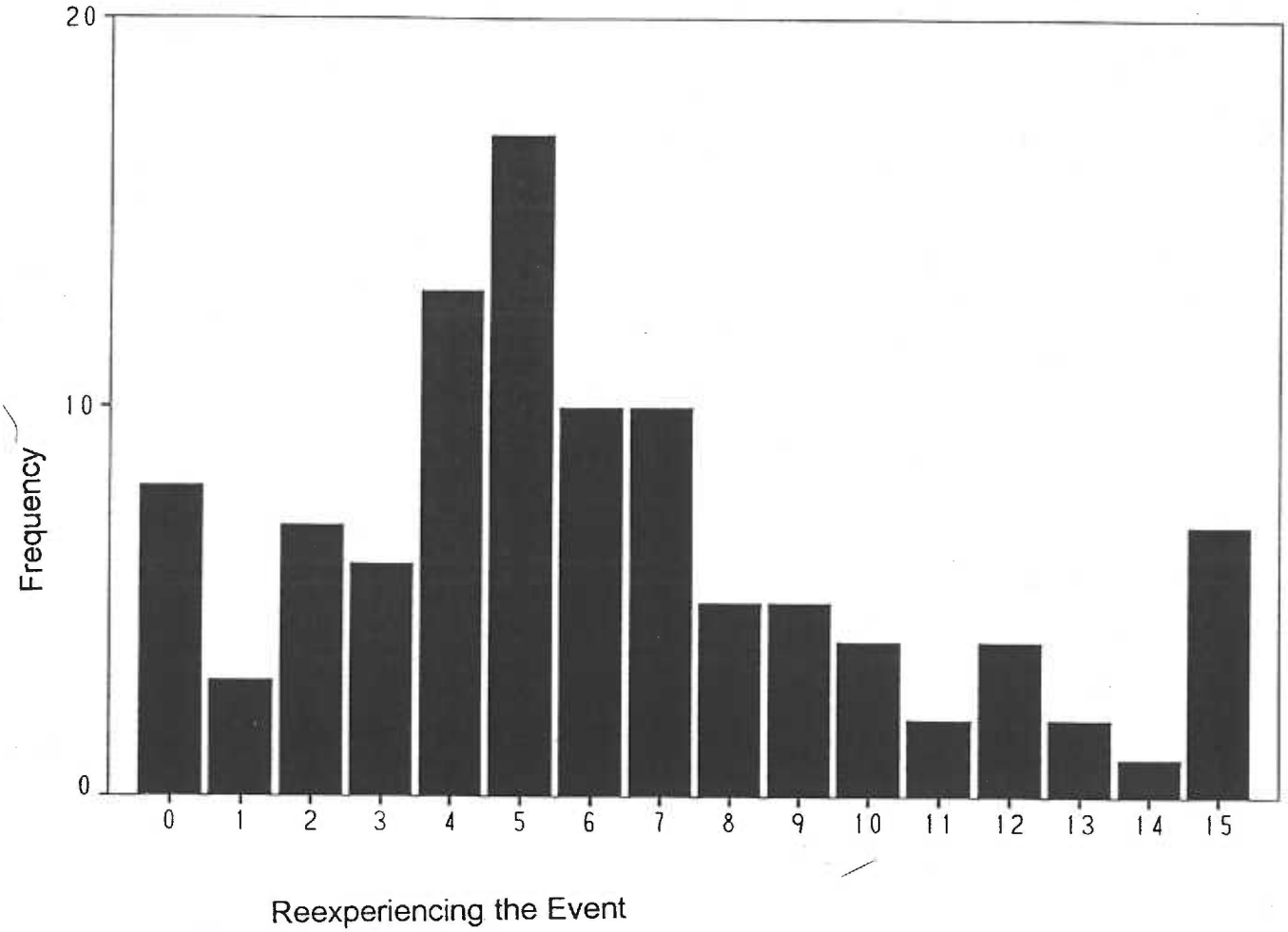

Figure 1. Mothers (n = 104) scores on Reexperiencing the Event, a subscale of the TES, and frequency of occurrence of each of the scores.

APPENDIX L

Figure 2

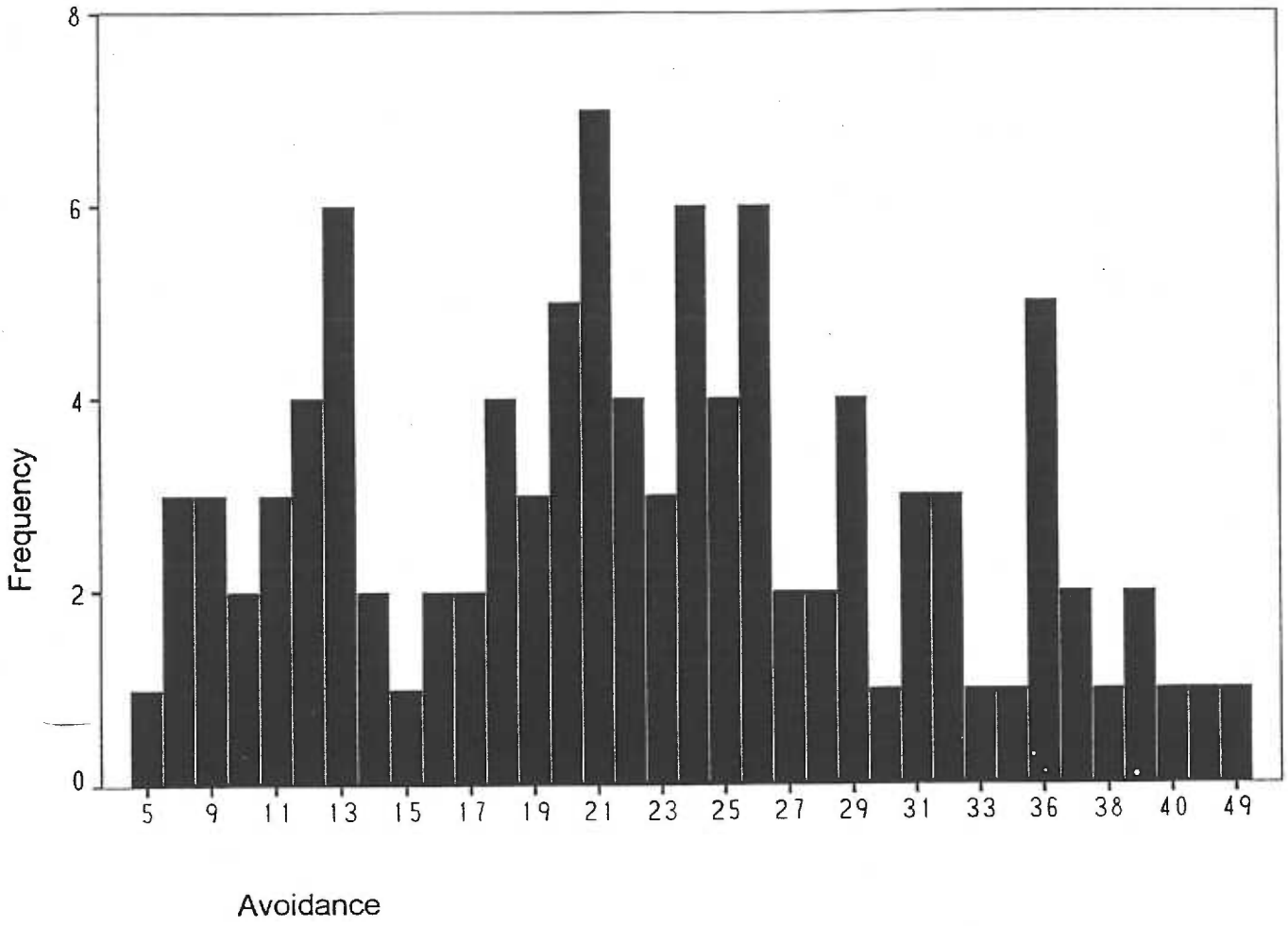

Figure 2. Mothers (n = 104) scores on Avoidance, a subscale of the TES, and frequency of occurrence of each of the scores.

APPENDIX M

Figure 3

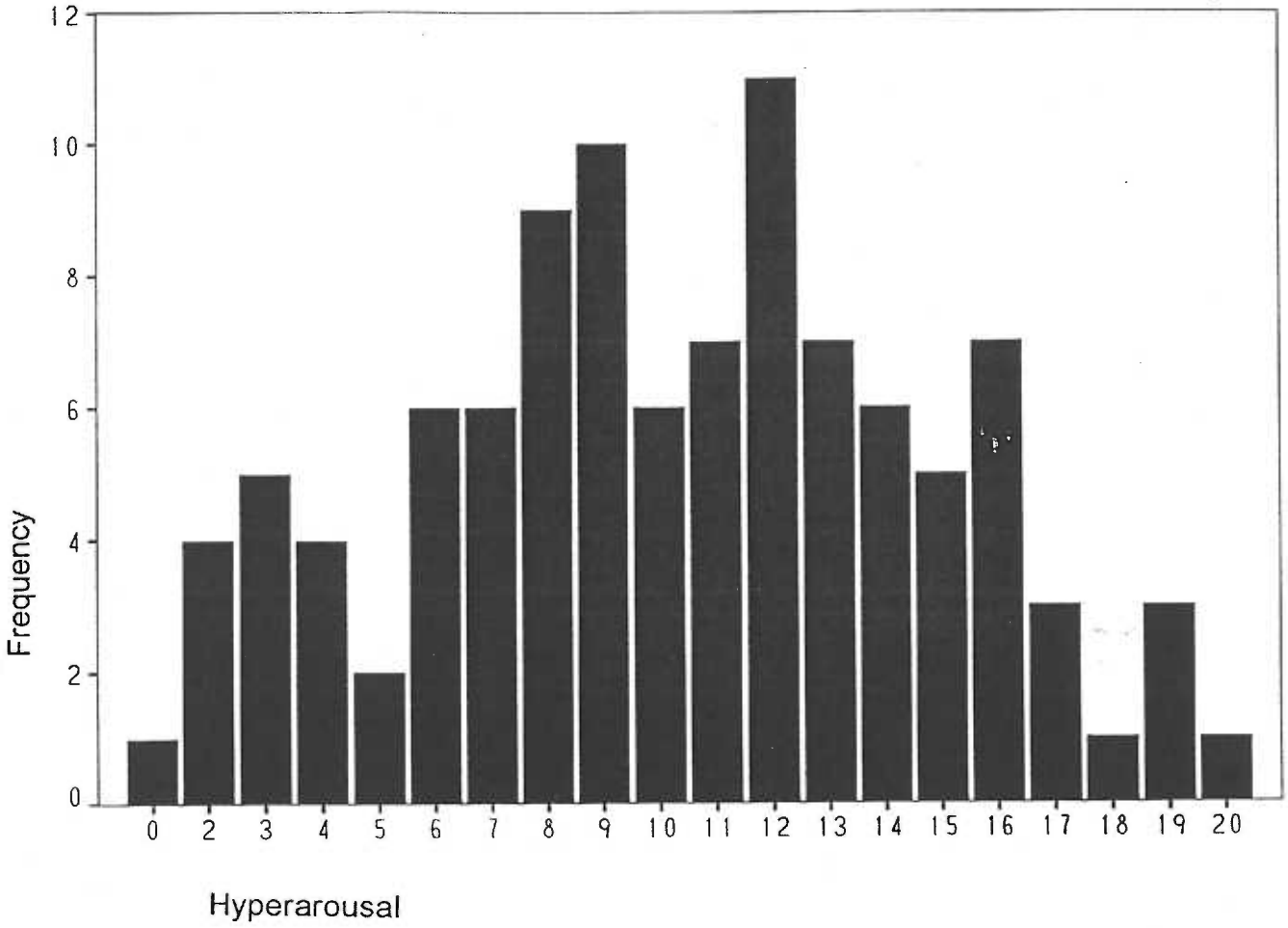

Figure 3. Mothers (n = 104) scores on Hyperarousal, a subscale of the TES, and frequency of occurrence of each of the scores.

APPENDIX N

Figure 4

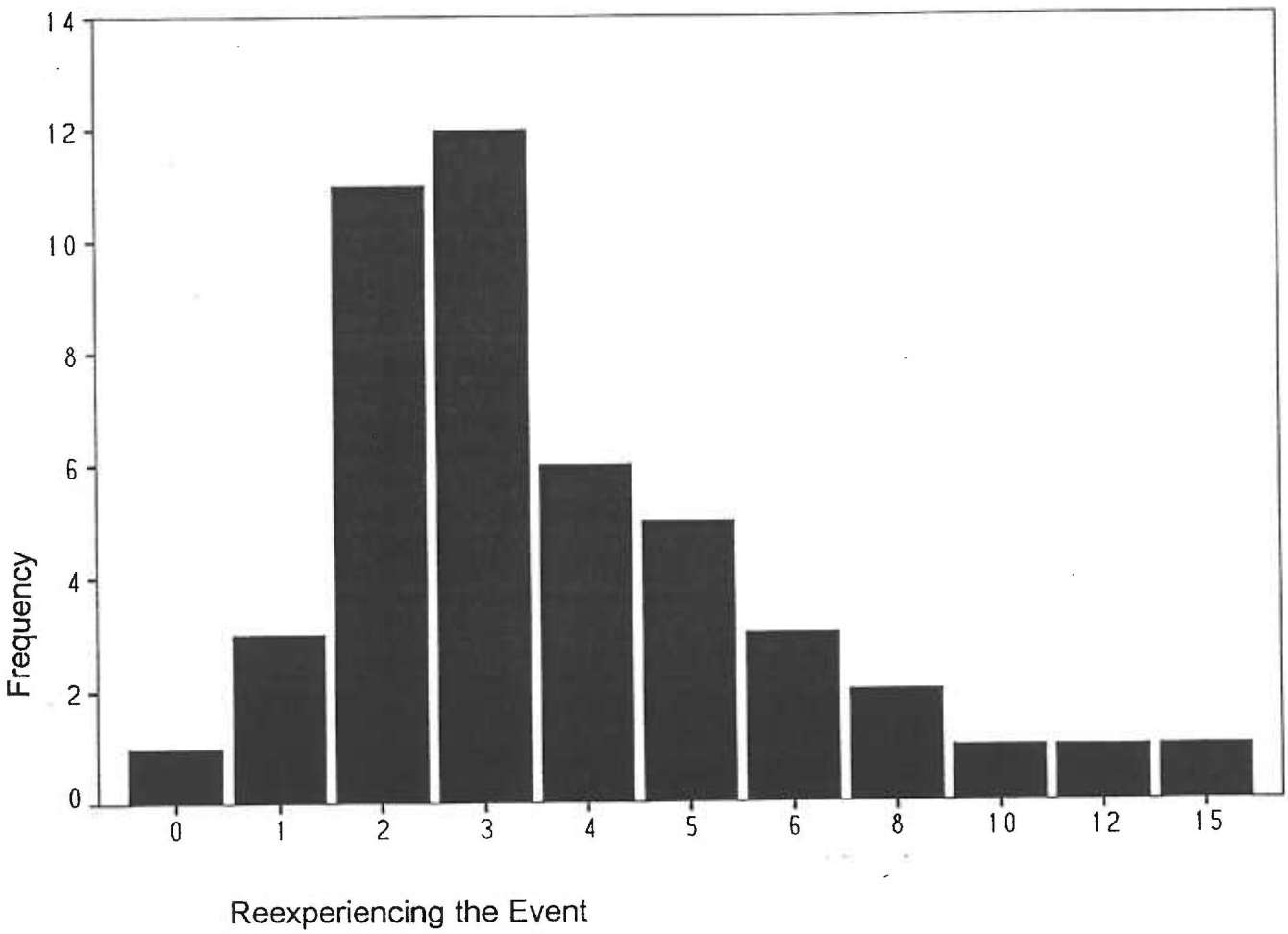

Figure 4. Fathers (n = 46) scores on Reexperiencing the Event, a subscale of the TES, and frequency of occurrence of each of the scores.

APPENDIX O

Figure 5

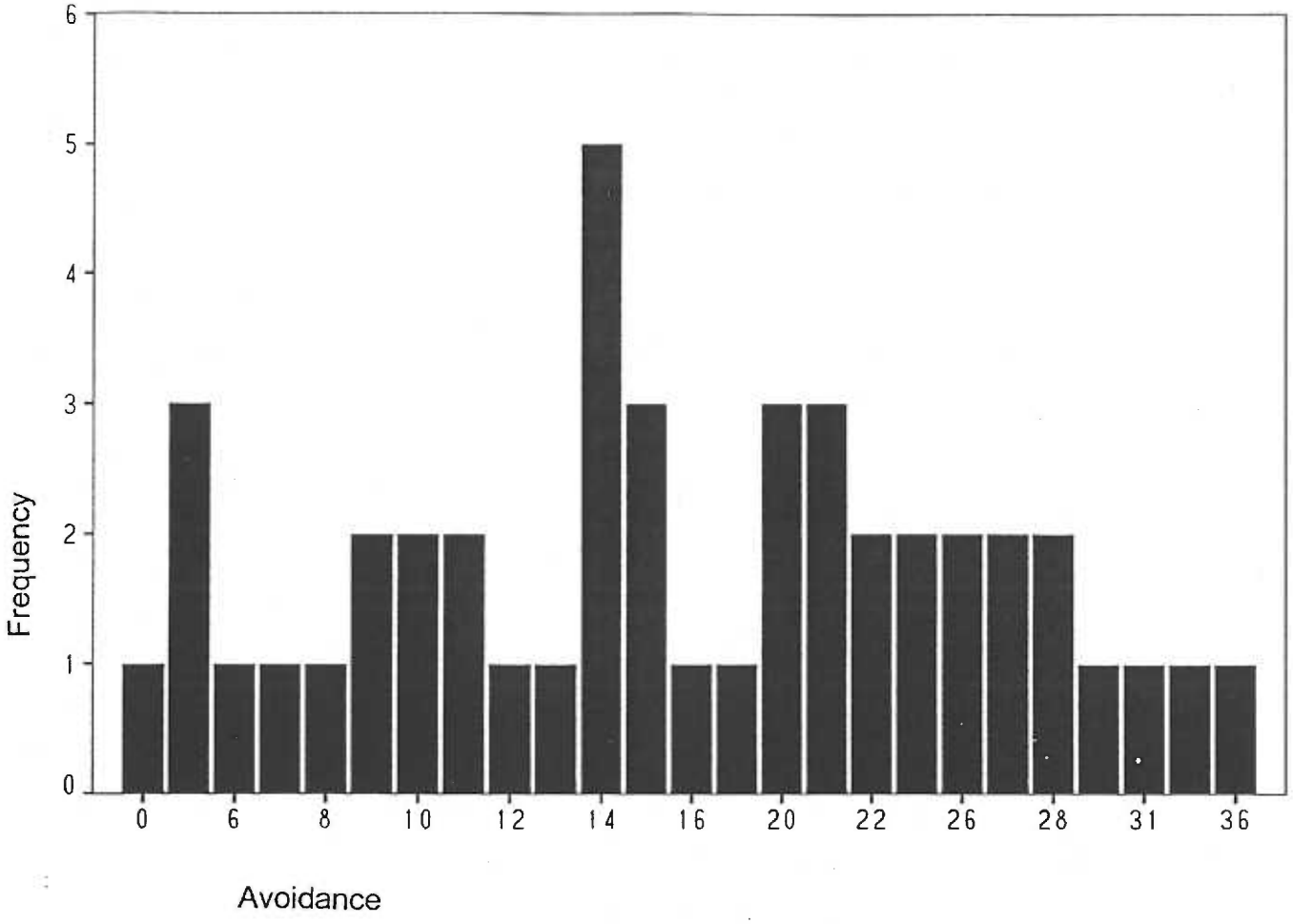

Figure 5. Fathers (n = 46) scores on Avoidance, a subscale of the TES, and frequency of occurrence of each of the scores.

APPENDIX P

Figure 6

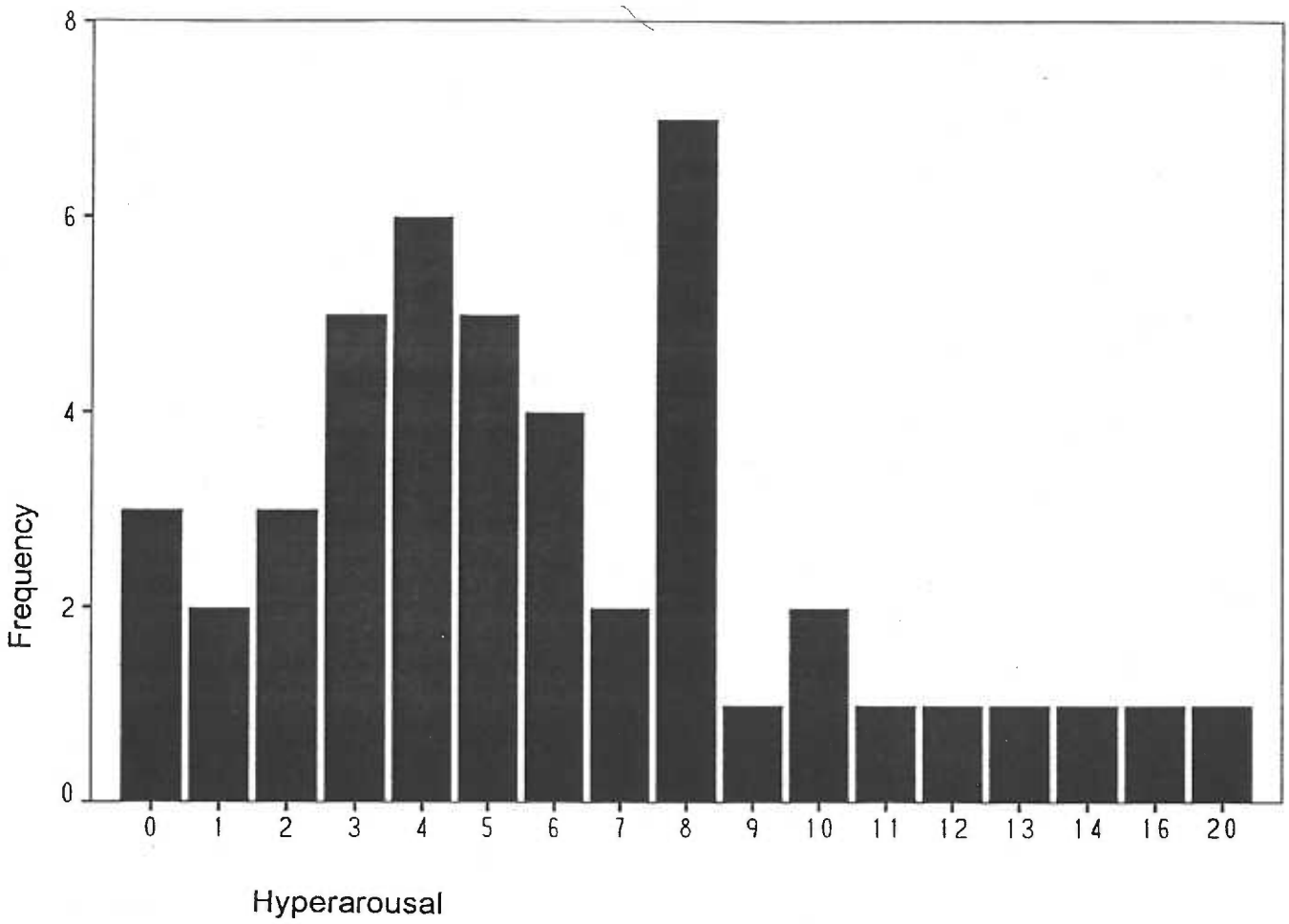

Figure 6. Fathers (n = 46) scores on Hyperarousal, a subscale of the TES, and frequency of occurrence of each of the scores.