

ADOLESCENT RESILIENCE FOLLOWING PARENTAL DEATH  
IN CHILDHOOD AND ITS RELATIONSHIP TO  
PARENTAL ATTACHMENT AND COPING

by

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Submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy

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CASE WESTERN RESERVE UNIVERSITY

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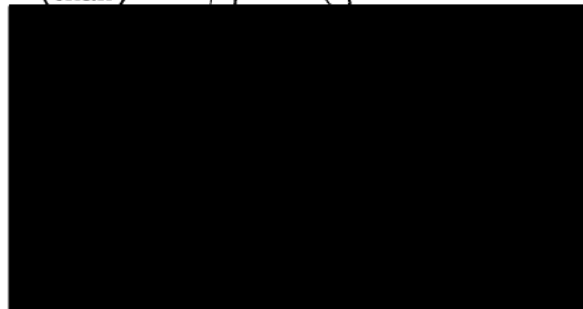
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Abstract

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Adolescent resilience following loss has been linked with supportive social relationships and coping. Retrospective studies have found that parental death during childhood has been a risk factor for serious mental health problems in adolescence. However, health care professionals and researchers have also reported positive outcomes of increased competency, self-worth, and health in other adolescents. These adolescents have demonstrated resilience, the dynamic ability or strength that enables persons to adjust readily to loss and to mobilize resources.

The purpose of this study was to investigate the relationships among parental attachment to the surviving parent, adaptive coping, and resilience of adolescents following death of a parent in childhood. For this study, resilience was operationalized as social

competence, global self-worth, and perceived health. The theoretical model was based upon attachment theory (Bowlby, 1969), protective mechanisms (Rutter, 1987), and loss and adaptation (Benoliel, 1985).

This cross-sectional correlational study examined the relationships among attachment to the surviving parent, adaptive coping, and resilience in 62 adolescents (13 through 21 years) who experienced parental death during childhood. Interviews with self-report instruments were done in the home or a chosen setting. The instruments were the Relationships Questionnaires (IPPA), the Coping Inventory, the Self-Perception Profile for Adolescents, the General Health Rating Index, and a demographic questionnaire. Multiple regression analysis and Pearson product moment correlations were used to test five hypotheses. Three hypotheses were partially supported in that adaptive coping was a significant predictor of social competence ( $R^2=.35$ ), global self-worth ( $R^2=.30$ ), and perceived health ( $R^2=.15$ ). Gender pair ( $R^2=.07$ ) was significant with perceived health. Correlations were significant for attachment and coping ( $r=.29$ ,  $p<.05$ ), and attachment and perceived health ( $r=.36$ ,  $p<.01$ ). Recommendations for further study that will add to the development of knowledge of parental

attachment, adaptive coping, and resilience were indicated.

### Dedication

This work is dedicated to my children, Eric, Mark, Kristen, Michael, and Meg, who (like the children in this study) experienced the profound loss of their father during their childhood; to the memory of my husband Peter, who gifted us with his life-long love of learning and for whom the evening of life came so early; and to the adolescents who shared so generously and taught me that life is to be cherished, challenged, and lived to the fullest even when death had touched them so deeply.

## Preface

"The phenomenon of childhood resilience under profoundly stressful life conditions has, happily, attracted growing recent interest from several research groups, based on the conviction such youngsters are far more important for a theory of wellness than their limited numbers might imply. Current research seeks to flesh out the correlates of resilient outcomes under stressful life conditions and to identify child-and family-milieu factors, interactions between the two, and ongoing change in family life situations that favor or impede resilient child outcomes ... Identifying the role of these components can inform the development of preventive interventions for profoundly stressed children and families, that address one irrepressible challenge in the pursuit of wellness."

Cowen, E.L. (1991). In pursuit of wellness. American Psychologist, 46(4), 407.



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## CHAPTER 1

### Introduction

#### Purpose

The purpose of this study was to investigate the relationships among parental attachment to the surviving parent, adaptive coping, and resilience of adolescents following parental death in early childhood (Figure 1). The researcher designed a model (Figure 2) based upon Rutter's (1987) protective mechanisms model, Bowlby's (1969) attachment theory, and Benoliel's (1985) loss and adaptation perspective. The theoretical model consisted of adolescent parental attachment, adaptive coping, and resilience as measured by social competence, global self-worth, and perceived health.

#### Research Problem

Parental death during childhood has been identified as a risk factor for later problems of poor adjustment, impaired psychological functioning, and mental illness, particularly during the stressful adolescent years (Bowlby, 1981; Cowen, Pederson, Babigian, Izzo, & Trost, 1973; Enos & Hartman, 1981; Markusen & Fulton, 1971; Parkes, 1982; Worden, 1985). It is hypothesized that when the loss has been the death of a parent during the schoolage years, readjustment to the loss may occur

Figure 1  
THEORETICAL STRUCTURE OF  
THE MODEL OF RESILIENCE

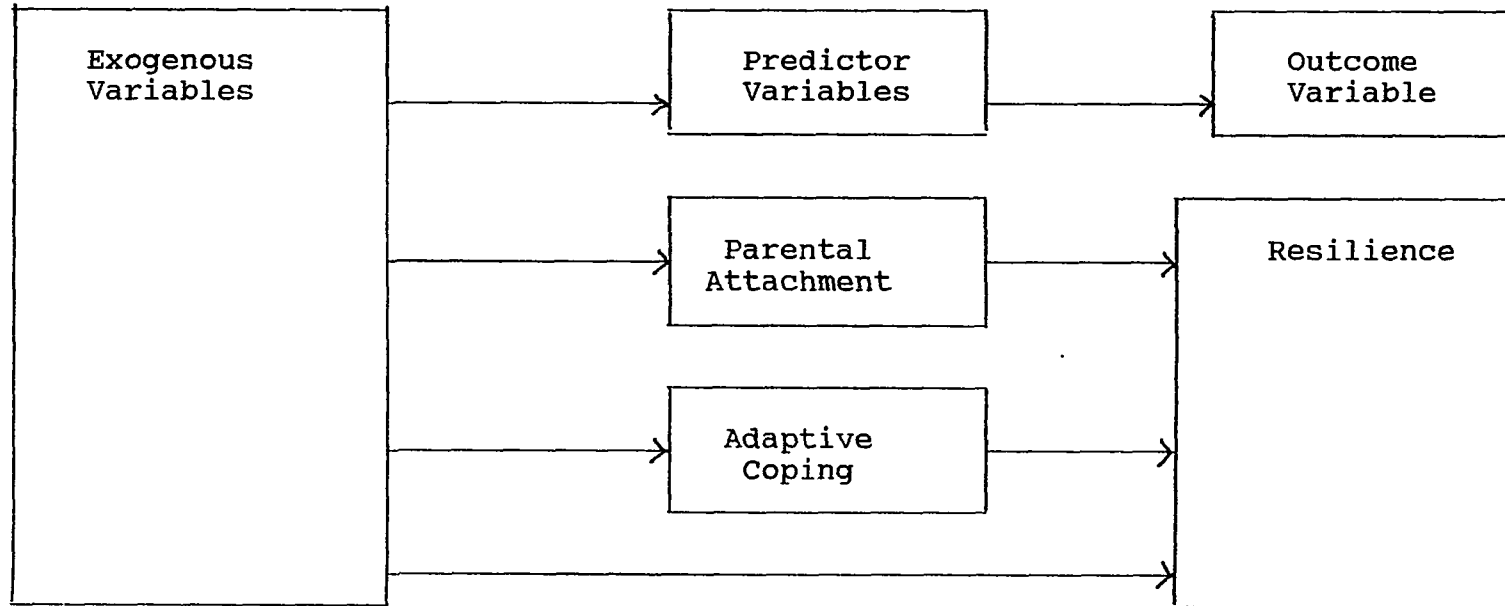
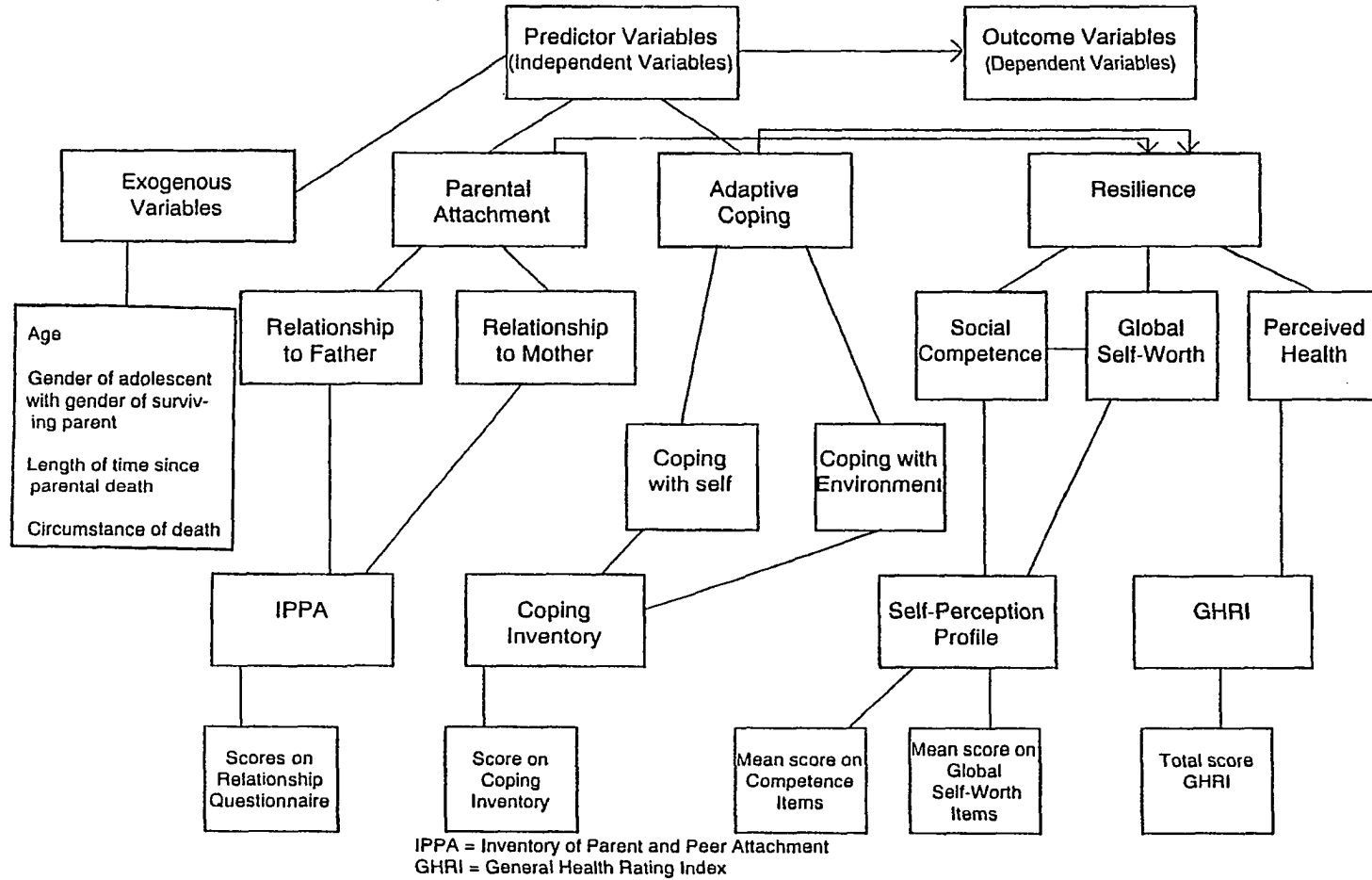




Figure 2

**THEORETICAL-EMPIRICAL STRUCTURE OF  
THE MODEL TO BE USED IN THIS STUDY  
(Risk Factor: Parental death in childhood)**



during adolescence when these adolescents are negotiating additional stressors surrounding changes in identity and independence.

Children's responses to loss, such as loss from divorce, loss of friends due to family relocation, or sibling death, and the long-term consequences have been addressed in the research literature during the past three decades (Garmezy, 1986,1991; Gray, 1989; Rozental, 1983; Rutter, 1977). The majority of the early research on response to loss was retrospective, focusing on adults who were later identified as having serious psychological or pathological disturbances with parental loss in childhood as a common factor. Most literature on the effects of parental death on children and adolescents has been in anecdotal and clinically-based articles (Adams-Greenly, Beldoch, & Moynihan, 1986; Bertola & Allan, 1988; Garber, 1985; Parness, 1975).

The potential for adolescents living in single parent families is a realistic expectation in society at this time (National Commission on Children, 1992). In 1985, 21% of American children lived in single parent households (AMA 1990a). Those statistics had risen to 24.1% by 1991 as reported by the Center for the Study of Social Policy (1992). Although those households included

families affected by divorce and separation, death of a parent is a real possibility.

Mortality statistics for heart disease, accidents, and cancer among parents of child-rearing age are considerably high (U.S. Department of Health and Human Services, 1988). The American Cancer Society statistics projected an estimate of deaths in 1990 from all types of cancers at 510,000 for both men and women in America; over one million new cases of diagnosed cancers were also estimated for 1990 (American Cancer Society, 1990). Statistics from the late 1970's identified that, by the last two years of high school, as many as one child in ten had experienced a parental death (Garber, 1985). With couples starting families nearly a decade later than the previous generation (Whitehead, 1990), the potential for death of a parent during the schoolage or adolescent years continues to be a major concern in society.

Empirical studies have not yet shown a direct relationship between the death of a parent in childhood and the onset of psychological and behavioral disorders in adolescence, but there are reasons to believe that this prior event may negatively influence adolescent adjustment (Garmezzy, Masten, & Tellegen, 1984; Hamburg & Hamburg, 1985). On the other hand, there are adolescents who have shown remarkable positive outcomes and resilient

responses in the years following parental death. This adolescent resilience following parental death in childhood has been linked with positive social relationships, such as a supportive relationship with the surviving parent, and individual abilities in coping (Garmezy, 1983; Rutter, 1983; Hauser, Vieyra, Jacobson, & Wertlieb, 1985).

Currently, it is unclear if resilience results, in part, from previous successful experiences of coping with stressors or from surviving multiple minor traumas in childhood. Adolescents who are resilient may continue to respond in a similar manner when confronted by stressors and demonstrate remarkable resilience as they experience and master stressors in their lives.

A notable shift in the focus of research has taken place from a concern with poor adjustment following serious loss or trauma to the investigation of the presence of stress-resistance factors and positive outcomes (Garmezy, 1983, 1986; Rutter, 1983, 1987; Smith, Smoll, & Ptacek, 1990; Hetherington, 1984; Werner, 1982). A paucity of research has addressed resilience in adolescence following parental loss, although resilience was identified as an important variable to consider.

This study examined the question: What are the relationships among adolescent parental attachment to the

surviving parent, coping, and resilience following the death of a parent in childhood?

#### Significance

The resilient response of the adolescent following the death of a parent in early childhood received little attention in the past and has now become a more recent focus of attention in nursing (McClowry, Gilliss, & Martinson, 1989) and in the counseling and psychology fields (Benard, 1987, 1992; Bertola & Allan, 1988; Gray, 1989; Hetherington, 1984; Oltjenbruns, 1991; Worden, 1985, 1990). Resilience, the capability that enables an individual to recover from or adjust easily to loss or sustained life stress, is viewed as a healthy response.

The mechanisms influencing the development of resilience as a healthy response in the adolescent are not fully understood. Some studies suggest that the adolescent's attachment relationship to the surviving parent may be a major factor in adjustment and in the development of resilience, and recently there is an increase in research on that relationship (Blain, Thompson, & Whiffen, 1993; Cotterell, 1992; Garmezy, 1986, 1991; Garmezy, Masten, & Tellegen, 1984; Papini & Roggman, 1992; Rutter, 1987).

Resilience is a multidimensional concept. The dictionary defines it as "a capability that allows an

individual to recover from or adjust easily to change or misfortune" (Webster's Ninth New Collegiate Dictionary, 1989, p. 1105). Flach (1988) described it as the psychological and biological strength required to successfully master change. The misfortune or change can include the loss of a parent or sustained life stress.

Resilience has an inherent connotation of a beneficial response entailing positive growth. Resilience as an outcome, though highly abstract, can be viewed through attributes of social competence (Boyce, 1985; Flach, 1980, 1988; Garmezy, 1983; Harter, 1982; Rutter, 1983), positive self-worth (Garmezy, Masten, & Tellegen, 1984; Gjerde, Block, & Block, 1986; Goodell, 1985/1986; Harter, 1985, 1988; Kadner, 1989; Werner & Smith, 1982), and health (Cowen, 1991; DeMaio-Esteves, 1990).

Child development specialists have identified that resilient children have shown similar patterns in individual positive personality features, family cohesion, and social support availability. These patterns included the specific attributes of social competence and positive global self-worth, attributes that describe the characteristics of adolescents who have been considered resilient (Boyce, 1985; Garmezy, 1983).

The role of attachment and its stability in later years has surfaced as a concern in the field of child development and adult psychology (Armsden, 1986; Armsden & Greenberg, 1987; Kalish & Knudtson, 1976). The meaning of attachment as experienced in adolescent parental relationships is a more recent interest. Although security in family and social relationships has been documented as a protective factor in resilience (Garmezy, 1983, 1986; Rutter, 1983, 1987), the role of adolescent parental attachment relationships has not been specifically addressed. Since attachment involves the natural development of close parent-child relationships, it needs to be considered as developing throughout the life span (Antonucci, 1976; Blain, Thompson, & Whiffen, 1993; Bowlby, 1982; Boyce, 1985; Clunn, 1991; Cotterell, 1992; Papini & Roggman, 1992; Rice, 1990; Ricks, 1985).

Although the relationships among adolescent parental attachment and adaptive coping, and resilience in adolescents are complex, it appears that these variables may be critical concepts related to resilience following the death of a parent. A clear understanding of these concepts may provide a useful framework for the development of intervention strategies to foster resilience in adolescents.

Only two studies that addressed the area of resilience were found in the nursing literature and those studies were focused on adults (Kadner, 1989; Wagnild & Young, 1990). Authors mainly from child life, child development, pediatric medicine, and clinical psychology have produced literature on the response of children to parental death. This literature has sought to explain the factors that have promoted resilience in children, and later in adolescence, relative to parental loss (Flach, 1988; Garmezy, 1983, 1986; Hauser, Vieyra, Jacobson, & Wertlieb, 1985; Rutter, 1983, 1987). These authors describe resilient children as being competent, happy, helpful, and resourceful individuals. As they grew to adolescence they were able to develop extra-familial social relationships and used a wide repertoire of coping strategies when faced with new crises.

The resilient adolescent developed greater skills in dealing with stressors and was capable of accessing outside support systems and understanding the many factors that surrounded a stressful event (Hetherington, 1984). Not all adolescents are successful in being highly resilient. The loss of a parent in childhood may lead to an unstable adolescence, one that is fraught with challenges and stressors. The factors associated with



resilience in adolescents following parental death in childhood are the focus of this study.

#### Conceptual Framework

The models that address both adolescents' and children's responses to loss have been shaped by the writings of Kubler-Ross (1983) and Bowlby (1969, 1981, 1982). The clinical studies provided by both authors point out the importance of grieving as a healthy process when a loss has been experienced. Parental death in childhood was considered a major loss, one that would have a major impact on adaptation in adolescence and later adulthood.

Loss is defined as "the harm or privation resulting from loss or separation" (Webster's Ninth New Collegiate Dictionary, 1989, p. 356). Rando (1984) specified that loss can be either physical (tangible loss of possessions or family member) or psychosocial (symbolic as in loss of status or change in status). The focus of this study was on resilience following the loss of an ongoing relationship between child and parent which included both physical and psychosocial loss. Loss must be viewed within the context of attachment as that invisible bond between the parent and the child or adolescent has been affected and changed by the death of a parent and may

potentially influence their relationship with the surviving parent (Ross-Alaolmolki, 1990).

Bowlby (1969, 1987) specifically addressed the role of attachment in adjusting to the loss of a parent and his work provides the basis for the inclusion of attachment relationships in the model developed for this study. Bowlby's work described the influence of parental loss in childhood on later adolescent and adult patterns of adaptation to subsequent loss and change. In the nursing literature, Benoliel (1985), and Jones and Peacock (1988) applied Bowlby's concepts of loss and adaptation in their works on grieving and loss.

#### Healthy Responses to Loss

Kubler-Ross (1983) devoted a chapter in her book about children and death to "loss as a catalyst for growth and understanding" (p. 77). Although this work focused mainly on terminally ill children and adolescents and their responses to their impending deaths, the conceptual notion of how children dealt with death was linked to their developmental stages, previous experiences with death, and the support of the family. The understanding of loss, ways of coping, and the subjective experience of approaching death were the important concepts discussed (Kubler-Ross, 1983). She described children's active participation in the death

care of family members and the positive responses and growth that occurred along with, and after, those shared experiences.

Children and adolescents' perceptions of death and their responses to such losses can be viewed through the developmental perspective of age differences. Children in early schoolage years (six through ten years of age) have less understanding of the permanence and the meaning of death than those children in the early adolescent years (11 through 14 years) (Kubler-Ross, 1983; Worden, 1990). Adolescents generally have internalized the adult concept of death as the cessation of life, yet their own feelings of immortality may be challenged by the previous death of a parent. Denial of the permanence of the loss may also be present. At a time of major emotional, physiological, and sexual transitions, the adolescent who has previously lost a parent to death may have difficulty in approaching the surviving parent for guidance, understanding, support, and assistance (Bowlby, 1987).

The immediate grief response occurs typically within the first year following the loss of a significant family member through death. The intermediate response is seen during the second through fifth years. Long term responses are those which occur after the fifth year (Worden, 1990).

Children and adolescents handle losses in a manner that appears to be related to developmental stages, the ability to use coping mechanisms, and the security of attachment relationships in the family (Benoliel, 1985; Bowlby, 1981; Fox, 1985; Garmezy, 1983). They respond to separation and loss by mobilizing all available resources, thereby potentially developing greater autonomy and more efficient coping skills (Gray, 1989; Ross-Alaolmolki, 1990). With these increased skills and capabilities, healthy adaptation to loss and the capacity to cope with change can be enhanced (Benoliel, 1985; Kubler-Ross, 1983).

#### Protective Mechanisms Model

The "steeling effect" was the term that Rutter (1980, p. 810) and Garmezy (1983) used to describe the pattern of resilience observed in some children following the death of a close relative. The pattern was composed of a similar group of factors that appeared to provide risk resistance and to foster positive outcomes with increased competencies in these children and adolescents. Garmezy (1983) noted that this pattern was designated by a multitude of descriptors, particularly invulnerability, ego-resilience, stress-resistance, and resilience. In his review of the research literature on healthy responses to loss and crises, Garmezy (1983) noted that

similar conclusions were drawn. Certain children showed positive responses and demonstrated resilience to stressful events. These children shared common characteristics that came to be identified as the protective factors model; the presence of positive personality factors in the individual, a supportive family milieu with warmth and cohesion, and an available external social support system.

Recently, Rutter (1987) presented a restructured model based on processes which occur in support of resilience based on his work with the protective factors model. In this model, resilience is not viewed as fixed; it varies among individuals and across risk situations. Rutter (1987) stated that the "essential defining feature is that there is a modification of the person's response to the risk situation" (p. 317), describing a coping process.

The focus in resilience studies has shifted from the identification of protective risk variables to a process model dealing with negotiation of risk situations and protective mechanisms (Rutter, 1987). Risk refers to the stressors that human beings are subjected to throughout the lifespan (Clunn, 1991). Negotiation of risk situations implies coping.

The four processes that Rutter (1987) delineated for the protective mechanisms model were: "reduction of risk impact, reduction of negative chain reactions, establishment and maintenance of self-esteem and self-efficacy, and opening of opportunities" (p. 325). The resilience model presented here was developed from the theoretical bases of this protective mechanisms model.

#### Model for the Study

The variables included in the model for this study were adolescent parental attachment (Armsden, 1986), adaptive coping (Zeitlin, 1981, 1985), and resilience as measured by perceived social competence and global self-worth (Harter, 1982, 1988; Murphy & Moriarty, 1976; Garnezy, Masten, & Tellegen, 1984), and perceived health (Davies & Ware, 1981; DeMaio-Esteves, 1990). Parental death in childhood was the risk factor leading to loss of a parental relationship that established the criterion for admission to the study. The predictor variables were parental attachment to the surviving parent and adaptive coping, including the exogenous variables of age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected).

The outcome variables of resilience for this study were perceived social competence, global self-worth, and

perceived health, the measures of resilience. These variables were used in the model to examine adolescent resilience following parental death in childhood.

Social Competence and Self-Worth. In this model, the multi-faceted social competence concept included domains of academic and athletic competence, social acceptance, physical appearance, romantic appeal, job competence, conduct, and close friendship development. Global self-worth was a more expansive dimension of self-esteem (Harter, 1988) and was measured independent of the competence domains.

Successful accomplishment of tasks bolsters self-worth and social competence to higher levels (Harter, 1982, 1988; Rutter, 1987). The concept of self-perceived social competence quite clearly identifies the abilities to access new experiences in work, school, and home environments, as well as to develop and maintain satisfying relationships (Harter, 1988).

Social competence reflects confidence in personal control of self within the social environment. Self-worth portrays good feelings about the value of one's self and capabilities. These competencies may be related to parental attachment. Rutter (1987) suggested that secure early attachments to parents do indeed provide protection for later experiences with risk. Close

intimate relationships as children grow through adolescence may positively affect self-worth.

Perceived Health. The concept of perceived health is an extension of the Rutter (1987) model. Clinical studies of healthy adolescents with highly stressed lives have documented that the resilient adolescents tended to recover from acute illnesses quickly and were less likely to have serious illnesses (Werner, 1988; Werner & Smith, 1982). The likelihood of psychosomatic illness, injuries, or physiological symptoms in adolescents who lack resilience has been documented in the literature (Smith, Smoll, & Ptacek, 1990; Clunn, 1991). Health as perceived by the adolescent has been included in this model to examine the importance of its role within the model.

Coping. Rutter (1987) suggests that alteration of the meaning of the risk can reduce the impact of the risk on a child or adolescent. Previous successful coping with stressors may provide an inoculation effect that parallels the steeling effect theory leading to competence in handling one's self in stressful situations.

Coping involves using learned behaviors in meeting personal needs (coping with self) and adapting to the demands of the environment (coping with environment)



(Zeitlin, 1981, 1985). Adolescents who developed and used coping skills tended to seek out creative and resourceful ways to handle challenges in their lives (Flach, 1980, 1988; Murphy & Moriarty, 1976; Rutter, 1987; Garnezy, Masten, & Tellegen, 1984).

Adolescent Parental Attachment. Following parental death, the surviving parent's provision of nurturance and care may interrupt the potential for negative consequences. The role of parental attachment relationships is less well known, yet it is hypothesized that attachment relationships establish a consistent, safe, and comfortable environment that interrupts potentially negative reactions (Ainsworth, Blehar, Waters, & Wall, 1978; Antonucci, 1976; Bowlby, 1982; Boyce, 1985; Knudtson, 1976). A positive attachment relationship to the surviving parent allows the adolescent to grow in the presence of a caring environment. The model for the study includes this concept of adolescent parental attachment relationships and refers specifically to the surviving parent. The attachment relationship to the deceased parent is recognized as also having influenced the adolescent, however, attempting to assess that relationship a year or more after the parental death would be seriously problematic.

A major strength of this study was the direct use of self-perceptions and self-report of the adolescents in data collection, rather than parent or teacher evaluation of resilience. Adolescents as respondents have been the focus of Garmezy, Masten, and Tellegen's (1984) ongoing study at the University of Minnesota called "Project Competence". The qualitative data collected in this longitudinal study demonstrated that adolescents could be reliable and perceptive in their subjective report. The case studies of highly stressed children in this project, compiled after a series of interviews (from childhood through adolescence), documented the individual's competence and feelings of self-worth (Smith, 1989).

Although resilience includes a variety of descriptors, social competence, global self-worth, and perceived health comprised resilience for this study. This resilience model addressed concerns within the realm of nursing and health care, particularly within the psychosocial domain. Community health and school nurses will be faced with these issues in their work with children, adolescents, and families who are experiencing the stress of severe illness, traumatic accidents, or death of a family member. Importantly, oncology nurses deal with the responses of families and strategies for enhancing resilience in both children and adults during

the grieving process. The development of knowledge about resilience and associated factors will be an important addition to the nursing literature.

#### Resilience and the Roy Adaptation Model

The concept of resilience with its connotation of adaptation to potentially stressful situations is congruent with the adaptation model of Callista Roy (Roy, 1980, 1983, 1988). Within the philosophical bases of her model, Roy has discussed the importance of resilience in both the physiological and spiritual domains, though resilience is not defined nor described (Andrews & Roy, 1986). Adaptation, the major concept of the model, is the focus of nursing practice and the means for the promotion of health of the individual. Roy presented an explanation of the intervention stage of the nursing process as the stage of "selection and carrying out of an approach to change or stabilize adaptation by enhancing stimuli" (Roy, 1983, pg. 1).

Coping mechanism subsystems are addressed in Roy's model with two categories: 1) regulators (automatic responses of neuro-chemical-endocrine nature) and, 2) cognators (complex processes of response involving perceptual, emotional, judgmental, learning, and informational aspects) (Roy, 1983). The desired outcome is role mastery, in essence, a specific competence of the

individual in a specific role. Adaptation is viewed as both the process and the product of adaptive coping (Tiedeman, 1989). The Roy model shares similar concepts with the theoretical framework of the resilience models as found in the psychology literature (Garmezy, 1986; Garmezy, Masten, & Tellegen, 1984; Rutter, 1987).

The Roy Adaptation Model provides a perspective on health, social competence, coping, and adaptation which allow the individual to be viewed holistically. Roy defines loss as "any situation which renders a valued object inaccessible or altered in such a way that it no longer has the qualities that made it valuable" (Buck, 1991, p. 282). In her definition of the physical self, she speaks of the personal appraisal of one's own physical being as including "attributes, appearance, functioning, sensations, sexuality, and wellness-illness states" (Buck, 1991, p. 282). The physical self encompasses more than physiological functioning and includes a broader perspective of self.

### Definitions

#### Conceptual Definitions

Resilience: Resilience is defined as a dynamic capability/strength (both psychological and physiological in nature) that enables an individual to recover from or adjust easily to misfortune, loss, or sustained life

stress. Resilience, for this study, was viewed through outcome attributes of social competence and global self-worth (Garmezy, Masten, & Tellegen, 1984; Harter, 1988) and self-perceived health (DeMaio-Esteves, 1990).

Resilience is not a fixed attribute.

Social Competence: Social competence (an outcome) is the child's successful adaptation to adversity and mastery of the self within society. Competence is defined as a "set of functional or instrumental skills including intellectual, social-emotional, and practical abilities" (Clunn, 1991, p. 131). Social competence is a measure of the resilience of the adolescent within eight specific domains: scholastic competence, social acceptance, athletic competence, physical appearance, job competence, romantic appeal, behavioral conduct, and close friendship (Harter, 1982, 1988). These domains were reflected in subscales measuring social skills and capabilities providing a self-perception profile of adequacy across the different domains.

Global Self-Worth: A ninth domain identified is global self-worth, defined as the "extent to which the adolescent likes oneself as a person, is happy the way one is leading one's life, and is generally happy with the way one is" (Harter, 1988, p. 3). Global self-worth is the individual's perception of his or her own worth

and value across the social competence domains. Global self-worth (an outcome) was considered independent of the domains of social competence.

Perceived Health: Perceived health is defined as the general well-being status of an individual and that individual's feelings and evaluation of that status (DeMaio-Esteves, 1990).

Adaptive Coping: Adaptive coping is the process by which a person uses learned behaviors in a stressful situation to meet one's own personal needs and to adapt to the demands of one's environment while reducing the maladaptive nature of the outcome (Rutter, 1987; LaMontagne, 1987a; Zeitlin, 1981).

Adolescent Parental Attachment: Attachment is the close affectional bond of substantial intensity between child and parent that endures beyond infancy (Bowlby, 1969). For this study, adolescent parental attachment was defined as the attachment relationship with the surviving parent, mother or father. The attachment relationship with the deceased parent was acknowledged, but was not investigated. Secure or insecure dimensions of the attachment relationship develop from infancy through adolescence and continue throughout life span (Bowlby, 1969, 1982; Armsden, 1986; Armsden & Greenberg, 1986, 1987).

### Operational Definitions

In the absence of instrumentation specific to resilience, this construct was operationalized by the variables of social competence, positive global self-worth, and self-perceived health status. Social competence with its multiple domains and global self-worth were measured by the Self-Perception Profile for Adolescents (Harter, 1988). Perceived health was measured by the General Health Rating Index (GHRI) (Davies & Ware, 1981) a self-perception instrument used successfully in research with adolescent females (DeMaio-Esteves, 1990).

Adaptive coping, as a measure of modification of risk impact and the adjustment to new and challenging situations, is the process of using learned behaviors to meet one's personal needs and to adapt to the demands of one's environment. Adaptive coping was measured by the Coping Inventory (Zeitlin, 1985).

Adolescent parental attachment, the relationship that reflects the close affectional bond of substantial intensity between child and parent that endures beyond infancy, was operationalized through the relationship with surviving parent, mother or father. The Relationships Questionnaires for the father and mother from the Inventory of Parent and Peer Attachment (Armsden

& Greenberg, 1986) were used to measure the attachment relationship of the adolescent to the surviving parent.

Circumstance of death was the classification of death as sudden or expected. Worden's study in Boston (1990) identified two categories of sudden death as being less than one day's awareness of impending death and less than one week's awareness. These two categories were collapsed into one for the purpose of this study and sudden death referred to those situations where one week's awareness or less of terminal diagnosis/impending death was known to the families. Expected death followed guidelines as suggested by Worden (1990) as greater than one week's awareness and included deaths from long-term illnesses and post-trauma occurrences.

#### Assumptions

1. Parental death during childhood is a major stressful life event (Benoliel, 1985; Bowlby, 1981, 1982, 1987; Garnezy, 1986; Rutter, 1983).
2. An adolescent who has lost a parent to death in the childhood years has experienced separation and loss (Benoliel, 1985; Bowlby, 1981, 1982, 1987).
3. The ability to attain and maintain positive social relationships with parents and peers is a lifespan developmental process (Bowlby, 1969, 1981, 1987; Greenberg, Siegal, & Leitch, 1983).



4. The attachment may be to both parents, however, the attachment to the surviving parent only was the focus of this study.
5. An individual who responds to a stressful life event by recovering from it, adjusting easily to it, and responding with positive growth demonstrates resilience (Garmezy, 1983; Garmezy, Masten, & Tellegen, 1984; Hetherington, 1984)
6. Resilience is dynamic, has defining attributes, and is viewed on a continuum from low (vulnerability) to high (protection) (Rutter, 1987).

#### Research Questions

The following research questions were examined in this study:

1. Are parental attachment to the surviving parent, adaptive coping, and variables of age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) predictors of social competence in adolescents who have experienced parental death in childhood?
2. Are parental attachment to the surviving parent, adaptive coping, and variables of age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death

(sudden versus expected) predictors of global self-worth in adolescents who have experienced parental death in childhood?

3. Are parental attachment to the surviving parent, adaptive coping, and variables of age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) predictors of perceived health in adolescents who have experienced parental death in childhood?

4. Is there a relationship between parental attachment to the surviving parent and adaptive coping in adolescents who have experienced parental death in childhood?

5. Is there a relationship between parental attachment to the surviving parent and perceived health in adolescents who have experienced parental death in childhood?

#### Hypotheses

1. Parental attachment to the surviving parent, adaptive coping, and age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of social competence in

adolescents who have experienced a parental death in childhood.

2. Parental attachment to the surviving parent, adaptive coping, and age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of global self-worth in adolescents who have experienced parental death in childhood.

3. Parental attachment to the surviving parent, adaptive coping, and age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of perceived health in adolescents who have experienced parental death in childhood.

4. Parental attachment to the surviving parent is significantly and positively correlated with adaptive coping in adolescents who have experienced parental death in childhood.

5. Parental attachment to the surviving parent is significantly and positively correlated with perceived health in adolescents who have experienced parental death in childhood.

## Summary

Stressful life events, such as parental death, provide the context within which resilience operates, a construct that has been linked primarily with children and more recently with adolescents. The model for the study describes resilience by its attributes of social competence, global self-worth, and perceived health. Resilience in adolescence connotes the capacity to rebound from situations involving risk. The adolescents at risk in this study are those who have experienced parental death in childhood. Those adolescents at risk who have shown good outcomes are called resilient.

Adaptive coping addresses the interaction with risk variables that moderates or minimizes the maladaptive effects of that risk. The model alone cannot totally explain individual differences in one adolescent's resilience following parental death. Resilience is a dynamic attribute, modifying and altering stressful situations for the individual (Rutter, 1987).

The separation and loss literature suggest that attachment plays a role in assisting an individual through adaptation following death of a parent. The adolescent who has developed positive attachment throughout the lifespan may be able to draw upon close social relationships for assistance and for coping

strategies. Although the attachment relationships between mothers and fathers may differ, both parents play roles in influencing the development of future social relationships and coping skills.

The relationships among attachment, coping, and resilience are implied through the literature, yet have not been tested. Knowledge of a positive direction, supported by research, will extend the model and identify areas for nursing intervention, particularly in bereavement care of adolescents.

## CHAPTER TWO

### Review of the Literature

The literature reviewed on adolescent resilience following parental death in childhood included the literature on loss as a stressor due to parental death, coping of children and adolescents, attachment, and resilience. The early writings on life events across the life span focused mainly on adults and dealt with issues of turning points and times of crises as being stressors to the individual. Children, adolescents, and their responses to a life event such as death of a parent have had less attention until recently.

The literature on coping during childhood and adolescence has increased greatly during the past five to ten years in the fields of psychology and nursing. Analysis of the coping with stress research has broadened the focus on stress-resistance factors, protective mechanisms for dealing with stress, and the identification of resilience in both children and adolescents. However, since resilience in adolescents is a relatively new concept for research, the literature is still limited, though promising in scope. During the past three years researchers have shown interest in pursuing the potential for enhanced wellness following crises and loss in childhood and adolescence.

### Theoretical Literature

The literature reviewed for the theoretical perspectives has been classified into four major areas: literature on parental death and loss in children and adolescents, the stress and coping literature (including the life events literature), attachment, and resilience. Although these categories are not mutually exclusive or comprehensive, they form the foundation for the knowledge base of resilience.

#### Parental Death and Loss

Rutter (1987) used Lazarus' theory in development of the protective mechanisms model and discriminated among the different types of stressful events in childhood and early adolescence. Two categories of events surfaced in his writings, those of an acute nature (not involving loss or discord) and those that dealt with lasting life changes or adaptations that were neither positive or negative in affective tone. He suggested the word stressor be used to describe the acute stressful events and that a separate category be used to label lasting life changes.

The early literature defined life events in relation to changes in the individual's personal social setting, events such as the loss due to the death of a significant person. These same events were seen to affect children

and adolescents as well as adults and were increasingly examined in research on children.

Johnson (1986) in his research on children and adolescents viewed the life events framework in a new light by specifically examining the positive and negative/undesirable aspects of life events and changes including their differing effects on children. His research reflected the opinion that negative life events (when compared to positive events) were more highly correlated with adjustment problems in children and adolescents.

Using an interaction framework ascribed to Elliot and Eisdorfer, Grey and Hayman (1987) addressed the magnitude of stressful experiences and stress responses in children and adolescents through high school years. Life event stressors in childhood were defined as those events that happened to the child/adolescent and were reported by the child/adolescent, eliminating parent and caregiver as respondents. Mediators were considered in the model described and individual differences in children's responses and outcomes to stressors were included as important. The authors identified the need for multiple assessment methods in nursing using a conceptual framework for the holistic appraisal of children's coping with stress. Major and minor events



could be perceived as negative or positive and were dependent upon the individual's interpretation. This view supported the developmental aspects of life events as stressors.

Jeanne Quint Benoliel (1985) examined the meaning of loss to human beings and the adaptation to the loss of significant relationships and change. She considered the role of attachment relationships and human development when describing the social environment of the young child. An environment that was responsive to the "child's needs for guidance with experiences of separation and loss appears to be important for the development of a sense of being capable of coping with adversity and change" (Benoliel, 1985, p. 219).

When viewing the adolescent who had experienced a loss of a parent in childhood, Benoliel (1985) discussed the meaning of the loss of a significant person and the relationship, the success of the grief work throughout the childhood years, and the expression of the meaning of the loss in the adolescent years. She provided a guide for the extension of bereavement care in nursing to the understanding of the adaptation of the adolescent following parental loss in childhood.

The adolescents in this study have experienced loss through parental death in childhood. The adolescent's

loss of a significant person is the loss of the relationship and affectional bond shared with that person. Challenges are faced by the adolescent as changes in the constellation of family relationships are rearranged (Ross-Alaolmolki, 1990).

The literature on grieving and loss supports the perspective that sudden death does have initial severe distress (Bowlby, 1987; Kubler-Ross, 1983). The duration of the deep feelings following sudden death and the relationship of adolescent parental attachment to the surviving parent are less clear and are critical areas for further research.

#### Coping of Children and Adolescents

The coping literature that focused on children has emerged from the framework of Lazarus and Folkman (1984). Folkman's (1984) discussion of stress and coping speaks of relationships between child and environment. Coping is viewed as a process in this model and is one of the mediators of the "stress and stress-related adaptational outcomes" (Folkman, 1984, p. 839). Adolescents do indeed handle stressful encounters in the environment and attempt by coping to master or at least reduce the demands placed upon them.

Coping strategies were categorized according to the Lazarus model in a review and analysis of published case

studies of coping in hospitalized children ages 2 through 10 years (Coty, Ellerton, & Ritchie, 1984). Although this work supported the stress-coping paradigm, the two indices for classifying behavior towards self and towards environment were considered to be problematic for use in research and for clinical assessments in nursing practice. Recent work by Zeitlin (1985), however, has established the usefulness of those classifications for research with adolescents.

Within the childhood chronic illness literature, Drotar (1981) addressed the issue of chronic illness as a stressor that affects all members of the family. He suggested the importance of including comprehensive appraisals of the coping abilities of the child as well as psychosocial adaptation in family, school, hospital, and community environments. Coping was viewed as a dynamic process that develops and grows within the child/family context. Drotar reported that the seriousness of the disease and its requirements for care did not appear to negatively affect resilience and adaptive coping in many of the chronically ill children. He pointed to the need for future research to identify those factors which contribute to adaptive coping and successful adjustments to long-term stressors such as chronic illness. Rather than focusing on the differences

among healthy and ill children, he believes that health care professionals must look to the strengths and positive progress among all children.

This literature shared similarities in considering the influence of development on children and adolescents' responses to stressors that involve loss, their family relationships, and coping. Children and adolescents do interpret stressful events and use strategies to cope based on their previous experiences, their support networks, and their own developmental stage.

#### Summary

Two major issues were addressed in this review: 1) children and adolescents must be included as their own respondents in research on stressors that impact on their lives, and 2) the importance of examining strengths and positive outcomes is emphasized. These issues need to be addressed in further research on coping strategies of children and adolescents who have experienced the loss of a parent due to death.

#### Resilience

The theoretical literature on resilience included those writings that discuss protective mechanisms, stress-resistance factors, resilience, and invulnerability. The theoretical development of resilience as a concept progressed from an early concern

with invulnerability and the "steeling effect" through factors associated with stress-resistance and protective mechanisms.

A maturational model of continuity and discontinuity that focused on change and the individual's growth in response to change described continuity in terms similar to the descriptors used for resilience. The capability to hold onto and manage psychological development and stability when stressors or threats have occurred was emphasized (Brim & Kagan, 1980). Similarly, plasticity considers issues of flexibility in response to change and the potential for change throughout life due to the social interaction of persons (Lerner, 1984). This theoretical perspective assists in the explanation of children's and adolescent's growing developmental capacity to handle major life changes; internal cognitive restructuring enables adaptation within their social environments.

The classic works on stress-resistance and invulnerability have been attributed to social psychologists and researchers, particularly Garmezy and Rutter, and are now being addressed as an important area for nursing (Clunn, 1991). Early in the 1970's, Garmezy and Neuchterlein (1972) in their review of the literature on factors relating to children's resistance to disorder

identified competence and adaptation as important variables. They noted that some children who were raised in poverty, or with a family member with a mental illness or under conditions of physical or psychological neglect were found to have matured through adolescence developing competence and exhibiting adaptation. These studies formed the basis of the model for competence formation despite exposure to stress within the family or community.

Similarly Block and Block (1980) whose work emerged from a psychoanalytic approach identified the construct of ego-resilience as a personality characteristic. They viewed the ego-resilient person as one who was resourceful in meeting the challenges of the environmental demands. There were definite distinctions among ego-resilience, coping, and competence. Ego-resilience had a dynamic quality in response to the environmental context. The ability to cope with the self and with the environment was a critical aspect of this model.

Resilience has been defined in varying ways as both an antecedent and an outcome. Professionals are in general agreement that there is an ability or an inner strength present in some adolescents that facilitates their recovery from or adjustment to traumatic events,

multiple or chronic life stressors, or strong challenges. The role of perceived health status as a component of resilience has not been studied, yet physical illness and psychosomatic symptoms have been linked to vulnerability and poor resilience (Anthony, Koupernik, & Chiland, 1978). Vulnerability with its developmental implications for residual negative effects following stressful events was discussed and reported in the literature (Cowen, Pederson, Babigian, Izzo, & Trout, 1973; Garmezy, 1983, 1986; Rutter, 1980, 1983).

In the revision of the protective factors model, Rutter (1987) described protective mechanisms as including the opportunity for a wide range of experiences. Choices may have to be made following unpleasant or undesired circumstances, such as experiencing the death of a parent, that open up the adolescent's life to greater growth and new social relationships. These adjustments to changes involve use of coping strategies by the adolescent. The adaptational outcome of stress, that is coping, may be as important as the life event itself.

Garmezy (1991) addressed the concepts of resiliency and vulnerability in the disadvantaged poverty-stricken population, particularly poor Black families. Poor maternal health, nutrition, and medical care increased

morbidity. Although the transmission of a parental chaotic life-style could predict later negative life status, certain positive factors appeared to contain those problems. Variables seen to make a difference were strong self-perception and social skills, modification of risks and stressors, cognitive skills, goal-directed activity levels, family cohesiveness and warmth, family member role-definition, the presence of a very caring adult in the child's life, and a source of external support such as school or church involvement.

Continued research and study of the patterns of stress-resistance and invulnerability led to the coining of the term "the steeling effect" (Rutter, 1980, p. 810), although the word steeling had been used by Anthony (1974) in an earlier work about stress and the invulnerable child. Rutter explicated protective risk factors and resilience in this 1980 work. A three component model of these factors included the categories of positive personality characteristics (i. e. flexibility, social responsiveness, positive mood, high self-esteem, autonomy, sense of personal power, and others); supportive family milieu with warmth, cohesion, and positive structured role relationships; and external social support systems with appropriate role models (Garmezy, 1983; Rutter, 1983, 1987).



A developmental study of stress and competence in children and adolescents added yet other dimensions to the protective factors model, that of challenge and compensatory responses (Garmezy, Masten, & Tellegen, 1984). Although this particular study dealt with risk factors for developmental psychopathology, it did support a three-factor model approach for predicting stress resistance and competence in children. The protective factors model was designated as the "immunity versus invulnerability model" (Garmezy, Masten, & Tellegen, 1984, p. 103). This model, along with the challenge model, were considered types of coping as they were involved in relationships among personal attributes, stressful situations, and adaptation. The work of Garmezy, Masten, and Tellegen (1984) supported the beneficial effects of the protective risk factors on resilience in children.

Werner (1984) posed two questions that directed the theme of her essay on resilience in children, "What is right with these children?" and, "...How can we help others to become less vulnerable in the face of life's adversities?" (Werner, 1984, p. 68). Another critical question raised was whether this pattern of response was a learned behavior. The definition of resilience was very clearly spelled out as "the ability to recover from

or adjust easily to misfortune or sustained life stress" (p. 68).

Werner (1984, 1990) categorized protective factors of resilient children as emanating from within the self, within the family, and within the community. A characteristic that was new to the protective factors model addressed the helpful roles of children and adolescents in both home and community. These resilient individuals were managers of specific household duties or family health care within their homes. Outside of their homes, they voluntarily assisted others or held jobs and responsibilities.

Benard (1987) reviewed the literature on protective factors and resilience and addressed the need to build health-promoting behaviors and social competence in children. She summarized the protective factors role in stress-resistance and resilience in children. Personality and environmental influences interacted in a reciprocal non-linear relationship. Outcomes were determined by a balance between risk factors, stressful life events, and protective factors (Benard, 1987).

Benard (1992) continued to review the extant literature on resilience and health-promotion strategies for children in at risk situations. She suggested that negative risk factors should be translated into positive

action strategies or protective factors. The resilient child was pictured as one who works, plays, loves, and expects well in spite of severe stress and adversity. Attributes that consistently identified the resilient child were social competence, problem-solving skills, autonomy, and a sense of purpose and future-orientation.

The importance of the concepts of stress-resistance and resilience to the health care of children and adolescents was further delineated by Richmond and Beardslee (1988). In their definitions, they equated successful coping, adaptation, or mastery with resiliency. In describing resilient children, the authors specified that the children had not "succumbed or become dysfunctional due to the stresses under consideration at the time of assessment" (Richmond & Beardslee, 1988, p. 159). Although conceptual definitions were not initially distinct, resiliency was later described as involving both stressors and the capacity of the child to respond, endure, and master in the face of those stressors.

High self-esteem, a range of available opportunities, family support and structure, coping skills, and personal/social relationships were identified as important characteristics as adapted from Rutter's (1987) model. The developmental perspective for

pediatricians was highlighted as being critical to the understanding of children's health promotion and disease prevention needs, particularly as they progressed through the adolescent years.

### Attachment Theory

The classic work on attachment by Bowlby (1969) described the phases of human attachment in infancy as beginning with the orientation to a figure, orientation with discrimination, maintenance of proximity to that figure, and the formation of a goal-directed partnership. The mother of the child was the usual figure of reference in the theory, yet either parent or the primary caregiver may now be considered as the partner figure. The partnership concept has been expanded in more recent work (Bowlby, 1982) and has been identified as occurring about the middle of the third year of life.

Further additions to the theory discussed the stability and change in patterns of attachment over time, a relatively new development after a decade of research. Bowlby (1982) found that the patterns of attachment remained throughout subsequent years if the family environment were stable. Parental and peer social relationships in adolescence reflected the earlier attachment patterns.

The close bond that had grown between the child and mother [parent] was a major factor in the ability of the child to develop trust and self-confidence (Ainsworth, Blehar, Waters, & Wall, 1978). During this process, the child invested the self into a dependency relationship with the parent. Subsequently, the child learned to separate and become an individual, loving and capable of enjoying satisfying social relationships. The pattern of developing such relationships continued on throughout developmental stages as the child grew older.

The experience of separation and loss, through the death of a parent, challenges the capability of the child. If the child had the security to explore the environment and learned to detach from the parent, the attachment bond would have been successful in freeing the child to face life's struggles confidently (Benoliel, 1985; Bowlby, 1981; Garmezy, 1986). The child responds to the loss by mobilizing inner resources. These losses become significant turning points in life and assist in development of greater autonomy and more adaptive coping skills throughout adolescence and later life (Benoliel, 1985; Steinberg & Silverberg, 1986).

Knowledge about resilience and the protective risk factors that can be enhanced in children have been presented in this review of the theoretical literature on

loss due to parental death, attachment, coping, and resilience. The research in the fields of children's and adolescents' coping and adolescent attachment relationships is recent and expanding, yet the studies in stress-resistance, protective mechanisms, and resilience are sparse. The review of this literature demonstrates a definite need for investigation to develop and support the theoretical foundations in the field.

#### Analysis of Differing Methodological Approaches

The difficulty in studying parental death and loss as a stressor, coping, and resilience is apparent to the health professional. Ethically one could not manipulate an experimental group with the introduction of stressors to measure coping responses. The published research to date include initial studies that have sought to document the presence of protective factors in highly stressed children (Garmezy, 1983; Rutter, 1979). An early work by Garmezy and Neuchterlein (1972) was actually a review of various sources of both published and unpublished literature that identified linkages among socioeconomic factors, genetic background, and "familial disadvantage" (p. 329) in the absence of empirical literature. Garmezy (1983) did discuss the epidemiological study done in England by Rutter in the mid 1970's as one of the first

to uncover the protective factors in a disadvantaged and stressed population of children.

Laboratory studies may show limitations as synthetic situations to mimic stress on subjects lack the meaningfulness and the intensity of true life experiences. As a result, many of the studies relating coping and life events as stressors have been correlational studies. Experimental treatments have not been given to either group, nor have children been randomly selected for group membership. Individual variation in response has also been a problem for researchers whether the stressful occurrence has been a major disaster or a minor traumatic event. Criticisms have been directed to these types of studies by theorists and researchers (Johnson, 1986; Nelms, 1985; Thoits, 1982; Worden, 1990).

Non-random sample and non-random assignment to groups, and unclear descriptions of the treatments have violated the assumptions of experimental design. The seemingly inconsistent results support the use of an interaction process model rather than the focus on the gravity of the risk (Rutter, 1987).

Two longitudinal studies provided a wealth of information on the developmental aspect of the stress-resistance puzzle. Both studies (Block & Block, 1980;

Werner, 1984) were able to document family patterns, environmental change, and the personality factors in the children as they matured.

The case study approach, although not frequently reported in the literature, held merit in the beginning years of research on children and coping with stress (Rutter, 1979; Werner & Smith, 1982). The separation and loss writings discussed case studies as giving substantial, indepth qualitative data about the children and adolescents who were subjected to the stress of family losses through death and divorce (Bowlby, 1981; Kubler-Ross, 1983).

Although correlational studies have been the typical approach to studies of resilience and coping responses, more than one researcher has cautioned professionals about the highly inflated correlations that have resulted (Johnson, 1986; Thoits, 1982). Instruments that are reliable, valid, and measure protective mechanisms must be used in developing this research area.

#### Research Literature

The research in the field of resilience is grouped into three categories for ease in analysis of the literature: attachment, coping of children and adolescents, and resilience. The adolescent attachment research is a relatively new phenomenon in the most



recent decade. The coping literature includes those studies that relate to life events, coping strategies and responses to stressors. The published research on resilience is limited at this point in time.

### Attachment

Attachment theory appears to provide the linkage among attachment relationships, adolescent development, and adjustment. Since adolescence is a time for the exploration of meaningful, close, and supportive relationships, attachment relationships have been the focus of exploratory research.

Ricks (1985) reviewed studies on the effects of parental childhood experiences and the subsequent attachment of the parent and child. Bowlby's theory of attachment suggests that there is an intergenerational continuity in the quality of parental behavior. The effects of separation or disruption in the family and parental remembrance of childhood attachment were examined. The research has been longitudinal and retrospective causing problems in gathering information over long periods of time and in recall of past events. Separation involved the loss of one or both parents before the age of eleven either by death or divorce. Disruption was defined as occurring either alone or in conjunction with separation or death.

The Minnesota, Berkley, and Amherst projects were reviewed in regard to mother-child attachment and "the social transmission of parental behavior" (Ricks, 1985, p. 210). The major findings of those projects focused on the relationship of the quality of the mother's childhood recollections of parental relations and her self-esteem as compared with child-mother attachment. Attachment was measured by outcomes from the strange situation assessments and problem-solving abilities. Within this conceptual system, self-esteem was viewed as a function of a child's relationships with his/her parents. Findings suggested that successful childhood outcomes were associated with a maternal history of positive recollections of childhood experiences. When childhood outcomes were successful, yet a maternal history of disruption or rejection was noted, the mothers had evidence of stable marriages and high self-esteem. Maternal self-esteem and security of infant/mother attachment were positively correlated regardless of whether loss or disruption had occurred.

Armsden (1986) studied affective status, self-esteem, appraisal, coping with loss, and the relationships to parental and peer attachment in late adolescence. Adolescents who reported secure parental relationships had higher self-esteem and higher coping

levels. The presence of strong and warm family relationships was also related to supportive peer group relationships.

Attachment theory posits that securely attached children develop positive internal working models of self and others (Bowlby, 1969). Likewise, insecurely attached children develop negative models, thus fostering mistrust and questioning of their own worthiness. Perceived social support may be an observable manifestation of attachment style (Blain, Thompson, & Whiffen, 1993).

In their study of late adolescents (Blain, Thompson, & Whiffen, 1993), 216 undergraduate students completed a packet of questionnaires assessing perceived social support and attachment to parents and peers. Perceived social support was considered a function of the model of self (self-worth) and others external to the self with their availability and responsiveness (Blain, Thompson, & Whiffen, 1993). Attachment style was identified by a self-report choice of a descriptive paragraph reflecting one's feelings about relationships, the Close Relationships Questionnaire (CRQ) (Bartholomew & Horowitz, 1991). The styles were categorized as four discrete types: secure, fearful-avoidant, preoccupied, and dismissing-avoidant. Those subjects who selected the

secure attachment style showed high levels of perceived social support from parents and friends.

Developmentally, friend relationships are very important during adolescence as independence from the family is being negotiated. The attachment bond to parents remains, however, the attachment behaviors may evolve to become phone calls, letters, or short visits home if away at college. These findings are consistent with attachment theory and support the durability of the bond across developmental stages (Blain, Thompson, & Whiffen, 1993).

Social support during adolescence and attachment behavior were major resources for coping with stressful events in a study by Cotterell (1992). The transition from school to work was one of the identified stressful events. The study linked interpersonal relationships in adolescent years to Bowlby's theory of attachment. School environments were part of the formal network while family and friends comprised the informal network. This study examined the relationships among attachment to significant others and parents with support resources and adolescent well-being. A random sample of 57 adolescents were surveyed with three self-report measures of social support, psychological well-being and academic

adjustment, and attachment to three key providers of support (friends, parents, and teachers).

Few relationships were found between social supports or attachment and adjustment. Moderate relationships were found between adolescents' number of supports and strength of attachment to members of the respective support system. The main finding suggested that the strength of attachment to parents and teachers was associated with positive feelings about self and was a powerful force for mental-health well into middle-adolescence. Associations between supports and academic outcomes were not consistent among the sexes. Parental and adult non-kin support was related to academic self-concept in the female subjects. Support from friends was negatively related to self-concept and educational plans among the males. Gender differences were evident in the social support influences, yet the attachment outcomes supported the strong role of positive self-concept in well-being (Cotterell, 1992).

The relationship of attachment to competence, anxiety, and depression in sixth grade students was studied by Papini and Roggman (1992). A convenience sample of 47 family triads participated in three assessment sessions in a longitudinal study. The researchers hypothesized that strong attachment

relationships with parents resulted in positive perceptions of adolescent self-worth and self-competence.

Correlational analysis of the data lent positive support to the idea that strong attachments to parents promoted the development of greater self-perceived competence in early adolescents. In addition, attachment relationships with parents provided a stable emotional foundation to aid the adolescent through the transitional periods where emotional support was needed. Adolescent feelings of depression and social anxiety were reported less often when strong attachment relationships with their parents were noted.

#### Summary of Attachment

Attachment viewed as a life-span developmental concept has built upon the foundation of infant and toddler relationships with the mother and father or primary caregiver. The strength of the attachment bonds formed by children affected the quality of the relationships established in adolescent years. Self-esteem, self-worth, and social competence were linked to the success of the attachment relationships. Likewise, strong attachment provided a stable foundation and emotional support when stressful events in childhood were experienced.

Coping of Children and Adolescents

An early study by LaMontagne (1984), though not examining coping following parental death, was based upon the Lazarus framework and investigated the relationship between children's locus of control beliefs and preoperative coping behaviors. Fifty-one (51) children ages 8 through 12 years, who were scheduled for minor surgery, voluntarily participated in the study. This convenience sample was split into three groups on the basis of scores on the avoidant-adaptive coping dimension instrument; avoidant, middle, and active. The three groups were given three different amounts of information depending upon their coping scores. Children rated as active were given more detailed information about the surgery and their problems than the other two groups. This biased the results of the study and afforded a different treatment protocol to one group.

The findings supported the role of cognitive factors in coping styles of children. Children were able to define and appraise the stressful situation. A relationship between locus of control and preoperative coping was found. Children rated as active had significantly lower locus of control scores than the children in the mixed and avoidant groups. Differences in coping behaviors in relation to locus of control were

supported. Socioeconomic class (SES) was also related to locus of control with internality being related to higher social class. Parent-doctor information and locus of control were independently predictive of coping (LaMontagne, 1984).

Replication and extension of the latter study was done to investigate children's locus of control beliefs and coping (LaMontagne, 1987b). Forty-two children, ages 8 through 18 years, who were hospitalized for minor surgery voluntarily participated as a convenience sample.

The results supported the hypothesis that internal locus of control was positively associated with adaptive coping. In addition there was a positive association between age and coping and greater information with active coping. Findings did support that all three independent variables were related to the children's coping strategy and that locus of control and information were associated with specific coping behaviors. There was no association between SES of parents and sex of child and the study variables (LaMontagne, 1987b).

#### Summary of Coping Research

The literature presented on children and coping was mainly from the discipline of nursing. Professionals entrusted with the care of children in health care and home settings have observed and questioned the ways in



which children handle stressors and cope with difficult situations.

The coping research presented problems with convenience samples, nonrandom assignment to treatment groups, lack of control groups with experimental protocols, and inconsistencies in the reliability and validity statistics presented. Small sample sizes were also used in these studies and power analyses were not reported. The coping research was extremely limited with respect to older children and adolescents. Coping may be an important linkage in the resilience model when stress-resistance factors and protective mechanisms are examined in children and adolescents.

### Resilience

The focus of studies on resilience began with an interest in the children who demonstrated positive responses and who achieved despite growing up in poverty and often neglect in a ghetto or in families with serious psychopathology (Garmezy & Neuchterlein, 1972). This ability for successful growth following sustained life stress indicated that there was a special capability in some children to withstand trauma and to rise above it.

#### Ego-Resiliency and Personality Factors

One of the earliest works on resilience was a longitudinal study conducted by Block and Block (1980)

starting with nursery school children in the three year span of 1969-1971. The research study was included because of its importance as the seminal work in longitudinal studies of resilience. The goals of this study were to investigate the developmental course of ego-resilience and ego-control. The researchers hoped to find predictors of personality attitudes in adolescence through their studies of ego-resilience and ego-control in childhood.

Data were collected at multiple points in time from as many of the original subjects as possible under the funded "Block Project" at the University of California, Berkeley campus (P. Gjerde, personal communication, April 17, 1989). The sample size has ranged from a high of 130 children to a low of 104 children as some respondents have been lost due to mobility of the families. Parental and child data were collected and continue as the analyses are ongoing. Multiple Q-Sort methods were used to identify and categorize ego-resilient children. Teachers and supervisors ranked the children at various developmental levels from preschool through adolescence.

The results of the study (Block & Block, 1980) indicated that the factors or antecedents of ego-resiliency (also called resiliency by the authors) included genetic and constitutional factors of

temperament styles; secure and loving mothering care; social interaction and communication; and congruence within the family structure. These factors reflected the protective mechanisms that have been examined by other researchers (Garmezy, 1986; Garmezy, Masten, & Tellegen, 1984; Rutter, 1987).

Personality characteristics associated with perspective-taking in the ego-resiliency and egocentrism relationship were also measured in a separate cohort (Gjerde, Block, & Block, 1986). Perspective-taking (or non-egocentrism) was considered to be an age-related component of a general ability to adapt with resourcefulness to the contextual demands of a changing environment. This general ability was called ego-resiliency and labeled as a personality characteristic. Because the design was longitudinal, the researcher sought to explore the developmental trajectory of egocentrism on an individual level.

These children were followed from 3 through 18 years of age with several data collection times and varying sample sizes beginning with 111 children (Gjerde, Block, & Block, 1986). Results of the study supported the researchers' initial expectation that individual variation in young children's egocentrism could be explained by the use of personality constructs. It also

partially supported the negative relationship that was predicted between egocentrism and ego-resiliency. Secure attachment to the maternal figure and responsible, loving mothering were positively related to the development of perspective-taking (non-egocentrism) and ego-resiliency in children. Utilizing these two capabilities enhanced the child's ability to respond to environmental demands and stresses with a "dynamic, flexible, and resilient manner" (Gjerde, Block & Block, 1986) and assisted in adaptation. Additional support was given to personality characteristics as explaining the individual variation in cognitive-developmental levels of children.

Longitudinal studies on infants born into poverty had shown support for the protective factors, then processes, that had been the focus of Garnezy's earlier studies (1983, 1986) and Rutter's work in England (1983, 1987). The infants who achieved successful outcomes had parents who were supportive of their offspring, set roles in the family, and nourished cohesive family environments (Garnezy, 1991). These children were active, socially involved with others, and able to seek support within the community. Schools formed a critical system for children as they promoted social and/or academic success as well as decreasing emotional and behavioral disturbances. The disability of being disadvantaged could be overcome and

adaptation could be successful, however, the protective processes that are involved continue to require research.

Clinical observations by health care professionals, along with recent studies in children's responses to loss, have shown that there are children who respond to crises in their lives with positive growth and adaptation (Block & Block, 1980; Bolig & Weddle, 1988; Garnezy, 1983, 1986; Kubler-Ross, 1983; Rutter, 1983; Werner, 1984, 1990; Werner & Smith, 1982). These studies suggest that protective processes emerge that foster increased competency and positive outcomes in bereaved children. Greater knowledge of how parental relationships and coping relate to resilience in adolescence following a stressful experience is an important concern to nursing since adolescence is often a difficult adjustment period (American Medical Association [AMA], 1990a, 1990b; Armsden, 1986; Hauser, Vieyra, Jacobson, & Wertlieb, 1985; Papini & Roggman, 1992).

#### Competence and Protective Factors

Specific studies relating to these protective mechanisms and competence in children were done by Garnezy, Masten, and Tellegen (1984). Their main focus was directed to finding the components of developmental psychopathology in children experiencing high levels of stress. The researchers investigated risk, competence,

and protective factors in a 10 year study of children in three different cohort groups from early schoolage through adolescence. Resilience was defined as an outcome, a competence capability in children who were highly stressed.

The sample in the first cohort (200 children) was drawn from a pool of 600 children, however, randomness was not addressed in the report. The other two cohorts were drawn from children who had congenital heart defects (32) and severe physical handicaps (29) and both groups appeared to be convenience samples (Garmezy, Masten, & Tellegen, 1984).

Limitations were discussed and focused on the community sample in cohort I and the lack of data on developmental issues. This sample was designed to be heterogeneous and to represent healthy, resilient children in comparison to the two other cohorts that addressed different homogeneous populations with physical handicaps. The children did not show evidence of specific psychopathology and consequently provided a data base for comparison in future research in the area of competent functioning and resilience (Garmezy, Masten, & Tellegen, 1984).

In a more recent study, Daniels, Moos, Billings, and Miller (1987) examined the risk and resistance factors of

psychosocial adjustment in healthy children, chronically ill children, and their healthy siblings. In this cross-sectional correlational study, the parents of 93 children with juvenile rheumatoid disease (JRD), 72 healthy siblings, and 93 healthy controls matched to the children with JRD were administered a number of assessment instruments. The age ranges of the children in the three groups were not specified in the report.

Three domains were examined: 1) family background and SES, 2) children's psychosocial functioning variables, and 3) risk and resistance factors. Demographic data were collected and analyzed with ANOVA and no significant differences were found except that the siblings were from larger families than the subjects in the control group, as was expected from the design.

The findings suggested that parental dysfunction, in particular, depression, physical symptoms, and family stressors was associated with more psychological and physical problems among the children with JRD. In general, the risk and resistance factors were similar for the siblings of children with JRD, however, family cohesion and expressiveness were more important. Vulnerability and protective factors were similar in the healthy control group of matched families with the JRD families. Mothers' depression and the lack of family

cohesion and expressiveness were weakly related to more adjustment problems among the control children (Daniels, Moos, Billings, & Miller, 1987).

Risk and resistance factors also tended to show similar results for both continuous psychological and physical problems as well as for a dichotomous multiproblem index. The robustness of the risk factors was supported. Better parental functioning, low family stressors, and increased family resources seemed to be important for both the healthy children and the children with JRD (Daniels, Moos, Billings, & Miller, 1987).

The methods section did not clearly explain the procedures for data collection, however, the authors stated that parental report was used. The lack of statistics on reliability and validity for the instruments used was another major weakness. The study failed to clearly explicate the relationships and the predictive ability of parental functioning, family stressor, and family resources with psychosocial adjustment and physical problems (Daniels, Moos, Billings, & Miller, 1987).

Subsequent research and long-term follow-up with highly stressed children have shown they have made excellent progress in response to intervention programs. Programs were directed toward increasing the repertoire



and use of coping strategies, improving the children's social relationship patterns, increasing feelings of self-worth, and establishing a supportive family environment (Adams-Greenly, Beldoch, & Moynihan, 1986; Botvin & Tortu, 1988; Brenner, 1984; Flach, 1988; Gray, 1989; Hauser, Vieyra, Jacobson, & Wertlieb, 1985; Humphrey & Humphrey, 1985; Saunders, 1983; Saunders & Remberg, 1984). The children who demonstrated high degrees of resilience also had unusual psychological strength even though they had experienced very acute or prolonged traumatic, stressful events. Four characteristics appeared to describe these children: 1) an active and evocative approach to problem-solving with negotiating abilities, 2) the ability to perceive life experiences in a constructive, positive manner even when pain or suffering was involved, 3) an ability to gain positive attention from others from infancy on, and 4) the possession of a strong faith that the future held positive meaning for them (Werner & Smith, 1982).

In Werner's more recent work (1990), she discussed the developmental progression of protective factors. The middle school age children, the most studied group, had strong problem-solving and communication skills even though they were not academically talented. They demonstrated social competence, flexible coping skills,

humor, and independence as they grew through adolescence. The resilient adolescents, the least studied, demonstrated more positive self-worth, social maturity, responsibility, and goal-directed behaviors than their peers.

#### Moderator Variables in Resilience Research

A prospective study specifically investigated the influence of conjunctive moderator variables, social support and psychological coping, on sports injury outcomes (Smith, Smoll, & Ptacek, 1990). The sample consisted of 250 male and 201 female adolescent athletes ranging in age from 14 through 19 years. During the entire sports season, injury assessment reports were kept on any athlete who received an injury and on the number of days lost out of the total possible playing days.

Results of the study indicated that coping skills and social support were independent psychosocial resources, and as such, worked together in influencing the effect of life stresses on subsequent sports injuries in adolescent athletes (Smith, Smoll, & Ptacek, 1990). Athletes demonstrating low levels of coping skills and social support resources were found to be more vulnerable sustaining a significant number of injuries. Major negative life events had accounted for 30% of the injury variance. The conjunctive effect of coping and social

support on resilience and vulnerability factors was supported in this study.

#### Summary of Resilience

The variability in the quality of the research in the fields of resilience and stress-resistance factors establishes the necessity for well-designed and carefully implemented research studies in those areas. Although experimental and laboratory studies may be inappropriate or ethically difficult for this type of research, longitudinal correlational studies have addressed these psychosocial concerns and have provided several quality research studies. The absence of demographic data relating age ranges of children and adolescents, the lack of documentation of procedures for accessing subjects for the study, and missing reliability and validity statistics of the research instruments have been major problems with the behavioral research in resilience to date. Future studies need to address these issues to provide substantial and quality research in this area.

#### Health of Adolescents

The health of adolescents is a concern of health care professionals in society today. The physiological, emotional, and psychosocial changes that accompany adolescence signal major transitions for pre-teen and early teenagers. Coupled with school changes and family

role changes, adolescents are saddled with several major life events in a short period of time, within a few years in many cases. Coping behaviors are also affected in this age group when peer pressures for psychoactive drugs and alienation from family members are increasingly powerful factors (AMA, 1990a, 1990b; Hamburg & Hamburg, 1985).

Early adolescence is considered a distinct stage, generally between ages 11 and 14 years, as the onset of puberty occurs simultaneously along with multiple demands on the social, emotional, and psychological well-being of the individual (AMA, 1992; Hamburg & Hamburg, 1985; Hauser, Vieyra, Jacobson, & Wertlieb, 1985). Middle adolescence refers to ages 15 through 17 years and late adolescence typically includes the years 18 through 21 prior to young adulthood (AMA, 1992; Blain, Thompson, & Whiffen, 1993).

Physical health may be at risk during these times of transition and turmoil. Coupled with the experience of the death of a parent in the earlier childhood years, the young adolescent is challenged to meet added stressors within the family and community environment. Research on the relationship between health, coping, and competence behaviors indicate that some adolescents maintain their health and build upon their competence capabilities

during the years of change (DeMaio-Esteves, 1990; Smith, Smoll, & Ptacek, 1990).

The relationship between daily stress and perceived health status was investigated by DeMaio-Esteves in a study of 159 adolescent girls between the ages of 14 and 16 years (DeMaio-Esteves, 1990). A causal model tested direct and indirect effects of daily stress on perceived health through introspectiveness and coping. The female adolescents completed a series of four instruments that included the General Health Rating Index (Davies & Ware, 1981).

A LISREL VI model was used to test the theoretical model and showed that daily stress had a direct negative effect on perceived health status and a direct positive effect on introspection. Introspection had a direct effect on perceived health status, and a mediating effect on the relationship between daily stress and perceived health status (DeMaio-Esteves, 1990). Problem-focused coping had a direct positive effect on perceived health status, and a mediating effect on the relationship between daily stress and perceived health status.

The findings confirmed the theoretical literature that linked daily stress to perceived negative health status in teen-age girls. Interestingly, the results tended to contradict previous research that showed

emotion-focused coping had a direct positive effect on health symptomatology in adolescents. Gender, however, may have played a role in this relationship as only females were included in this study (DeMaio-Esteves, 1990).

Adolescence presents many challenges to nursing. The relationships among perceived health, coping, and social relationships are complex and varied. Continued exploration of the theoretical linkages and support by research may provide insight and understanding of the adolescents' physiologic and psychosocial responses to the loss of a parent in childhood (Shonkoff, Jarman, & Kohlenberg, 1987). Adolescent bereavement and adaptation to loss studies are sparse in nursing, yet have been suggested for future nursing research by clinicians in acute care and community health settings (Adams-Greenly, Beldoch, & Moynihan, 1986; Benoliel, 1985; Clunn, 1991; Davies, 1991; Jones & Peacock, 1988; Ross-Alaolmolki, 1990; Zambelli, Clark, Barile, & deJong, 1988).

## CHAPTER THREE

### Method

The focus of this study was resilience in adolescents who had experienced the serious loss of death of a parent in earlier years. This study described the relationships among parental attachment and coping (the predictor variables) and resilience (the outcome) in adolescent children following parental death in childhood. It examined these variables along with age of the adolescent, gender of the adolescent with gender of the surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) for their strengths in predicting the outcome variance.

### Design

The study was a cross-sectional, correlational design with one group of adolescents, ages 13 through 21 years, who had experienced the loss of a parent through death during the childhood years. Data were collected in this study at one point in time, at least one year following the death of a parent. The choice of one year or more after parental death was made to allow for youth to have proceeded through the initial grieving stages (Bowlby, 1981; Kubler-Ross, 1983; Worden, 1990). The immediate responses of initial shock, disbelief, and deep emotional sadness may be resolved, although the

adolescents may still feel sadness at the loss of their parent.

Resilience, a multidimensional concept, has not been measured with presently available instrumentation, therefore, attributes that can be measured were substituted for resilience. These attribute variables allowed resilience to be operationalized as social competence, global self-worth, and health as perceived by the adolescents.

Demographic variables that may also influence resilience were included in the predictor variables, i.e. age of adolescent, gender of adolescent and gender of parent, length of time since parental death, and the circumstance of death (sudden versus expected). Gender of adolescent was paired with gender of parent to examine this set of variable pairs: mother-daughter, mother-son, father-daughter, and father-son. Gender pair grouping, though not a continuous variable, was entered into the regression equation. The effect of sudden death versus expected death was statistically controlled in the multiple regression analysis.

All of the adolescents in the sample completed the written data collection instrument (by phone or in person) identifying the demographic variables and the self-report instruments; the Self-Perception Profile for



Adolescents (Harter, 1988), the General Health Rating Index (Davies & Ware, 1981), the Relationships Questionnaire of the IPPA (Armsden & Greenberg, 1986), and the Coping Inventory (Zeitlin, 1985).

#### Sample

The sample was purposive and was originally to be accessed through referral of adolescents who had participated in bereavement support groups for adolescents in the Midwest (one in northeast Ohio and one in southern Ohio). Both groups had been contacted by the researcher and the proposal was accepted by their executive boards for cooperation in identifying subjects for the study. Approximately 40 adolescents were to be available from each support group. At the time of data collection, both support groups withdrew their participation to provide access to subjects. One group stated that they had not retained the names and addresses of their clients through a clerical error. The other group had experienced refusal on the part of the group's facilitators to allow the researcher access to the children because it interfered with their own research.

The final sample was the result of the concerted efforts of recruitment of adolescents through multiple methods. Letters were sent by the researcher to adult bereavement support groups for newsletters and

announcements at meetings, to school psychologists and counselors who were attending a state conference in central Ohio, to school teachers in northern Ohio, to area churches with ministries to bereaved families, and to single parent support groups. Follow-up telephone calls were made to those groups to further explain the study.

Calls were made to counselors who worked through funeral homes in northeastern Ohio. Printed requests for participation were sent to community groups (e.g. Boy Scouts and Girl Scouts) with self-addressed, stamped postcards for return to the researcher if participation was desired. An informal network of interested persons contacted the researcher to refer a family with an adolescent for consideration into the study. One national organization for single parents published the research request in their monthly magazine as a service announcement. Letters or phone calls were received by the researcher in response to the notices in single parent and support group newsletters.

Approximately 145 adolescent names were provided for participation in the study. Address changes or restrictions in accessing families substantially reduced the pool of subjects to 126. These 126 adolescents represented a four-state area in the Midwest and the

states of New York and New Jersey. Letters were then sent to the adolescent and the parent explaining the study and the referral source (Appendix A). The consent form was attached and a self-addressed stamped envelope was included for return of the signed consent if participation was allowed. A reminder postcard was mailed to each identified potential subject three weeks after the first mailing if a response was not obtained by that time.

A response rate of 60% of those contacted led to the decrease in potential sample size. Seventy-five adolescents and their parents returned consents and verbally agreed by telephone screening to participate. However, seven withdrew participation prior to the data collection. Some of the reasons for withdrawal that parents identified were (1) the parent didn't want to have the adolescent involved, (2) the adolescents didn't care to participate, (3) the adolescent would only participate if there was payment, or (4) the adolescent was still grieving or emotionally uncomfortable with the parent's death.

Six of the final subjects did not meet the criterion of age at time of parental death (5 years to 14 years), therefore, their responses were not included in this study. The final sample consisted of one group of 62

adolescents aged 13 years through 21 years who had lost a parent to death during childhood (ages 5 through 14 years). The sample group covered young persons in all stages of adolescence; early (15), middle (26), and late (21). Thirty-one males and thirty-one females comprised the final sample.

Adolescents were screened by telephone for inclusion criteria. Adolescents were excluded from this study for the following reasons; 1) ongoing treatment for mental health problems or chronic illnesses; and 2) married adolescents or those who had natural born children. These criteria were identified in the telephone call when establishing the appointment time for data collection. An adolescent whose surviving parent had remarried since the parental death was not excluded from the study, however, the data were tracked and group differences were described.

Many parents were hesitant to allow participation of their children and verbalized their fears that the questionnaires would cause the resurfacing of grief and emotional distress. These parents were reassured that the questionnaires were ones that were used with all adolescents and were not concerned with grieving but with health and social skills. The issue of parental death as

a criterion for entry remained a significant emotion-laden problem for sample identification.

Parental death was due to any sudden or chronic factor. More than two years and up to 15 years had lapsed from the time of the parent's death and the adolescent's participation in the study. This time frame allowed for the initial grieving episode to be handled and to approximate at least the intermediate time span of adjustment (of one to four years) as well as long-term adjustment (greater than four years) as identified by Worden (1990).

#### Setting

Given the nature of the inclusion criterion of the occurrence of a parental death in childhood, the home environment was used, if desired, and privacy was maintained. The geographic area included the state of Ohio, western Pennsylvania, and eastern Illinois.

Fifty-eight of the subjects completed the instruments in their own homes, one completed them in the library where the parent worked, and three completed them in a friend's home. (These latter three were all 18 years of age or older). All but eleven subjects had their surviving parent present during the time of the session.

### Data Collection

All adolescents meeting the criteria for eligibility and their parents were contacted by the researcher by letter. Informed consent forms were signed by the adolescent and the parent (if the adolescent was under age 18 years) and mailed back to the researcher prior to the time of participation. If the adolescent was willing to participate, an appointment was made by telephone for an interview in the adolescent's home (or a setting convenient to the parent and adolescent).

Data were collected in face-to-face interview sessions by the researcher who traveled to each setting during the time from May 19, 1992 through November 15, 1992. All subjects completed paper and pencil instruments in the selected setting. If not completed at the time of the telephone contact, demographic data were collected during the interview session. These data sheets provided information concerning the adolescent, the surviving and deceased parent, the present family constellation, and length of time from diagnosis to death of the parent to establish sudden versus expected classification. Information about participation at any time in a bereavement support group was requested. Questionnaires were used for the collection of all other data: the Self-Perception Profile for Adolescents

(Harter, 1988), the General Health Rating Index or GHRI (Davies & Ware, 1981), the Relationships Questionnaires of the IPPA (Armsden & Greenberg, 1986), and the Coping Inventory (Zeitlin, 1985).

The order of the instruments in each of the packets was randomized for all possibilities (24). Each packet of four questionnaires was placed in a large brown envelope with space marked for the subject's ID number on the outside. The ID number was noted on all pages of each instrument as well as on the envelope. The packet was carried by the researcher to each home or the setting chosen by the subjects. Each adolescent was asked to select a quiet area with a table or a desk for writing. The directions for each instrument were read to the subject in the order in which the instruments were placed in the individual packet.

Although the approximate time expected for completion of all of the survey instruments was about 30 to 45 minutes, a few of the subjects needed extra time and were allowed to proceed at their own pace. Several subjects completed the surveys in less than 30 minutes. Questions about the instruments were handled as they occurred and explanatory information was given if needed. The surviving parent, if home, generally remained with the researcher in another room and discussed issues

related to the study. When the adolescent identified that the instruments were completed, the researcher checked the sheets for missing data and if found those items were then completed. The instruments were then placed in the marked folder and hand-carried by the researcher out of the home or other setting.

### Instruments

#### Demographic Data Instrument

The demographic data form (Appendix B) included information about the adolescent; age, gender, grade in school, birthdate, racial background, sibling ages and gender, birth order, total number of family members in the home, and support group participation. Parental information included age of deceased parent at the time of death, date of death, years since death, educational level and previous employment status of the deceased parent as well as the current age, educational level, remarriage status, and employment status of the surviving parent. These data were used for description of the sample.

#### The Self-Perception Profile for Adolescents

The Self-Perception Profile for Adolescents (Appendix C) was used to measure attributes of resilience through the concepts of competence in eight domains and global self-worth (Harter, 1988). This instrument was



the newly refined adolescent version of the Perceived Competence Scale for Children (Harter, 1985). The questionnaire was titled "What I Am Like" (Harter, 1988). A domain-specific approach was used to assess a profile of competence for the adolescent along with a perception score for global self-worth. The domains reflected the areas of concern during the adolescent developmental stage: Scholastic Competence, Athletic Competence, Physical Appearance, Social Acceptance, Behavioral Conduct, Job Competence, Close Friendship, and Romantic Appeal.

Each domain was composed of five items with a structured alternative format of both positive and negative keyed items for each subscale yielding a total of 40 items for the competence domains and five items for the global self-worth domain. Two decisions were made by the adolescent; which kind of person am I most like and how true that statement is for me (sort of true or really true). Scores per item range from 1 (low perceived competence) to 4 (high perceived competence). Twenty items of the 45 total items were reverse coded prior to data entry (Harter, 1985).

A mean score for each of the eight competence domains was totalled for the social competence score and a separate mean score for global self-worth was

calculated for the data analysis. Statistical analyses of this format of items have shown that adolescents are more likely to report accurate perceptions than socially desirable responses (Harter, 1988).

The score for global self-worth was treated independently. Global self-worth was described as a "more gestalt-like evaluation about the self" (Harter, 1988, p. 4) and was directly assessed from five items on the profile rather than from a summed score of items tapping multiple domains. Factor analysis supported the decision to use the eight domains for competence and one subscale of global self-worth. The factor analysis reported substantial factor loadings for each subscale with no cross-loadings over .30 (Harter, 1988).

Cronbach's alphas for all subscales ranged from .74 to .93 with the exception of four subscales between .58 and .64 which were subsequently revised and one subscale (conduct) which was not reported (Harter, 1988). Although domain scores independently yield specific pictures of the adolescents, a total score for competence along with a separate score for global self-worth does provide an overall profile of the perceived social competence and self-worth of the individual (Harter, 1988). Approximately 10 to 15 minutes were needed for

completion of this instrument and only a few of the subjects verbalized any difficulty with it.

#### The General Health Rating Index

The General Health Rating Index (GHRI) (Davies & Ware, 1981) was used to measure the adolescent's perceived health status (Appendix D). This 22 item scale was a self-completed scale organized in a five-point Likert format that tapped perceptions of one's own health status and feelings about it. It was easy to read and appeared designed for completion by persons who may have had limited reading skills.

The items were rated as definitely true, mostly true, don't know, mostly false, and definitely false. Ten of the items were reversed coded and were scattered throughout the index. The GHRI was developed from the Health Perceptions Measures (Davies & Ware, 1981). The possible range of scores was 22 to 110 with the higher level of scores indicating perceptions of better general health status. The instrument has been used with adolescents age 14 through adults to age 67 years.

Cronbach's alpha for internal consistency, for the study done by Davies and Ware (1981), was .89 as compared to an alpha of .85 for a study of stress and perceived health in adolescent girls by DeMaio-Esteves (1990). The

approximate time for this instrument's data collection was 5 to 10 minutes.

The attributes of resilience, health, social competence, and global self-worth, were measured by scores from the General Health Rating Index and the Self-Perception Profile for Adolescents. These instruments provided an estimate of resilience as instrumentation for measuring resilience has not been published to date.

#### The Inventory of Parent and Peer Attachment

The Inventory of Parent and Peer Attachment or the IPPA (Armsden & Greenberg, 1986) with two of its three scales, the Relationships to Mother and the Relationships to Father Questionnaires (Appendix E), were used to measure attachment relationships to the surviving parent. The peer subscale was not administered. Although originally designed to measure parental attachment on one scale and peer attachment on a second scale, psychometric testing with Factor Analysis yielded a three factor solution with mother and father separating on individual scales (Armsden, 1986).

Reliability testing by the authors of the instrument showed high Cronbach's alphas for each scale with a sample size of several hundred adolescents. The Relationships to Parent Questionnaire had subscale alphas of .86 to .91 as mothers and fathers were not separated

out in the original study (Greenberg, Siegal, & Leitch, 1983). Results of further psychometric testing using the IPPA (Ross-Alaolmolki, Heinzer, & Aten, 1992) with a sample of 210 adolescents demonstrated similar high Cronbach's alphas. Mother subscales ranged from .88 trust and communication to .81 for alienation and a total scale of .94. Father subscales ranged from .89 for trust, .88 for communication, and .82 for alienation. Total father scale had a reliability of .95. The mother and father scales were identical in design with the exception of the words mother or father being used for parent.

Only the mother and father scales were used in this study for parental attachment to the surviving parent. Each subject completed only one scale, the scale designed for their surviving parent. The data were also recoded on the attachment to the parent scale and entered into the multiple regression as one scale. Gender pairs would establish the parental role of mother or father in the regression analysis.

The IPPA had 25 Likert-type items on each scale with those items identical on mother and father scales (and generally parallel on the peer scale). Subjects were asked to respond on a five point scale of almost never-never true to almost always-always true (Armsden &

Greenberg, 1986). Ten items were reverse coded on each instrument. A total score for each surviving parent was recorded from the questionnaire completed by the adolescent. The possible score range was 25 to 125. The instrument took approximately 5-10 minutes to complete.

#### The Coping Inventory

The Coping Inventory (Appendix F) has been used in studies of coping strategies of children and adolescents where self-report is desired (Zeitlin, 1985). Reliability statistics for this instrument were not published in the manual for the instrument (Zeitlin, 1985), but were computed in data analysis in an unpublished study by Ross-Alaolmolki (1990). The Cronbach's alpha for the Coping Inventory was .93 for the total scale and ranged from .62 to .85 for the subscales (Ross-Alaolmolki, 1990).

The Coping Inventory consisted of 48 items related to coping with self and coping with the environment. The items were designed in a Likert-type 5 point scale ranging from behavior is not effective (score of 1) to behavior is effective most of the time (score of 5). Three dimensions were reflected in each of the two categories: productive-nonproductive, active-passive, and flexible-rigid. The instrument rated coping competence from a maladaptive state to an adaptive state

(Zeitlin, 1985). The time needed for completion of this survey was 10 to 15 minutes or more, particularly when the subject was an early adolescent.

Hand-coding of mean scores and raw-to-converted scores were done by the researcher and a trained assistant upon completion of all data collection. Data analyses were done with mean and converted scores for this instrument.

The data from all of the instruments were entered into a data entry program on the mainframe computer. Data were then analyzed through the SPSS-PC+ program on a personal computer.

#### Data Analysis

Statistical analysis included three multiple regressions and two Pearson product moment correlations. Normality of the distributions was tested through residual regression analysis and was achieved.

Using the criteria for sample size as suggested by Cohen and Cohen (1983) for a power of .80 with a preset alpha of .05 and a large effect size, a sample of 48 would be required for multiple regression. A large effect size with  $R^2 = .25$  was entered into the  $f^2$  formula for multiple regression analysis of this correlational study as recommended for areas of behavioral research (Cohen & Cohen, 1983; Polit & Sherman, 1990; Volicer,

1984). A sample size of 62 was used in this study yielding a power nearing .90 for the regressions. A power exceeding .90 was calculated for the correlational (Pearson  $r$ ) statistics with alpha at .05,  $r = .50$  (large effect size) with a sample size of 62 subjects.

The independent variables entered into the regression equations were six in number; parental attachment to the surviving parent, adaptive coping, and the demographic variables of age, gender of adolescent with gender of surviving parent (i.e. father-daughter, father-son, mother-daughter, and mother-son), length of time since parental death, and circumstance of death (sudden versus expected). The criterion of 10 subjects per independent variable was met with this sample size of 62. The dependent variables, treated separately in each multiple regression, were social competence, global self-worth, and perceived health.

Data analysis included descriptive statistics of the demographic data reported in tables using frequencies, means, and percentages to describe the sample. The variables of parental attachment to surviving parent and adaptive coping were treated as predictor variables and entered into the three stepwise multiple regressions with social competence, with global self-worth, and then with perceived health as the dependent variable. The



continuous exogenous demographic variables of age and length of time since parental death were entered into the equation along with parental attachment and coping. The dichotomous variable of circumstance of death (i.e. sudden death versus expected death) was entered into the equations as a dummy variable. Gender of the adolescent with gender of the surviving parent, although not a continuous variable, was also entered into each regression equation as an independent variable.

Pearson product moment correlations were done to identify the degree of correlation between the pairs of variables, attachment and coping, and attachment and health. Stepwise multiple regression analysis was used rather than hierarchical regression as the relative influence of each of the independent variables was not known.

**Hypothesis 1:** Parental attachment to the surviving parent, adaptive coping, age of the adolescent, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of social competence in adolescents who have experienced parental death in childhood.

Stepwise multiple regression analysis was used to test the influence of parental attachment to surviving

parent, adaptive coping, and the demographic variables on the dependent variable of social competence, one of the three measures of resilience, for Hypothesis 1.

**Hypothesis 2:** Parental attachment to the surviving parent, adaptive coping, age of the adolescent, gender of the adolescent with gender of the surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of global self-worth in adolescents who have experienced a parental death in childhood.

Stepwise multiple regression analysis was used to test the influence of parental attachment to the surviving parent and adaptive coping as well as the exogenous variables of age of adolescent, length of time since parental death, circumstance of death (sudden versus expected), and gender pair (father-daughter, father-son, mother-daughter, and mother-son) on the dependent variable of global self-worth, one of the three measures of resilience, for Hypothesis 2.

**Hypothesis 3:** Parental attachment to the surviving parent, adaptive coping, age of the adolescent, gender of the adolescent with gender of the surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors

of perceived health in adolescents who have experienced a parental death in childhood.

Stepwise multiple regression analysis was used to test the influence of parental attachment to the surviving parent and adaptive coping on the dependent variable of global self-worth, one of the three measures of resilience, for Hypothesis 3. The continuous variables of age, length of time since parental death), and the dichotomous variable of circumstance of death (sudden versus expected) along with the variable set of gender pairs (father-daughter, father-son, mother-daughter, and mother-son) were also entered as independent variables into the equation for stepwise multiple regression.

Social competence, positive self-worth, and health have been documented as descriptors of adolescents who have shown resilience to stressful events, particularly parental death in childhood (Cowen, 1991; Garmezy, 1983; Rutter, 1983, 1986, 1987; Werner, 1984). Global self-worth during the adolescent ages develops along with the self-concept in identity and role (Blos, 1962; Coopersmith, 1984; Harter, 1982). Adolescents who display high levels of self-worth also show positive responses in handling their own needs and are socially competent (Achenbach & Edelbrock, 1987; Harter, 1982; Kalish & Knudtson, 1976). The resilient adolescents have

also tended to be less likely to have serious illnesses or have recovered quicker from illnesses (Werner & Smith, 1982).

**Hypothesis 4:** Parental attachment to the surviving parent is significantly and positively correlated with adaptive coping in adolescents who have experienced parental death in childhood.

The Pearson product moment correlation was used to establish the strength of the relationship between parental attachment to the surviving parent and adaptive coping.

Those adolescents who have security in their relationships with parents and peers have used a wider repertoire of coping skills and developed relationships with others outside of the family circle (Zeitlin, 1985). Adolescent attachment patterns are reflected in parental and peer relationships, social competence, and global self-worth (Armsden, 1986; Armsden & Greenberg, 1987; Cotterell, 1992; Harter, 1982, 1988; Papini & Roggman, 1992; Rice, 1990).

**Hypothesis 5:** Parental attachment to the surviving parent is significantly and positively correlated with perceived health in adolescents who have experienced parental death in childhood.

The Pearson product moment correlation analysis was used to ascertain the strength of the relationship between parental attachment to the surviving parent and the perceived health of the adolescent who had experienced the death of a parent in childhood.

At the present time, the literature does not specifically address the concept of perceived health and its relationship to adolescent parental attachment to the surviving parent. The implication is that the adolescents may perceive their health status as "well" or "fine" even in the midst of deviations. The information gained from this hypothesis testing will add to nursing's knowledge base of health perceptions across the adolescent developmental time.

#### Protection of Human Subjects

Potential risks to the subject were minimal as questions similar to those in the questionnaires are likely to be found in clinical assessment interviews by health professionals. The instruments used describe feelings, behaviors, and competencies of adolescents in social settings of the home, school, or peer activities. If the content of the questions appeared to be disturbing to the adolescent, the researcher or the adolescent would choose to terminate the session temporarily or permanently. The researcher would then allow time for

the adolescent to discuss concerns, express emotions or feelings, or reflect in moments of silence. The decision to continue with the session, return to complete at a later time, or end the session would then have been made with the adolescent. Contact with the parent or referral for further assistance would have been arranged if indicated. All subjects completed the questionnaires without displaying any distress or identifying any concerns related to the surveys.

There were no distinct benefits to the participant, with the possible exception of that adolescent's being able to reflect on, consider, and reaffirm the skills and capabilities that were presently being used. Potential benefits of the study for nursing were in the realm of increasing understanding of long term effects of healthy adaptation to the loss of a parent during childhood, the role of adolescent parental attachment to the surviving parent, and the use of coping strategies by adolescents. This study provided information on the linkages between the adolescent attachment relationship to the surviving parent and both coping and perceived health.

Approval for the study was obtained from the Frances Payne Bolton School of Nursing Research Review Committee and the Case Western Reserve University Research Review Committee for Human Subjects. The surviving parent and

the adolescent were contacted by letter and written consent was obtained from the subject and the parent (if the subject was under 18 years of age). Participation in the study was voluntary and the adolescent was free to withdraw from participation at any time during the study. All subjects who volunteered to participate and accepted questionnaires completed the study.

Provisions for confidentiality were explained to the parent and the adolescent and code numbers were assigned to each subject for data analysis purposes. The written data sheets and master list of names and code numbers on computer disk were kept in a locked file which could be accessed only by the investigator. Data sheets were destroyed upon completion of the study. Abstracts of the study were offered to each subject and were mailed to each participant upon completion of data analysis. Each subject also volunteered to participate in other surveys in the future. Their names and addresses were retained on disk in a locked file separate from their data. After collection of further data in a future study, the names and addresses will be erased from the disk.

## CHAPTER FOUR

### Results and Discussion

The data analysis was done in two stages, descriptive analysis of the sample and statistical analysis of the research data. Data were separated by gender groups for the description of the sample. Those subjects who had stepparents and those who had attended support groups were also tracked for group differences.

#### Description of the Sample

Adolescents in the sample were evenly divided by gender with 31 females and 31 males. The age range was 13 through 21 years of age with a mean age of 16.53 years, a median of 16 years, and a mode of 17 years. Females had a mean age of 16.16 years, while males had a mean age of 16.9 years. All three stages of adolescence were represented; early (11-14 years), middle (15-17 years), and late (18-21 years). Table 1 presents the description of the sample.

The grade that the adolescents had completed were coded using number values through high school (9-12). College years were designated as 13 (freshman), 14 (sophomore), 15 (junior), and 16 (senior). The mean grade of the sample was 11.13 identifying that this was beginning year for juniors in high school. Grade ranges included seventh grade through fourth year of college.



Table 1

Description of the Adolescents in the Sample

Variable	Mean	SD	Range
<u>Age</u>			
Males ( $n=31$ )	16.90	2.21	13-21 yrs.
Females ( $n=31$ )	16.16	2.35	13-21 yrs.
Total Sample (N=62)	16.53	2.30	13-21 yrs.
<u>Grade</u> (expressed in numbers through college)			
Males ( $n=31$ )	11.52	2.05	8-16 grade
Females ( $n=31$ )	10.74	2.03	7-14 grade
Total Sample (N=62)	11.13	2.06	7-16 grade
<u>Age of child at parental death</u>			
Males ( $n=31$ )	9.97	2.59	5-14 yrs.
Females ( $n=31$ )	9.48	2.41	5-14 yrs.
Total Sample (N=62)	9.73	2.49	5-14 yrs.
<u>Years since parental death</u>			
Males ( $n=31$ )	7.00	3.04	2-14 yrs.
Females ( $n=31$ )	6.71	3.15	2-14 yrs.
Total Sample (N=62)	6.85	3.08	2-14 yrs.

All subjects were matriculated students during the regular school year although some of the college students were enrolled part-time. College students (ages 18 through 21 years) were considered as late adolescents according to the guidelines of the AMA Department of Adolescent Health (1992) and the American Academy of Pediatrics (Brinois, Irwin, & Millstein, 1992).

Siblings gained entry into the study if they met the criteria for admission. The sample represented a total of 42 families: 26 families with one member, 13 families with two members, two families with three members, and one family with four members participating. The sample was divided into gender groups for examination of demographic data as well as total sample characteristics. Family membership was not identified in the analysis.

Although the study was open to any cultural, racial, or ethnic group, the majority of the participants were Caucasian (98.4%) with one subject of Asian descent (1.6%). Minority children were referred for inclusion and were sent letters, yet there was either no response or a negative response to the request for participation in the study.

Age of the adolescent at time of parental death ranged from 5 years through 14 years of age for the males, and 5 years through 13 years of age for the

females in the study. The mean age for the total group was 9.73 years. Similar means were noted for the groups by gender, as shown in Table 1.

Support group participation was reported by 15 of the subjects overall. Six males and nine females had participated in school managed groups or in bereavement programs fairly soon after the death of the parent. Only one subject reported continued contact with the adolescent group and that was through attendance at reunion picnics or parties held yearly for former participants. There were no significant differences between the support group participants and non-participants on the major study variables when subjected to  $t$ -test analyses.

The adolescents in this sample had parents with educational levels reported at the high school graduate level or above. Approximately 77% of the mothers had taken some college courses or more, while 71% of the fathers had attended college. One adolescent did not know the educational background of his deceased father. Descriptions of the parent characteristics are shown in Table 2.

Employment histories indicated that 87% of the mothers had been or were employed at present. Mother's

Table 2

Description of the Parents of the Adolescents

	<u>Males</u> n = 31	<u>Females</u> n = 31	<u>Total Sample</u> N = 62
<u>Surviving parent</u>			
Mother	25 (80.6%)	23 (74.2%)	48 (77.4%)
Father	6 (19.4%)	8 (25.8%)	14 (22.6%)
<u>Gender Pairs</u>			
Father-Daughter		8 (25.8%)	8 (12.9%)
Father-Son	6 (19.4%)		6 ( 9.7%)
Mother-Daughter		23 (74.2%)	23 (37.1%)
Mother-Son	25 (80.6%)		25 (40.3%)
<u>Stepparent</u>			
Yes	9 (29%)	8 (25.8%)	17 (27.4%)
No	22 (71%)	23 (74.2%)	45 (72.6%)

(table continues)

Table 2

Description of the Parents of the Adolescents

	<u>Males</u> n = 31	<u>Females</u> n = 31	<u>Total Sample</u> N = 62
<u>Father works(ed)</u>			
Yes	31 (100%)	29 (93.5%)	60 (96.8%)
No	0	2 ( 6.5%)	2 (3.2%)
<u>Education of father</u>			
(highest completed)			
High school	10 (32.3%)	9 (29.0%)	19 (30.6%)
Some college/vocational	9 (29.0%)	11 (35.5%)	20 (32.3%)
College graduate	7 (22.6%)	7 (22.6%)	14 (22.6%)
Graduate courses	4 (12.9%)	4 (12.9%)	8 (12.9%)
Don't know	1 ( 3.2%)	0	1 ( 1.6%)

(table continues)

Table 2

Description of the Parents of the Adolescents

	<u>Males</u> <u>n = 31</u>	<u>Females</u> <u>n = 31</u>	<u>Total Sample</u> <u>N = 62</u>
<u>Mother works(ed)</u>			
Yes	28 (90.3%)	27 (87.1%)	55 (88.7%)
No	2 ( 6.5%)	4 (12.9%)	6 ( 9.7%)
Don't know	1 ( 3.2%)	0	1 ( 1.6%)
<u>Education of mother</u> (highest completed)			
High school	5 (16.1%)	7 (22.6%)	12 (19.4%)
Some college/vocational	14 (45.2%)	10 (32.3%)	24 (38.7%)
College graduate	2 ( 6.5%)	6 (19.4%)	8 (12.9%)
Graduate courses	10 (32.3%)	8 (25.8%)	18 (29.0%)

(table continues)

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Table 2

Description of the Parents of the Adolescents

	<u>Males</u> <u>n = 31</u>	<u>Females</u> <u>n = 31</u>	<u>Total Sample</u> <u>N = 62</u>
<u>Age of parent at death</u>			
(expressed in means)	42.38 yrs.	42.23 yrs.	42.03 yrs.
<u>Age of living parent</u>			
(expressed in means)	45.97 yrs.	46.39 yrs.	46.16 yrs.
<u>Cause of death</u>			
Cancer	13 (41.9%)	9 (29.0%)	22 (35.5%)
Heart Disease	10 (32.3%)	15 (48.4%)	25 (40.3%)
Accident	3 ( 9.7%)	2 ( 6.5%)	5 ( 8.1%)
Other	5 (16.1%)	5 (16.1%)	10 (16.1%)
<u>Sudden death</u>			
Yes	12 (38.7%)	18 (58.1%)	30 (48.4%)
No	19 (61.3%)	13 (41.9%)	32 (51.6%)

careers in the 42 families included a large number of health care professionals: nurses (11), social workers (5), and one medical librarian. Other identified careers included beautician, real estate sales manager, librarian, restaurant waitress, small business owners, teachers, and homemakers. Almost 94% of the fathers had been employed or were employed at present. Professional positions and blue collar jobs were fairly evenly distributed among the fathers. The positions ranged from truck drivers, carpet installers, and welders to sales managers and doctors. (Data were not separated in the analysis for the deceased parent and the surviving parent). The unemployed or soon-to-be unemployed included surviving single mothers with college degrees.

Seventeen of the families had a stepparent present in the home. All of the other families were single parent families at the time of data collection. The surviving parent in most of the families was the mother (77.4%). The data in this study approached current estimates of gender of surviving parent as being six times more likely to be the mother (Bureau of the Census, 1985 Census Fact Sheet, 1992). The gender pairs of surviving parent and adolescent represented 23 mother-



daughter pairs, 25 mother-son pairs, 8 father-daughter pairs, and 6 father-son pairs.

The causes of death for the parents were listed as heart disease (40.3%), cancer (35.5%), accidents (8.1%), and other (16.1%). The category 'other' included those who had long-term disorders, such as multiple sclerosis, chronic kidney disease, and alcoholic liver disease as well as those who died by drug overdose and by gunshot wound (homicide). One father had disappeared and was declared dead, but his body was never found.

Heart attacks were the most frequently reported heart disease cause, and were reflected also in the category of sudden death. Accidents, also noted in the sudden death category, included plane crashes, industrial equipment fatalities, and motor vehicle accidents. Thirty parental deaths (48.4%) were reported as sudden by the 62 subjects. Parental deaths in the expected category included deaths following chronic illnesses such as cancer or other degenerative conditions of several years duration.

Deceased parents' ages at time of death ranged from 28 years through 67 years with a mean of 42.03 years. The deceased fathers were older at the time of their deaths. Surviving parents' ages at the time of the study

ranged from 38 through 58 years with a mean of 45.97 years. The adolescent subjects' family group (Table 3) had a wide range of siblings with the largest family group being a mother and eight children, while the smallest group size was one mother and a child. Total numbers of family members living currently in the home ranged from the single adolescent living in his or her own apartment (two) to a household of six members. Grandparents, aunts, uncles, and cousins shared homes with several of the subjects. Twenty-six of the 62 adolescents were first-born children.

Demographic data were tracked for the adolescents who had stepparents. The descriptions of the data for the adolescents whose parents had remarried ( $n = 17$ ) are found in Appendix G (the group means and standard deviations) and in Appendix H (the categorical variables). There were no significant differences in the descriptive data when tested with a  $t$ -test analysis between the group with a stepparent and the group with parents who had not remarried. A few of the adolescents in the stepparent group did report that their parent had remarried more than once after the parental death. In

Table 3

Description of the Families of the Adolescents

	Mean	SD	Range
<u>Total Persons Living in Home</u>			
Males ( $\underline{n}=31$ )	3.87	1.38	2-6
Females ( $\underline{n}=31$ )	3.68	1.45	1-6
Total Sample (N=62)	3.77	1.41	1-6
<u>Total Number of Brothers</u>			
Males ( $\underline{n}=31$ )	1.07	1.06	0-3
Females ( $\underline{n}=31$ )	1.36	1.45	0-6
Total Sample (N=62)	1.21	1.27	0-6
<u>Total Number of Sisters</u>			
Males ( $\underline{n}=31$ )	.94	1.24	0-6
Females ( $\underline{n}=31$ )	.61	.61	0-2
Total Sample (N=62)	.77	.98	0-6
<u>Total Number of Older Siblings</u>			
Males ( $\underline{n}=31$ )	1.26	1.53	0-7
Females ( $\underline{n}=31$ )	1.10	1.40	0-4
Total Sample (N=62)	1.18	1.45	0-7

four cases, that first stepparent was no longer married to the surviving parent.

### Discussion

Some difficulties were encountered in accessing the adolescents. Parents identified concerns that the participation in the study would bring feelings of grief and distress. The concerns of these parents were considered very carefully and personal contact by telephone addressed these issues. The sense of discomfort may have been the parents' and their concern for the adolescents. Even with a time criterion of one year or more, parents may possibly have been dealing with their own grieving concerns at the loss of their spouses.

A serendipitous occurrence was found in the spontaneous responses of the subjects to the coping questionnaires. The adolescents verbalized that they had not been asked to think about the ways that they problem-solved or used creative approaches to handle difficult situations. Many commented that the questions helped them to "figure out" how they approached problems or how they looked for solutions. The adolescents reported that it was helpful for them to think about how they coped and whether or not it worked. These subjects were thoughtful and reflective in their spontaneous remarks.

### Summary

In summary, the sample of 62 young men and women represented all stages of adolescence and equal numbers by gender. They appeared healthy and had no evidence of chronic illness. None of the subjects were actively involved in counseling or therapy, nor had any been married or had children of their own. All but two of the adolescents lived in their parent's home as a permanent residence. All subjects shared information about themselves and their families and expressed interest in the meaning of this study.

### Scores on the Instruments

The group means, standard deviations, and ranges for the subscale and total scale scores are presented in tabular format for the Relationships Questionnaires (Armsden & Greenberg, 1986) in Appendix I, the Coping Inventory (Zeitlin, 1985) in Appendix J, and the Self-Perception Profile for Adolescents (Harter, 1985) in Appendix K. The group mean on the General Health Rating Index (Davies & Ware, 1981) for the total sample is presented in the narrative. The data on the instruments from the adolescents with stepparents is found in Appendix L for comparison with the subjects who lived in single parent homes.

The Relationships Questionnaires (Armsden & Greenberg, 1986) had 25 items on the total parent scale and the three subscales of trust, communication, and alienation (Appendix I). The range of scores was 40 to 125 with a possible range of 25 to 125. The moderately high scores and the mean of 92.97 for parent attachment (mother attachment 95.23 and father attachment 85.21) as compared with the mean scores of 87.51 and 89.89 for mother and 83.19 and 81.10 for father from the Armsden study (1987) suggest that this sample of 62 adolescents demonstrated positive attachment with their surviving parents. Subscale mean scores were also high with trust (38.50), communication (28.26), and alienation (26.21).

The scores of the subgroup of 17 adolescents with stepparents were higher than the group without stepparents across all subscales and the total scale (41.29 trust, 31.77 communication, 28.29 alienation, and 101.35 total parent attachment score). The range used was 59 to 125 and the standard deviation for the total score was lower (16.43) than the total group. The only significant difference found between the two groups of adolescents was on the attachment to the parent total scale ( $t = 2.15, p < .05$ ).

The Coping Inventory (Zeitlin, 1985) with its 48 items was the longest instrument and the most difficult

one for the many of the subjects to complete. The wording in a number of questions was formal rather than conversational.

The total score and subscale scores are reported with standard deviations and ranges in Appendix J. The productive, active, and flexible self mean scores are noted along with the converted score for self. Likewise, the productive, active, and flexible environment mean scores are listed along with the converted environment score.

The score used for data analysis was ADAPT, a score converted from both self and environment scores. The mean for the group of 62 adolescents was 3.98 with a standard deviation of .36. The range was 3.1 to 4.9 for the sample out of a possible 1.0 to 5.0 giving evidence of high coping abilities and use of coping resources in these adolescents. The mean score on ADAPT from the Ross-Alaolmolki study (1990) was 3.79 with a range of 2.3 through 4.9 for the 210 adolescents who participated.

Scores on the Self-Perception Inventory (Harter, 1985) were reported as individual mean scores from each of the nine domains of competence (Appendix K). Eight of the mean scores were summed for use in the regression analysis and were called the social competence score (items = 40). The global self-worth score was treated

separately as noted in the author's manual for its independent meaning (items = 5). The range of possible mean scores was 1.0 through 4.0 for each domain. The total mean score for SPPMN, the eight domains of social competence, was 23.65 with a standard deviation of 3.30 for the sample of 62 subjects. The possible range was 8.0 to 32.0 for this mean and the total group range was 15.60 to 29.60.

The global self-worth mean score (GSWMN) for the total sample was 3.18 with a standard deviation of .68 and range of scores from 1.0 to 4.0.

The General Health Rating Index (Davies & Ware, 1981) had no subscale scores as it was a short index of a more comprehensive instrument and is reported in this narrative. Total scores on the GHRI with its 22 items ranged from 51 to 105. The possible range of scores was 22 to 110. With a group mean of 81.55, a standard deviation of 13.38, and the absence of lower scores, this sample of 62 adolescents perceived their own health status as fairly high. The mean for this instrument in the Demaio-Esteves study of female adolescents was 79.19 with a standard deviation of 11.97. At this time, studies are being conducted with both female and male adolescents using this instrument (DeMaio-Esteves, April 1991, personal communication).



### Summary

In summary, the total sample of 62 adolescents showed high mean scores across all instruments lending credibility to their capabilities in attachment relationships, adaptive coping, and social competence. They portrayed competence and self-worth while experiencing life in a family touched by the loss of a parent. The subgroup of 17 adolescents in stepparent families demonstrated significantly higher parental attachment scores than the group living in single parent families.

Resilience appeared far more complex than originally conceptualized. Adaptive coping appeared to be a strength of the participants in this sample. The adolescents in this study used a wide variety of coping strategies and demonstrated healthy adaptive coping. The literature supports the strong effect that coping has on adaptation and a positive adjustment to life crises (Garmezy, 1986; Hetherington, 1984; McCown, 1987; Murphy & Moriarty, 1976; Roy, 1980; Rutter, 1983, 1987; Zeitlin, 1981).

### Reliability of the Instruments

Reliability values for all of the instruments and subscales are shown in Appendix M. The Self-Perception Profile (Harter, 1988) had a Cronbach's Alpha of .92 for

this study, while subscale alphas ranged from .71 to .91. The General Health Rating Instrument (Davies & Ware, 1981) had a reliability of .88 in this study.

Reliability for the Relationships Questionnaires of the IPPA (Armsden & Greenberg, 1986) were computed for the mother, father, and parent scales. The mother scale had a total reliability of .94 with the subscales of trust .85, communication .87, and alienation .73. Father scale reliabilities were .97 for the total scale with .94 for trust, .90 for communication, and .89 for alienation. Attachment to the parent (N = 62) had a total reliability of .95 with subscales reliabilities of .89 trust, .89 communication, and .89 for alienation.

The reliability for the total Coping Inventory (Zeitlin, 1985) in this study was .88 while subscale reliabilities ranged from .34 to .72. Four of the subscale reliabilities were low (.34 to .58) and may reflect problems with clarity in some of the items for active and flexible self, as well as for active and flexible environment. There were four to five items in those subscales which were identified as difficult to understand by many of the subjects. The adolescents commented that the wording was unusual and the questions were not clear. One question that many adolescents identified as "odd" was number 7, " Do you use self-

protecting behaviors to control the impact of the environment?" The cues given with the item were much better at getting the idea across to the subjects. The items in those subscales may need to be rewritten with the input of adolescents.

The instruments used in this study of adolescent resilience held strong reliabilities for the total scales with the sample of 62 subjects. Construct validity using factor analysis for the instruments used in this study was not possible due to the small sample size. The adolescents reported difficulty in understanding several items (items 6 through 12 on productive self and flexible self) in the Coping Inventory. These items were more complex and were generally longer with an explanation attached to the item. These items need to be revised for clarity and understanding from the adolescents' perspective. The adolescents did not report any difficulties with the Self Perception Profile, the General Health Rating Index, nor the Relationships questionnaire.

### Statistical Analysis

The data from the self-report instruments were coded, cleaned, and analyzed using SPSS-PC+ program. The first three hypotheses were tested using regression analysis. Hypotheses 4 and 5 were tested using the Pearson product moment correlation coefficient statistic.

Each independent variable was regressed on all other independent variables to ascertain multicollinearity (Lewis-Beck, 1988; Norusis, 1988). All  $R^2$ 's were lower than .45 indicating low intercorrelations among all of the independent variables with no violation of this underlying assumption.

Residual regression analyses were completed for the three regressions to test for assumptions of normality, homoscedasticity, linearity, and intercorrelations among the residuals. The Durbin-Watson tests for correlations among residuals ranged from 2.25, 2.13, and 1.96, respectively, in the regressions for each of the hypotheses and were within the acceptable range for low correlations (Draper & Smith, 1981; Norusis, 1988; Tabachnick & Fidell, 1989). The standardized residuals histograms for each of the regressions approached the form of a bell curve indicating normality of the sample. The normal probability plot of standardized residuals

indicated a linear regression line for these data sets (Lewis-Beck, 1988).

Each of the stepwise regressions had the same six predictor variables entered. The demographic variables of age of adolescent in actual years (AGEC), years since parental death (YRSD), and gender pairs of father-daughter, father-son, mother-daughter, and mother-son (GENPR) were entered into the equation with their respective values. Sudden death (SUDDP) was entered as a dummy variable in all of the regression analyses with 0 for expected death and 1 for sudden death. Scores on the Coping Inventory (Zeitlin, 1985) were calculated using published instructions. The scores for parental attachment were entered as total scores on the IPPA Relationships Questionnaires (Armsden & Greenberg, 1986) and recoded from the mother and father instruments. The gender pair variable accounted the surviving parent gender and adolescent gender in the equation.

The dependent variable in each equation was entered to reflect each of the identified dimensions of resilience, social competence (SPPMN), global self-worth (GSWMN), and health (GHRITO). Stepwise multiple regression analysis was done with a PIN of .99 and a POUT of 1 to allow all of the variables to enter into the analysis. Beta, the standardized regression coefficient,

was used for the discussion of the regression analyses (Norusis, 1988). Figures were rounded to two decimal places for reporting purposes.

### Multiple Regression Hypotheses

Hypothesis 1. Parental attachment to the surviving parent, adaptive coping, age of the adolescent, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of **social competence** in adolescents who have experienced parental death in childhood.

To test the first hypothesis, the dependent variable, **social competence**, was entered into the equation as a total of mean scores from the eight competence domains on the Self-Perception Profile for Adolescents (Harter, 1988).

The correlation matrix for all variables is shown in Table 4. All significant correlations are marked with asterisks. The matrix showed high correlations that were significant between age of adolescent and years since death, and age of child at time of death and years since death indicating the redundancy between those time variables. As age of adolescent increased, the years since death also increased as limits were preset for inclusion criteria.

Table 4

Correlation Matrix for All Variables.

	AGEC	STEPP	PARS	CDEAT	AGECD	SUPGP	YRSD
AGEC	1.00	-.27***	.14	.17	.20	.25	.58*
STEPP		1.00	-.19	.06	.17	-.09	-.35***
PARS			1.00	.05	.25	-.06	-.10
CDEAT				1.00	-.21	.06	.32***
AGECD					1.00	-.11	-.67*
SUPGP						1.00	-.27***
YRSD							1.00
GENPR							
ADAPT							
GSWMN							
ATACHP							
GHRITO							
SPPMN							

(table continues)

Note. N = 62 2-tailed Significance \*p < .001 \*\*p < .01 \*\*\*p < .05

Table 4

Correlation Matrix

	GENPR	ADAFT	GSWMN	ATACHP	GHRITO	SPPMN
AGEC	-.04	.09	.14	.17	.11	.09
STAPP	.14	-.12	-.07	-.27***	-.13	-.01
PARS	-.87*	.08	-.15	-.22	-.14	-.07
CDEAT	-.06	.19	.08	.24	.22	-.04
AGECD	-.16	-.12	.09	-.17	-.15	.05
SUPGP	.10	.04	.12	.03	-.02	.15
YRSD	.11	.17	.19	.29***	.21	.03
GENPR	1.00	-.09	.16	.20	.27***	.07
ADAFT		1.00	.55*	.29***	.39**	.59*
GSWMN			1.00	.36**	.32***	.64*
ATACHP				1.00	.36**	.16
GHRITO					1.00	.35**
SPPMN						1.00

Note. N = 62 2-tailed Significance \* $p < .001$  \*\* $p < .01$  \*\*\* $p < .05$



## LEGEND

AGEC	=	Age of the Adolescent at Time of Study
STEPP	=	Presence of Stepparent in Home
PARS	=	Surviving Parent Gender
CDEAT	=	Cause of Death of Parent
AGECD	=	Age of Child at Time of Parental Death
SUPGP	=	Support Group Participation
YRSD	=	Years since Death
GENPR	=	Gender Pair of Adolescent and Surviving Parent
ADAPT	=	Adaptive Coping Score on the Coping Inventory
GSWMN	=	Global Self-Worth mean score from Self-Perception Profile
ATACHP	=	Parental Attachment score from Relationships Questionnaires
GHRITO	=	Total Health score from General Health Rating Instrument
SPPMN	=	Total mean score for Social Competence from Self-Perception Profile

Another high correlation ( $r = .59$ ) was noted between social competence (dependent variable) and coping (independent variable) significant at the  $p < .001$  level. This correlation was expected as high adaptive coping would be linked with high competence scores. As the adolescent successfully uses coping strategies, the sense of accomplishment would bolster the social competence and positive feelings about the self.

Adaptive coping entered in the first step and accounted for 35% of the total variance with none of the other independent variables in the equation (Table 5). The Beta for coping was .59 in step 1 indicating a variable of moderately high importance.

The order of the independent variables entering in the first set of regressions was coping, sudden death, gender pair, age of adolescent, years since death, and attachment to the parent. Coping was the strongest predictor of social competence and achieved a Beta of .63 in step 6 of the regression. Coping was a significant predictor with  $t = 5.66$  at the  $p < .0001$  level. Attachment entered into the equation last suggesting it added little to the explanation of the dependent variable.

Table 5

Stepwise Multiple Regression for Social Competence (SPPMN) with Demographic Variables (GENPR, AGECE, SUDDP, YRSD), Parental Attachment Scores (ATACHP) and Coping Scores (ADAPT) as Predictors

Step No.	Variable	B	SE B	R <sup>2</sup> Cumulative	R <sup>2</sup> Change	F	Signif F (p value)	Final Beta
1.	ADAPT	5.74	1.01	.35		31.93	.00	.63*
2.	SUDDP	-.76	.75	.37	.02	17.08	.00	-.12
3.	GENPR	.47	.36	.38	.02	11.96	.00	.14
4.	AGECE	.17	.19	.38	.00	8.91	.00	.12
5.	YRSD	-.13	.15	.39	.01	7.24	.00	-.12
6.	ATACHP	-.00	.02	.39	.00	5.93	.00	-.01
	(CONSTANT)	-2.04	4.90					

Note. N = 62 \* p < .0001

## Discussion

Adolescents who have experienced a serious loss in childhood and have shown social skills in their interactions with family, friends, and others appear to have a strong foundation from early parental encouragement and support (Garmezy, 1991; Garmezy, Masten, & Tellegen, 1984; Werner, 1984, 1990; Werner & Smith, 1982). The ability to problem-solve and negotiate solutions were within their coping repertoires. This linkage between high adaptive coping and high social competence was demonstrated in the analysis of the first hypothesis. Adaptive coping was the strongest predictor of social competence, one of the correlates of resilience for this study. Although parental attachment was not statistically significant, it does have clinical relevance in resilience influencing the development of social competence and self-worth (Garmezy, 1991; Rutter, 1987; Werner 1984, 1990; Werner & Smith, 1982).

Data from this present study partially supported the hypothesis in that adaptive coping was a significant predictor of social competence. Higher scores on coping were correlated with higher scores on social competence.

Self-reports of coping provided insights into the abilities and strategies that the adolescents in this sample used for dealing with stressors. They had

strengths as indicated by their mean scores on productive environment (4.10) and flexible environment (4.20) (Zeitlin, 1985). These adolescents reported that they used appropriate interactions with persons in their environments and handled the pressures and demands of the external world. They were involved in active participation and were self-directed in their roles with others exhibiting behaviors that lead to social competence (Clunn, 1991).

The Roy Adaptation Model (Andrews & Roy, 1991) allowed for comparison of the nursing model with the model of resilience in this study. Coping and parental attachment are concepts that can be viewed through the Roy model, although the model's key concepts and their definitions are different.

Roy's model has coping mechanisms as its central core of the four adaptive modes: physiological, self-concept, role function, and interdependence. Adaptive coping was the strongest significant predictor of resilience as measured by social competence, global self-worth, and perceived health. These attributes of resilience parallel three of the four modes, while parental attachment is congruent with the interdependence mode, "the feeling of security in nurturing relationships" (Andrews & Roy, 1991, p. 17).

Attachment describes those relationships with significant others and support systems which reflect interdependence. With the impact of adaptive coping on adolescent resilience, the Roy model can potentially be used in an earlier developmental stage than adulthood. This finding appears conceptually appropriate as those adolescents who have had positive attachment relationships with their surviving parents may have greater feelings of self-worth (Harter, 1988).

Roy, in her Adaptation Model, did not define resilience, but implied its importance when discussing resilience of body and spirit. Adaptation does not fully explain resilience. The concept of adaptation level was defined as "a changing point that represents the person's ability to respond positively in a situation" (Andrews & Roy, 1991, p. 4). Thus adaptation level is not linked to a response to a loss or crisis, but to a change in a situation of any degree or intensity.

Hypothesis 2. Parental attachment to the surviving parent, adaptive coping, age of the adolescent, gender of the adolescent with gender of the surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of **global self-worth** in adolescents who have experienced a parental death in childhood.

The outcome variable, **global self-worth**, was entered into the equation as a mean score from the domains of the Self-Perception Profile for Adolescents (Harter, 1988). This domain was considered independent of the eight other domains as identified through Factor Analysis by the author of the instrument.

Two variables were highly correlated with global self-worth (above  $r = .40$ ). The correlation between coping and global self-worth was  $r = .55$  with significance at  $p < .001$  level. Conceptually, this correlation was understandable as adolescents with greater coping resources and success in using coping strategies may feel better about themselves and have bolstered their self-worth.

Social competence was correlated at  $r = .72$  with global self-worth, a domain of the self-perception inventory that measured social competence. Although the correlation was high, global self-worth has been identified as a concept separate from the social competence domains. Perceived health was correlated with global self-worth at  $r = .32$  ( $p < .05$ ). Perceived health increased along with higher levels of global self-worth.

Adaptive coping entered in the first step and accounted for 30% of the total variance with none of the other independent variables in the equation. The Beta

for coping was .55 in step 1 indicating a variable of moderately high importance.

The order of the independent variables entering in to the regression was coping, attachment, gender pair, age of adolescent, circumstance of death, and years since death (Table 6). Adaptive coping was the strongest predictor of global self-worth and achieved a Beta of .63 in step 6 of the regression. Attachment entered into the equation second adding .05 to the cumulative  $R^2$ . Coping was the only significant predictor with  $t = 4.58$  at the  $p < .0001$  level in the final regression.

### Discussion

Global self-worth, one of the domains of the self-perception inventory, is an expansive view of one's feelings of self-worth (Harter, 1988). The ability to perceive one's self as worth-while and meaningful is linked to the capabilities in handling self and successfully negotiating concerns in the environment (Garmezy, 1991; Werner, 1990; Werner & Smith, 1982) Adaptive coping was the significant predictor of global self-worth in this analysis. The hypothesis was partially supported as high scores on adaptive coping were significant predictors of global self-worth.



Table 6

Stepwise Multiple Regression for Global Self-Worth (GSWMN) with Demographic Variables (GENPR, AGECE, SUDDP, YRSD), Parental Attachment Scores (ATACHP) and Coping Scores (ADAPT) as Predictors

Step No.	Variable	B	SE B	R <sup>2</sup> Cumulative	R <sup>2</sup> Change	F	Signif F (p value)	Final Beta
1.	ADAPT	.96	.21	.30		25.82	.00	.52*
2.	ATACHP	.01	.00	.35	.05	15.65	.00	.18
3.	GENPR	.12	.07	.38	.03	11.60	.00	.18
4.	AGECE	.02	.04	.38	.01	8.74	.00	.07
5.	SUDDP	-.10	.16	.39	.01	7.00	.00	-.07
6.	YRSD	.00	.03	.39	.00	5.73	.00	.02
	(CONSTANT)	-1.90	1.01					

Note. N = 62 \* p < .0001

Hypothesis 3. Parental attachment to the surviving parent, adaptive coping, age of the adolescent, gender of the adolescent with gender of the surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of perceived health in adolescents who have experienced a parental death in childhood.

The outcome variable, perceived health, was the self-report of the adolescent's feelings about general health and well-being, past, present, and future. Perceived health was one of the measures of resilience in the model for this study. The total score on the General Health Rating Instrument (Davies & Ware, 1981) was entered into the equation as the dependent variable.

From Table 4, global self-worth, adaptive coping, parental attachment, and gender pairs showed significant correlations with health, yet the correlations were under  $r = .40$ . Adaptive coping entered in the first step (Table 7) accounting for 15% of the total variance with none of the other independent variables in the equation. The Beta for coping was .39 in step 1 indicating a variable of moderate importance.

The order of the independent variables entering in the regression was coping, gender pair, attachment, years since death, circumstance of death, and age of the

Table 7

Stepwise Multiple Regression for Health (GHRITO) with Demographic Variables (GENPR, AGECE, SUDDP, YRSD), Parental Attachment Scores (ATACHP) and Coping Scores (ADAPT) as Predictors

Step No.	Variable	B	SE B	R <sup>2</sup> Cumulative	R <sup>2</sup> Change	F	Signif F (p value)	Final Beta
1.	ADAPT	13.00	4.42	.15		10.77	.00	.35*
2.	GENPR	3.37	.56	.22	.07	9.69	.00	.26**
3.	ATACHP	.14	.09	.29	.06	7.74	.00	.20
4.	YRSD	.42	.66	.29	.00	5.83	.00	.10
5.	SUDDP	- 2.30	3.28	.30	.01	4.74	.00	- .09
6.	AGEC	.02	.83	.30	.00	3.88	.00	.00
	(CONSTANT)	4.47	21.30					

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Note. N = 62 \* p < .001 \*\* p < .05

adolescent. Adaptive coping was the strongest predictor of perceived health and achieved a Beta of .35 in step 6 of the regression. Coping and gender pair were the only significant predictors in the final regression, coping with a significant  $t$  of 2.94 at the  $p < .001$  level and gender pair with a significant  $t$  of 2.16 at the  $p < .05$  level. Attachment entered into the equation on the third step adding .06 to the cumulative  $R^2$  value.

Adaptive coping was the strongest predictor in each of the three regression equations with similar contributions toward social competence and global self-worth (30% or greater). Coping was the strongest predictor in the third regression for health explaining 15% of the variance in the model. The cumulative  $R^2$  of .30 in the health regression was lower than the  $R^2$  values of .39 in each of the first two regressions after the entry of all six independent variables.

Gender pair was the only exogenous variable that was significant, although only in one regression. Attachment was not a significant predictor in any of the regressions. It did contribute .07 to the cumulative  $R^2$  in the third regression with perceived health as the dependent variable.

### Discussion

The perception of health as an index of general well-being of the individual was the dependent variable in the third hypothesis. Although the literature has been replete with reports of poor mental health status as a long-term response to parental death in childhood (Bowlby, 1981; Cowen, Pederson, Babigian, Izzo, & Trost, 1973; Enos & Hartman, 1981; Markusen & Fulton, 1971; Parkes, 1982; Worden, 1985), the sample of adolescents in this study reported positively about their general health and well-being. The adolescents who participated appeared healthy and showed a fairly high mean score on the General Health Rating Index (group mean = 81.55). Subjects did comment that they were not sure what a "long illness" meant and answered with their own perception of that term. A few adolescents shared that they had experienced serious injuries since their parent had died and these injuries were related to contact sports. Whether or not adolescents were more accident-prone after parental death has not been examined and was not addressed in the current study.

Adaptive coping was significant and the strongest predictor of perceived health. It did not reflect accidents or injuries specifically and adolescence is a the time when team sports or vehicular injuries occur

frequently (AMA, 1990a, 1990b; National Commission on Children, 1992).

Perceived health as a dimension of resilience is congruent with the Roy's physiological mode and is a more realistic mirror of the adolescent's sense of well-being. The positive responses of the adolescents to perceived health includes the personal self as well as the physical self (Andrews & Roy, 1991).

Gender pair, one of the exogenous variables, was also a significant predictor in this analysis. The higher numbers reflected mother-adolescent pairs supporting the higher perceptions of health were found among those adolescents whose surviving parent was the mother. With a small sample of father-adolescent pairs ( $n = 14$ ), it is difficult to make a comparison between those two groups.

#### Correlational Hypotheses

The final two hypotheses were correlational in nature, testing the relationship between two predictor variables in Hypotheses 4, and testing the relationship between a predictor variable and an outcome variable in Hypothesis 5 (see Table 1). The power analysis for these statistics calculated with a software program was .73 and .90 respectively using a one-tailed significance with a medium effect size.

Hypothesis 4. Parental attachment to the surviving parent is significantly and positively correlated with adaptive coping in adolescents who have experienced parental death in childhood.

Hypothesis 4 was supported by this analysis. Parental attachment to the surviving parent was significantly and positively correlated with adaptive coping in this study of adolescents. The correlation of  $r = .29$  was significant at the  $p < .05$  level. The correlation was not so high as to violate the assumptions for the regression analysis.

#### Discussion

Attachment and coping ( $r = .29$ ) were significantly correlated at the  $p < .05$  level. High scores on the adaptive coping instrument were positively correlated with high scores on the Relationships Questionnaires which provided some support for the hypothesis that attachment was linked with coping abilities.

Their relationships with the surviving parent (and stepparent if present) appeared healthy and were generally open. Adolescents and parents communicated affectionately during the interview sessions.

Hypothesis 5. Parental attachment to the surviving parent is significantly and positively correlated with

perceived health in adolescents who have experienced parental death in childhood.

Hypothesis 5 was supported as parental attachment to the surviving parent was significantly and positively correlated with perceived health in this study of adolescents. The correlation of  $r = .36$  was significant at the  $p < .01$  level.

### Discussion

Attachment and health,  $r = .36$  were significant at the  $p < .01$  level. Perceptions of positive health were related to high attachment scores. The overall process of development and change across the lifespan can be seen as a series of attachments and separations that take place within the context of interrelationships with others. Thus the social environment that is responsive to the adolescent following parental death will be important in developing the capability to cope with adversity and change (Benoliel, 1985).

Bereavement care, an important component of nursing care, can assist the individual and family through healthy grieving with positive outcomes (Fox, 1985; Karl, 1987; McClowry, Gilliss, & Martinson, 1989; McCown, 1987).



Summary

An interesting finding was that the age of the adolescent at the time of the parental death was not significant predictor of the outcomes. One parent commented about that concern noting that her son (who was the younger of her two children when her husband died) had adjusted better than the older son. This mother sensed that the shorter length of time that the child had lived with the parent was related to easier adjustment. She spoke of that son's attachment to his father as being less as a result and "he handled it better than his older brother [did]." The attachment bond was considered by this parent as time-related, rather than related to the quality of supportive behaviors and shared feelings of closeness and protection.

Another parent shared a different perspective, that of the intensity of the bond that was still apparent in her children even though their father had been killed in a plane crash when the children were just beginning school. Time since the death was also an issue here as it had been 14 years since both adolescents had lost their father, yet they each talked of some of their memories of him. This mother had remarried within a year of her husband's death and the stepfather was still in

the home. Feelings of closeness and comfort were shared by these adolescents.

The older the adolescents were, the greater the number of years since parental death, and the more likely they were to have dealt with their initial grief and adjustment (Worden, 1985, 1990). The ongoing studies in Minnesota (Garmezy, 1991; Garmezy, Masten, & Tellegen, 1984) have continued to follow children through adolescence as they search for the patterns and predictors of resilience and competence in high and low risk populations.

All families who were present during the data collection showed interest in talking about their experiences and in learning about ways to handle stressful situations. The parents spoke of the difficulties in accessing bereavement care for their children immediately after the death of the parent. The adolescents shared their feelings about how isolated some of them felt after the tragic and sudden death of a parent. One adolescent mentioned the fact that it was easier to pretend that her parents were divorced than to identify that her mother had taken her own life. Some said friends were most helpful to them while others related their relationships with their surviving parents as the strong thread that kept them together emotionally.

The quality of environment, in relation to family, school, and community, can be a powerful predictor of the outcome for these adolescents. Caring and support, high expectations, and opportunities for participation are all factors that assist the child in developing a sense of attachment and cohesion within each level of environment. Ties among the three environments must be developed to ensure that all children have the opportunity to build resilience. As preventionists, community collaboration must be encouraged to change a negative risk situation into a cultural climate that promotes children's accomplishments and satisfaction in daily living (Benard, 1992).

Werner's studies (1984, 1990) supported the gender issue aspect of the roles of middle school children and adolescents in the home following the death of a parent. Although this study was limited in the number of father-adolescent pairs, specific role responsibilities within the family were reported by the majority of the subjects. The responsibilities were not gender-tied as society has viewed them, but shared by both males and females. Some of those mentioned by the subjects were household chores such as cleaning their bedrooms, washing and drying dishes, helping with the laundry, gardening, and assisting with cooking meals. This information was

offered without cues from the researcher and suggested a sense of pride and accomplishment on the part of those adolescents. With such a limited sample of gender pairs with the father, comparisons were not made.

## CHAPTER FIVE

### Summary, Implications, and Recommendations

This chapter presents the summary of the study, implications for nursing, and recommendations for future research. Adolescent resilience following parental death in childhood has been linked with supportive social relationships and coping. The purpose of this study was to investigate the relationships among parental attachment to the surviving parent, adaptive coping, and resilience of adolescents following the death in of a parent in childhood.

#### Summary

Retrospective studies have found that parental death in childhood is a risk factor in adolescence. The model for the study is based upon adolescent attachment to the surviving parent (Bowlby, 1987), the protective mechanisms model (Rutter, 1987), and the perspective of loss and adaptation as described by Benoliel (1985).

The predictor variables were attachment and coping and the exogenous variables were age, years since parental death, gender pair of the adolescent and the surviving parent, and circumstance of death (sudden or expected). The dependent variable, resilience, was measured by social competence, global self-worth, and perceived health.

### Research Question

The overall research question guiding this study was, "What are the relationships among adolescent parental attachment to the surviving parent, coping, and resilience following the death of a parent in childhood?"

### Hypotheses

The hypotheses tested in this study were: 1) parental attachment to the surviving parent, adaptive coping, and age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of social competence in adolescents who have experienced parental death in childhood; 2) parental attachment to the surviving parent, adaptive coping, and age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of global self-worth in adolescents who have experienced parental death in childhood; 3) parental attachment to the surviving parent, adaptive coping, and age, gender of adolescent with gender of surviving parent, length of time since parental death, and circumstance of death (sudden versus expected) are significant predictors of perceived health in adolescents who have experienced parental death in

childhood; 4) parental attachment to the surviving parent is significantly and positively correlated with adaptive coping in adolescents who have experienced parental death in childhood; and 5) parental attachment to the surviving parent is significantly and positively correlated with perceived health in adolescents who have experienced parental death in childhood.

### Methods

This study was a cross-sectional correlational design. The purposive sample included 62 adolescents from Ohio, Illinois, and Pennsylvania who responded to a request in a newsletter or a personal letter from the researcher. Data were collected on self-report questionnaires given by the researcher to adolescents in their homes or a chosen setting.

The instruments used in the study were 1) The Relationships Questionnaires of the IPPA (Armsden & Greenberg, 1987) for parental attachment; 2) The Coping Inventory (Zeitlin, 1985) for adaptive coping; 3) The Self Perception Profile for Adolescents (Harter, 1988) for social competence and global self-worth; 4) The General Health Rating Index (Davies & Ware, 1981) for perceived health; and 5) a demographic data questionnaire designed by the author.

### Description of the Sample

The adolescent subjects were evenly divided by gender, 31 females and 31 males (N = 62). The age range was 13 through 21 years with a mean age of 16.53 years. Females had a mean age of 16.16 years, while males had a mean age of 16.9 years. All three stages of adolescence were represented; early (11-14 years), middle (15-17 years), and late (18-21 years).

Age of the adolescent at time of parental death ranged from 5 years through 14 years of age. The range of time since parental death was 2 years through 14 years. The surviving parent in most of the families was the mother (77.4%). The majority of the subjects were Caucasian (61) with only one subject of Asian descent.

### Pertinent Findings

Pearson product moment correlations and regression analysis were used to test the five hypotheses. Findings from this research demonstrated that adaptive coping was a significant predictor of resilience as measured by social competence ( $R^2 = .35$ ), global self-worth ( $R^2 = .30$ ), and perceived health ( $R^2 = .15$ ). Parental attachment added  $R^2 = .06$  to the variance in the regression with perceived health. Thus, the first three hypotheses were only partially supported. The only exogenous variable that was significant was gender pair



( $R^2 = .07$ ) in the regression with perceived health as the dependent variable.

The two correlational hypotheses were supported. Parental attachment and coping were significantly and positively correlated with  $r = .29$  ( $p < .05$ ). Parental attachment and perceived health were significantly and positively correlated with  $r = .36$  ( $p < .01$ ). The significant correlation between perceived health and attachment suggests beneficial health responses with positive attachment.

#### Limitations

There were several limitations in this study. The sample was purposive and self-selective, reflecting a bias toward the adolescent subjects who volunteered to participate after a request was made known. As such, the results cannot be generalized.

Due to the inability to access minority adolescents in the study, the sample was Caucasian providing a bias toward that population. Non-participation of minorities may have been due to cultural or ethnic values related to family feelings about exploring parental death issues with children. These concerns were verbalized by two African-American parents (both fathers) who refused consent for their daughters to participate.

The surviving parent was present during the sessions with all but eleven of the subjects. Although the parent remained in another room while the adolescent completed the questionnaires, their presence may have affected the interaction between the researcher and the subject. Another limitation may have been related to the instrumentation measuring parental attachment relationships and whether or not they measured parental attachment or relationships with the parent.

#### Implications for Nursing Practice and Knowledge

##### Development

Life events such as death of a parent are developmentally interpreted by children in ways that are quite different from adults. The meaning of the event as a stressor can be understood by the health care professional within the context of development and the adolescent's relationships. Events that are unanticipated signal special concern and bring with them potentially new stressors to the individual. The rhythm of the life cycle that is interrupted by an event such as parental death has the potential to cause stress and may disrupt the trajectory of adaptation.

Knowledge of the individual's responses to stressful life events is critical to the provision of supportive and therapeutic nursing care. For the care of children

and adolescents, there is a need for nurses to know how and when to intervene, and to plan interventions to handle developmental crises.

By studying the roles of attachment relationships, coping, and resilience, nurses can develop strategies to assist adolescents and their surviving parents to readjust to living without one parent. In addition, nursing interventions can provide both adolescents and parents with coping strategies that will help them deal with unforeseen and unexpected changes in their roles in the future.

Nursing is beginning to direct its attention to the needs of children who have experienced the death of a significant person in their lives. When a loss or crisis occurs in childhood, normal growth and development during adolescence may be threatened or at least significantly affected. Nurses working in a variety of settings may be in positions to provide the supportive care to families to promote healthy adaptation for bereaved children. In particular, bereavement care necessitates a thorough understanding of loss and its effect on development throughout the lifespan. Focusing on the development of coping strategies and active listening, nurses could implement strategies to assess and strengthen the

resilience of children and adolescents who have experienced parental loss.

#### Recommendations for Future Research

Based on the findings of this study, recommendations for future research on resilience include: 1) a qualitative study of the process and involvement of resilience that examines the lived experience of loss for the adolescent following parental death in childhood, 2) a longitudinal study examining the model variables over time beginning with early adolescence, 3) a study designed using random sampling and control groups for generalizability of the results, 4) a more representative sample of all levels of socioeconomic, racial, and ethnic groups, and 5) an extension of the model to include parental perceptions and their own adaptation to the loss.

What needs to be known is how the pattern evolves and how the process of resilience is initiated. Explore adolescent attachment relationships with significant others, such as peers, teachers, extended family members, or clergy, that may influence the development of resilience.

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## APPENDICES

Appendix A

Letter to Parent and Adolescent with Consent Form

Marjorie M. Heinzer, Letter to Parent and Adolescent with  
Consent Form

Dear Adolescent and Parent:

I am writing to you to request your assistance in my doctoral dissertation research about adolescents who have experienced the death of a parent during their childhood. Your name became available to me through your response to a notice in a newsletter, from a mailing from a local support group, or from a personal reference. My name is Marjorie Heinzer and I am a Registered Nurse and a graduate student at Case Western Reserve University. As part of my research I will be giving questionnaires to adolescents (ages 13 to 21 years) for information on their social relationships with parents and friends, their coping skills, and their perceptions of their general health at this time.

It is important for nurses to know what helps young persons to cope with problems in their lives. While neither of you (parent or adolescent) will benefit directly from this study, this information may help nurses to assist others who may have shared similar losses or crises. Your participation is important to the value of the study.

The participation includes the completion of a background information form and four written (check-list) questionnaires for the adolescent. I would like to do these in your home setting (or in a place which is convenient for you) for your privacy and comfort. There are no right or wrong answers for any of the questions and your participation will in no way affect your health care status or your school progress.

The forms will take about a half hour to complete. All responses will be kept confidential and questionnaires will be marked with a code number rather than names. As the researcher, I will have the only master list of names and code numbers and this list will be locked in my files. After the data are collected and abstracts mailed to you, the list of names will be destroyed.

In order for me to bring the questionnaires to you, I must have your written consent (both adolescent and parent if under 18 years). A consent form is included with this letter as well as a self-addressed stamped

envelope so that you may mail your consent directly to me. Participation in this study is voluntary. If you will consider participation, please return the signed consent form to me by \_\_\_\_\_ and I will call to arrange an appointment. Either the adolescent or the parent may withdraw participation at any time during the interview. Since code numbers will be used, anonymity will be assured. The results will be reported as group responses without any identifying information.

Although this study may not provide any direct benefits to you, it may help other teenagers who experience the same type of loss and provide important information for nurses who work with those teenagers in school, community health, and pediatric health care settings. If you have any questions about this study, please feel free to call me at the number listed below or write to me. The person who referred you for this study was \_\_\_\_\_.

Thank you for your consideration. I look forward to hearing from you.

Sincerely yours,

Marjorie Heinzer, MSN, RN, CS  
Telephone: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_, OH 44225-3703

Return this portion in self-addressed envelope.

CONSENT FORM FOR STUDY

Investigator: Marjorie Heinzer, MSN, RN, CS



APPROVAL:

We have read the enclosed letter explaining the research study. My teenager and I agree that he/she may participate in this study. We understand that the information will be collected in an appointment in our home or in a setting that we have chosen that is convenient for us. We also understand that my adolescent's responses and all answer sheets will be kept confidential and anonymity will be assured. We understand that my adolescent or I as parent may withdraw participation at any time during the study.

Please return in the enclosed envelope by \_\_\_\_\_.

Parent signature:

\_\_\_\_\_ Date \_\_\_\_\_

Adolescent signature:

\_\_\_\_\_ Date \_\_\_\_\_

Phone number where my teenager can be reached to schedule a time for the interview: \_\_\_\_\_

Best time to call: \_\_\_\_\_ morning  
\_\_\_\_\_ afternoon \_\_\_\_\_ evening

Appendix B  
DEMOGRAPHIC DATA INSTRUMENT

## Demographic Data Collection Instrument

- Today's Date \_\_\_\_\_
1. Subject ID# \_\_\_\_\_
  2. Age of Adolescent (in years) \_\_\_\_\_
  3. Birthday (month/date/year) \_\_\_\_\_
  4. Sex of Adolescent \_\_\_\_\_
  5. Grade of Adolescent (by number) \_\_\_\_\_
  6. Racial Background (optional) Please circle the number.
    1. NATIVE AMERICAN/AMERICAN INDIAN
    2. ASIAN OR PACIFIC ISLANDER
    3. BLACK OR AFRICAN-AMERICAN
    4. HISPANIC
    5. WHITE
    6. OTHER - SPECIFY \_\_\_\_\_
  7. Who is your living parent?
    1. MOTHER
    2. FATHER
  8. Do you have a stepmother/stepfather?
    1. YES
    2. NO
 If YES then what year did your parent remarry?  
 \_\_\_\_\_
  9. What is your parent's current age? \_\_\_\_\_
  10. What was your deceased parent's age at the time of death? \_\_\_\_\_
  11. When did your mother/father die? (month/day/year)  
 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_
  12. What was the reason for your mother/father's death?  
 \_\_\_\_\_
  13. Was the death of your mother/father sudden? (Answer YES if there was less than a week's awareness that your parent would die.)
    1. YES
    2. NO



Subject ID# \_\_\_\_\_

14. Does (did) your mother work?

1. YES
2. NO
3. DON'T KNOW

If YES, then what type of work? \_\_\_\_\_

15. What was the highest level of school your mother completed?

1. ELEMENTARY SCHOOL
2. HIGH SCHOOL
3. SOME COLLEGE
4. COLLEGE GRADUATE
5. GRADUATE CLASSES
6. DON'T KNOW

16. Does (did) your father work?

1. YES
2. NO
3. DON'T KNOW

If YES, then what type of work? \_\_\_\_\_

17. What was the highest level of school your father completed?

1. ELEMENTARY SCHOOL
2. HIGH SCHOOL
3. SOME COLLEGE
4. COLLEGE GRADUATE
5. GRADUATE CLASSES
6. DON'T KNOW

18. Who lives with you in your home? \_\_\_\_\_

19. Do you have any brothers?

1. YES
2. NO

If YES, please write their ages. \_\_\_\_\_

20. Do you have any sisters?

1. YES
2. NO

If YES, please write their ages. \_\_\_\_\_

21. Have you ever participated in a support group for adolescents who have experienced the death of a parent?

1. YES
2. NO

Thank you for completing this questionnaire! 1/6/92mmh

Appendix C

THE SELF-PERCEPTION PROFILE FOR ADOLESCENTS  
"What I Am Like"

PLEASE NOTE

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

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Appendix D  
THE GENERAL HEALTH RATING INDEX

Appendix E

THE INVENTORY OF PARENT AND PEER ATTACHMENT  
The Relationships Questionnaire

Appendix F  
THE COPING INVENTORY

## Appendix G

Demographic Data: Group Means for Adolescents with Stepparents(n = 17)

	MEAN	SD	RANGE
<u>AGE</u>	17.53 years	2.15	13-21 years
<u>GRADE</u> (expressed in numbers through college)	12.12	2.15	7-16 grade
<u>AGE OF CHILD AT PARENTAL DEATH</u>	9.06 years	2.70	5-13 years
<u>YEARS SINCE PARENTAL DEATH</u>	8.59 years	2.96	5-14 years
<u>AGE OF PARENT AT DEATH</u>	37.94 years	8.83	28-67 years
<u>AGE OF LIVING PARENT</u>	44.70 years	5.17	38-58 years
<u>TOTAL PERSONS LIVING IN HOME</u>	4.29	1.21	1-06
<u>TOTAL NUMBER OF BROTHERS</u>	.71	.77	0-02
<u>TOTAL NUMBER OF SISTERS</u>	1.00	1.54	1-06
<u>TOTAL NUMBER OF OLDER SIBLINGS</u>	.88	1.69	0-07

## Appendix H

Description of the Adolescents with Stepparents(n = 17)

<u>Gender</u>	Male	9 (52.9%)
	Female	8 (47.1%)
<u>Surviving Parent</u>	Mother	11 (64.7%)
	Father	6 (35.3%)
<u>Gender Pairs</u> (surviving parent and adolescent)	Father-Daughter	5 (29.4%)
	Father-Son	1 ( 5.9%)
	Mother-Daughter	3 (17.6%)
	Mother-Son	8 (47.1%)
<u>Cause of Parental Death</u>	Cancer	7 (41.2%)
	Heart Disease	6 (35.3%)
	Accident	2 (11.8%)
	Other	2 (11.8%)
<u>Sudden Death</u>	Yes	10 (58.8%)
	No	7 (41.2%)
<u>Support Group Participation</u>	Yes	3 (17.6%)
	No	14 (82.4%)

(appendix continues)



## Appendix H

Description of the Adolescents with Stepparents(n = 17)

<u>Father Works(ed)</u>	Yes	17 (100%)
	No	0
<u>Education of Father (highest completed)</u>	Grade school	0
	High school	3 (17.6%)
	Some college or vocational	9 (52.9%)
	College graduate	5 (29.4%)
	Graduate courses	0
<u>Mother Works(ed)</u>	Yes	16 (94.1%)
	No	1 ( 5.9%)
<u>Education of Mother (highest completed)</u>	Grade school	0
	High school	5 (29.4%)
	Some college or vocational	9 (52.9%)
	College graduate	3 (17.6%)
	Graduate courses	0

## Appendix I

Group Means on Attachment Relationships QuestionnairesSubscales

(N = 62)

	<u>n</u>	Mean	SD	Range
<b><u>Mother Scale</u></b>				
Trust	48	39.60	6.53	22 - 50
Communication	48	29.13	6.63	11 - 40
Alienation	48	26.50	4.60	16 - 35
Attach Mother	48	95.23	16.79	55 -125
<b><u>Father Scale</u></b>				
Trust	14	34.64	10.99	15 - 50
Communication	14	25.29	8.73	13 - 40
Alienation	14	25.29	7.03	12 - 35
Attach Father	14	85.21	26.00	40 -125
<b><u>Parent Scale</u></b>				
Trust	62	38.50	7.92	15 - 50
Communication	62	28.26	7.26	11 - 40
Alienation	62	26.21	5.19	12 - 35
Attach Parent	62	92.97	19.46	40 -125

## Appendix J

Group Means of the Coping Inventory Subscales(N = 62)

	Mean	SD	Range
Productive Self	3.84	.50	2.8 - 5.0
Active Self	3.88	.48	2.8 - 5.0
Flexible Self	3.83	.49	3.0 - 5.0
Total Self	11.55	1.15	9.3 -14.8
Self	3.85	.38	3.1 - 4.9
Productive Environment	4.20	.43	3.3 - 4.9
Active Environment	3.87	.57	2.3 - 4.8
Flexible Environment	4.10	.50	2.8 - 5.0
Total Environment	11.94	.93	8.6 -14.7
Environment	4.11	.56	3.1 - 7.3
Self + Environment	7.88	.89	6.8 - 9.7
<b>Adapt</b>	3.98	.36	3.1 - 4.9

## Appendix K

Group Means of the Self-Perception Profile Subscales(N = 62)

	Mean	SD	Range
Scholastic Competence	2.89	.69	1.2 - 4.0
Social Acceptance	3.10	.70	1.6 - 4.0
Athletic Competence	2.66	.83	1.0 - 4.0
Physical Appearance	2.51	.81	1.0 - 4.0
Job Competence	3.35	.53	1.8 - 4.0
Romantic Appeal	2.68	.73	1.2 - 4.0
Behavioral Conduct	3.14	.56	2.0 - 4.0
Close Friendship	3.31	.74	1.0 - 4.0
Global Self-Worth	3.18	.68	1.0 - 4.0
Social Competence (All Mean Scores except Global Self-Worth)	23.65	3.30	15.6 - 29.6

## Appendix L

Group Means of Scores for Adolescents with Stepparents(n = 17)

	Mean	SD	Range
<b>The Coping Inventory</b>			
Adapt ( <i>k</i> = 48)	4.05	.38	3.4- 4.9
<b>The Relationships Questionnaire Parent Scale</b>			
Attachment ( <i>k</i> = 25)	101.35	16.43	59.0-125.0
Trust Parent ( <i>k</i> = 10)	41.29	6.65	26.0- 50.0
Communication ( <i>k</i> = 8)	31.77	7.07	14.0- 40.0
Alienation ( <i>k</i> = 7)	28.29	3.87	19.0- 35.0
<b>General Health Rating Inventory</b>			
Total Score ( <i>k</i> = 22)	84.29	10.92	61.0-105.0
<b>Self-Perception Inventory (<i>k</i> = 45)</b>			
Social Competence ( <i>k</i> = 40) (all mean scores except Global Self-Worth)	23.71	3.56	18.8- 29.6
Global Self-Worth ( <i>k</i> = 5)	3.26	.59	2.4- 4.0

## Appendix M

Reliability of Instruments

	<u>n</u>	<u>k (items)</u>	<u>Alpha</u>
<u>General Health Rating Inventory (GHRI)</u>	62	22	.89
<u>Relationships Questionnaires of Inventory of Parent and Peer Attachment (IPPA)</u>			
<b>Mother Scale</b>	48	25	.94
Trust	48	10	.85
Communication	48	8	.87
Alienation	48	7	.73
<b>Father Scale</b>	14	25	.97
Trust	14	10	.94
Communication	14	8	.90
Alienation	14	7	.89
<b>Parent Scale</b>	62	25	.95
Trust	62	10	.89
Communication	62	8	.89
Alienation	62	7	.78

(appendix continues)

## Appendix M

Reliability of Instruments

	<i>n</i>	<i>k</i> (items)	Alpha
<u>The Coping Inventory</u>			
Total Scale	62	48	.88
Productive Self	62	12	.72
Active Self	62	6	.34
Flexible Self	62	6	.36
Productive Environment	62	12	.75
Active Environment	62	6	.57
Flexible Environment	62	6	.58
<u>Self-Perception Profile for Adolescents (SPP)</u>			
Total Scale	62	45	.92
Scholastic Competence	62	5	.79
Social Acceptance	62	5	.84
Athletic Competence	62	5	.90
Physical Appearance	62	5	.91
Job Competence	62	5	.71

(appendix continues)

## Appendix M

Reliability of Instruments

	<i>n</i>	<i>k</i> (items)	Alpha
<u>Self-Perception Profile for Adolescents (SPP)</u>			
Romantic Appeal	62	5	.85
Behavioral Conduct	62	5	.77
Close Friendships	62	5	.89
<u>Global Self-Worth</u>	62	5	.88