PARENT DEATH IN CHILDHOOD AND LATER PSYCHOLOGICAL ADJUSTMENT

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ABSTRACT

PARENT DEATH IN CHILDHOOD AND LATER
PSYCHOLOGICAL ADJUSTMENT

By

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The present study explored the possible relationship between death of a parent in childhood and adult psychopathological tendencies. Previous research and clinical studies, while somewhat contradictory, tended to suggest that there is an increased likelihood of psychopathology in individuals who had experienced the death of a parent in childhood. Several studies and clinical theories also suggested that age of the child at the time of bereavement, sex of the child, and sex of the deceased parent were of differential and interactive significance. The present study sought to examine bereavement in the general population as opposed to a psychiatric population, to determine the effects of parent loss before the age of 17 years in relation to adult psychopathology, and to identify those bereavement variables most critical to the development of later psychopathology. The relationship of death anxiety to bereavement was also explored.

The subject sample was composed of undergraduate college students enrolled in psychology classes. Subjects were divided into four groups, based on their family history: (1) intact family, (2) single parent death, (3) divorce, and (4) multiloss (multiple

parent death, multiple divorce, or divorce and parent death). Levels of psychopathology were measured by objective tests of anxiety, depression, locus of control, and interpersonal trust. There were no significant differences between subject groups with regard to levels of psychopathological traits as measured by the four tests.

The variables of age of the child at the time of bereavement, sex of the child, and sex of the deceased parent within the single parent death group were studied in relation to psychopathological traits. There were no significant differences between early and late bereavement, males and females, or maternal and paternal death. The interaction of these variables could not be statistically studied due to the small size of the sample.

A death questionnaire was devised to measure and identify losses attendant to the death of a parent in childhood. While the quantity or number of losses attendant to the death of a parent did not significantly affect subjects' levels of psychopathological traits, several bereavement variables which were significantly related to adult psychopathological traits were identified. The following variables were found to be related to subsequent psychopathology in bereaved subjects: (1) the perception of additional losses due to the parent's death; (2) the lack of emotional, cognitive, and practical preparation for death; and (3) the lack of understanding the parent's death and the loss of a positive relationship.

The relationship of death anxiety to bereavement and to level of psychopathology was explored. Death anxiety, as measured by an objective scale, was found to be a function of psychopathological tendencies, and was not affected by childhood bereavement.

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By

Virginia Clare Wulf

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To My Family

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CHAPTER I

LITERATURE REVIEW

In our present society, the nuclear family forms the basis of growth and development for the child. For the young child, the family provides his major sources of love, affection, and security as well as his first contacts with socialization into the larger world. The family is the young child's world, and later, serves as a basis for interpersonal relationships with others and for the development of his own family as an adult. In most instances, the nuclear family is a "given," and the child is free to grow without major threats to his security within the family unit. However, many children are not as fortunate as the "norm" of this society and are faced with perhaps the ultimate disruption of the family and its enveloping security--the death of a parent. In an age when the extended family is a rarity, the death of a parent imposes a major disruption on the nuclear family, as parent substitutes in the form of grandparents, aunts, uncles, or other relatives are often lacking. While other kinds of parent loss such as divorce or temporary separation may be disruptive, parent death is a special kind of loss in that it is permanent, irreversible, and not a reflection of personal or interpersonal discord in the family. Parent death is a normal and inevitable event and is perhaps only abnormal when it occurs early in the child's life, contradicting the

norm of the nuclear-family-society. Birtchnell (1969) has likened parent death to "a clean surgical incision (rather) than a dirty gash due to trauma." There are probably fewer events prior to a death that would complicate the study of parental loss than there are prior to divorce; however, the ensuing circumstances and reactions to a parent death are at least as complicated and significant as those surrounding divorce.

While an ideal study of parent loss would involve identifying recently-bereaved children and observing their subsequent development over time, the limitations of time prohibit such an undertaking in the present study. The present research studies young adults who have lost a parent through death in childhood to investigate the possible effects of parent death on later personality development. Specifically, this research attempts to determine: (1) whether parent death in childhood is related to later psychiatric disturbances, (2) whether parent death, *per se*, is a significant predisposing event to later psychopathological problems or whether events attendant to the death are the significant factors in the child's later mental health, and (3) whether parent death as an experience can strengthen the child's capabilities of handling later traumatic death-related events, assuming that the reaction to parent death has been adequately resolved.

Before discussing these questions in more detail, a review of the literature will serve to acquaint the reader with the major findings, issues, and problems that have been studied to date.

Epidemiology

Incidence of Parent Death in the General Population

The incidence of parent loss by death in the general population is higher than most people would estimate. The percent of people who had a parent die by the time they were 16 years of age has been found to range from 12% to as high as 19.5%. Brown (1961), in a study of depressed patients and controls, found that 12% of the controls had experienced a death of a parent before they were 15 years of age. Munro and Griffiths (1969) found that 15% of psychiatrically normal individuals had lost a parent by age 16. In a more comprehensive study of childhood parent loss in a psychiatrically normal population, Munro (1965) found that 19.5% of the subjects had experienced a parent death by the subject's sixteenth birthday, and that by the twenty-fifth birthday, 34.2% of the general population had experienced the death of at least one parent. Other studies have shown similar results, regardless of whether the subjects were from the general population, general hospital inpatient wards, or general medical practice (Hilgard et al., 1960 and Norton, 1952). All of these studies suggest that at least 1% of parents die during each year of childhood and adolescence of their offspring.

More specifically, Munro (1965) found that paternal mortality was twice as high as maternal mortality throughout childhood, adolescence, and early adult life. By the sixteenth birthday, 12.4% of the subjects' fathers had died, compared with 8.1% for maternal deaths. In a study of life stress and mental health, Langner and Michael (1963) found that 12.3% of the population in an urban area had had a father

die by 16 years of age, 6.3% had experienced the death of a mother, and 1.9% had had both parents die. This higher proportion of father death is probably related to the fact that husbands are usually older than their wives and that men tend to die at younger ages than women in modern society.

In contrast to these studies, the Statistical Abstract of the U.S. Bureau of the Census (1971) found that only 5.5% of families had experienced the death of a parent. However, since the average number of children in a family is 2.6, the percent of bereaved children in the general population is actually 14.3%, comparable to the findings of other studies. Since the census sample size included a total of 44,110 families, the percent of identified bereaved children is a fairly accurate one.

Incidence of Parent Death in Psychiatric Patients

Epidemiological studies have further explored the incidence of childhood bereavement in adult psychiatric populations and these statistics have been compared to those of the general, or non-psychiatric, population with inferences being made as to the significance of parent loss in childhood for later psychiatric disturbances. In fact, most studies on the effects of parent death on later personality development have followed the psychiatric versus normal population design, and most of them have included psychiatric-bereaved patients only, to the exclusion of the normal-bereaved population. The bulk of these studies, then, cannot tell the reader about the "typical" adult who lost a parent in childhood, but only about those adults who lost a parent in childhood and have later developed psychiatric

problems which may be related to their early loss. In looking at these studies, however, the reader can gain some insight into the developmental hazards of childhood bereavement.

Barry and Bousfield (1937) found that the incidence of loss of one or both parents was 27.6% in a group of psychotic patients, while for normals, comparable figures were below 20%. Blum and Rosenweig (1944), in a study of schizophrenics, found that parent death occurs more often in the history of adult schizophrenia than in that of the general population. Suicidal individuals have also been found to have a higher incidence of parent death than the general population. Paffengarger et al. (1965) compared 225 male suicides among former U.S. university students with their living classmates and found that significantly more of the suicides had had a paternal death by the time they entered college. A later study in Britain also showed a significant difference between suicidal and non-suicidal psychiatric patients. The attempted suicides had more often experienced early parent death, and the age of the patient at the time of bereavement tended to be more likely between 10 and 19 years (Birtchnell, 1970c). A significant number of suicide admissions in this study had also had a parent die one to five years prior to the suicide attempt.

Most of the epidemiological studies of parent loss have compared depressed patients with either non-depressed or non-psychiatric controls. In a study comparing depressed adult patients with the general population, Brown (1961) found that the incidence of childhood bereavement for the depressives was 41%, compared with only 12% for the general population. While these differences are impressive, it should be noted that Brown's diagnostic criteria were not systematic, and that

patients were selected who showed a depressed mood, rather than a depression related to psychosis or organicity (i.e., a definite diagnostic category). The fact of being in a hospital may have accounted for a depression of mood in many of the patients, and thus Brown's criteria may have been vulnerable to inconsistency and over-inclusion. However, using the Depression Inventory and clinical ratings by psychiatrists, Beck et al. (1963) found similar, though smaller, differences between high and low depressed in- and outpatients. Of the "high depressed" individuals (a score of 25+ on the Depression Inventory), 27% had suffered the loss of a parent by age 16, compared with only 12% for the "low depressed" group (a score of 13 or less on the Depression Inventory). Birtchnell (1970a) also found a significant incidence of early parent death in severely depressed psychiatric patients compared to moderately depressed and non-depressed patients. From these studies it appears that parent death in childhood increases the likelihood of the later development of severe depression. A further study by Birtchnell (1970b) suggests that for psychiatric patients as a whole, the incidence of parent death is a significant predisposing factor to mental illness. He studied 100 consecutive admissions to a psychiatric hospital and found that loss of the father before age 10 and loss of the mother before age 4 were more frequent for psychiatric admissions, significantly so for females.

While these studies point to the likelihood of childhood bereavement as a significant predisposing factor in adult psychiatric disturbances, several other studies have found no significant differences between psychiatric patients and the general population with regard to childhood bereavement. Two studies of psychiatric patients

compared to normals revealed a trend in the direction of more bereavement among the patients, but these results were not statistically significant (Petursson, 1961 and Pollock, 1962). A similar non-significant trend was found by Munro (1966) in a comparison of severely depressed psychiatric inpatients and hospital outpatients, but the proportion of all depressed inpatients who lost a parent by death was very similar to the controls (21.6% and 20.2% respectively). Thus it appears that the severity of depressive illness may be influenced by parental death, but not the incidence. However, in a study of 200 patients with manic-depressive psychosis, Hopkinson and Reed (1966) found that 19.5% had lost one or both parents by age 15, an incidence no different from Munro's (1965) findings with psychiatrically normal subjects. Similarly, in a study testing the hypothesis that completed suicides more often have lost a parent by death before age 16, no differences were found between the suicides and the general population, even when the subjects were matched for age, sex, and marital status (Bunch et al., 1971). While Greer (1966) found that loss of both parents was four times as common among attempted suicides as among controls (16% versus 4%), his definition of "loss" included any circumstance--death, separation, divorce, illegitimacy, etc. When cases of loss of parents were divided into groups based on the circumstance of loss, there were no differences between attempted suicides and controls in the incidence of loss of parents by death specifically.

The inconclusive results of these epidemiological studies may be due to the differences in populations, in the definitions of "depressed" and "suicidal," and in the design of comparing psychiatric patients with non-psychiatric individuals. The question of what

factors lead to a patient's admission to a psychiatric hospital may be a confounding one, as it may be that bereaved individuals have had more contact with social service agencies due to the bereavement and thus may be more likely to seek out such agencies in times of difficulty or crisis. A way of circumventing this methodological problem would be to study bereaved individuals as a whole, regardless of whether or not they have received any kind of therapeutic intervention, and to compare this group with a similar non-bereaved population. Then any differences in such variables as psychological or social adjustment would more clearly be related to the fact of bereavement than to differences in population or confounding factors of definitions or design.

Hilgard et al. (1960) did examine adults bereaved in childhood who were from the general population. In the general population, they found 21% of the subjects had lost one or both parents prior to age 19 compared with 27% of state mental hospital patients, a relatively small increase of frequency of parent loss. By means of an interview and administration of the Edwards Social Desirability Test, they found that for the 29 women in the general population who lost fathers, 14 were classified as well-adjusted. This classification was based upon an intact home, a satisfactory marriage, adequate relationships with the children, and scores on the Edwards test indicative of comfortable adaptation to social life. Unfortunately, similar statistics were not elaborated for father-bereaved men, mother-bereaved individuals, or non-bereaved individuals. Thus while this study was an attempt to examine bereaved adults in the general population, it failed to compare these adults with non-bereaved adults in the general population, and a statistical test of the possible effects of bereavement in childhood

cannot be accurately determined from this study. A study by Langner and Michael (1963) also examined bereaved subjects in the general population. Using a mental health index based on pathological responses to questions relating to such symptoms as physiological disorders, rigidity, withdrawal, depression, and immaturity, they found that parent death was related to maladjustment only under certain conditions. Individuals whose parent died before they were 7 years old and lower-class individuals whose mothers had died generally had poorer scores on the mental health index than non-bereaved individuals.

At this point, a discussion of the specific conditions of sex of parent and age of the child at the time of the parent's death seems appropriate.

Sex of the Deceased Parent: Differential Effects

The Mother

The importance of the mother-child relationship is a universal tenet in all psychological theories. The current literature on parent loss stresses the significance of maternal bereavement for later psychiatric problems, especially when such loss occurs in the earlier years of childhood, specifically younger than four years of age (Barry and Lindemann, 1960; Barry, Barry, and Lindemann, 1965; and Birtchnell, 1970a and 1970b). Most of the studies have related maternal bereavement to neurosis, severe depression, and psychosis. In a study of neurotic patients, Barry, Barry, and Lindemann (1965) found that extreme dependency was the only differentiating characteristic of those neurotics whose mothers had died in infancy or early childhood,

and that only a few of the later bereaved patients (11-17 years) exhibited such extreme dependency. Dependency in this study was determined by intake interviews, and excessive demands upon the psychiatrist for time, attention, or services; such a determination of dependency is subjective and these results would be hard to duplicate. In two other studies of male and female neurotics, loss of the mother in early childhood was significantly higher than the general population only in female patients; no such relationship was found for the male patients (Barry and Lindemann, 1960 and Birtchnell, 1970b). However, in a study of depressed psychiatric patients, Dennehy (1966) found that male depressives were more likely to have suffered maternal bereavement, while for female depressives the trend was toward paternal bereavement. Other studies of depressive patients have not found such sex differences, although the incidence of maternal bereavement was higher than that of paternal bereavement (Munro, 1966; Munro and Griffiths, 1969; and Birtchnell, 1970a). Studies of psychotic patients reveal much clearer-cut findings with regard to the significance of maternal bereavement. In a study of female psychotics, maternal death was a factor in 16.9% of the schizophrenics and 16.1% of the manic-depressives, compared with only 5.8% in a normal control group (Blum and Rosenweig, 1944). Dennehy (1966) found that for both male and female schizophrenics, loss of the mother was more likely to be a part of the history than for normals. Other studies, making no differentiation as to sex of the patients, also found that the incidence of maternal death was higher among psychotics than normals, 15.7% and 5.3% respectively (Barry, 1939 and Barry, 1949).

In summary, maternal bereavement may be an important predisposing factor in later psychotic disturbances and is of significance in neurotic disturbances especially if the bereavement occurred in early childhood. There also appears to be more likelihood of later psychiatric disturbances in females who have lost a mother, although this finding may be a function of the fact that females are more likely to seek psychological help. Most of these findings pertain only to psychiatric patients, and thus the incidence of maladjustment may, in fact, be higher if one were to examine bereaved individuals in the general population.

The Father

In several of the studies already mentioned, father loss in childhood was not found to be a significant historical factor in adult psychiatric populations (Barry, 1939; Blum and Rosenweig, 1944; Barry and Lindemann, 1960; and Munro and Griffiths, 1969). While Blum and Rosenweig (1944) found a trend toward paternal loss for male schizophrenics, Barry and Lindemann (1960) found that patients whose fathers had died followed a pattern more nearly like that of the general population, as did Langner and Michael (1963) in a study of bereaved individuals in the general population. However, when such variables as sex of the child and age of the child at the time of paternal bereavement are controlled, significant trends do emerge. Early (0 to 9 years) childhood paternal bereavement has been related to depressed scores on American College Entrance Exams (Sutton-Smith et al., 1968). While this is not an indication of psychiatric problems, Dennehy (1966) found that improved schoolwork is a good measure

of the child's recovery from parental death. Thus, Sutton-Smith's findings may be an indication that early paternal bereavement is not easily resolved by the young child and that detrimental effects may persist at least as long as college-age. Birtchnell (1970b), in a study of 100 consecutive psychiatric hospital admissions, found that the incidence of paternal death before age 10 is significant for female patients only. Hill and Price (1967) also found a significant effect of paternal death for female depressed patients only, but they found the most significant age of bereavement to be between 10 and 14 years of age. However, their study compared depressed and non-depressed psychiatric patients only, and no comparisons were made with a non-psychiatric control group. A similar study of depression using psychiatric patients and normal controls was done by Munro (1966), however, and similar but non-significant results were found. Munro found no difference with regard to death of the father between depressives and controls as a whole, but when age was controlled, depressives showed a tendency towards excess paternal death in the 11-15 year old period. Thus, while early maternal bereavement is more clearly related to later adult psychiatric disturbances, the significance of age of paternal bereavement is less clearly understood. It may be that differences in patient criteria or diagnosis, and the lack of consistency of research designs among the paternal bereavement studies, are confounding the results.

There is a trend in the aforementioned studies which suggests that females may be more affected by paternal death than males. While one study showed a trend towards paternal loss being associated with male schizophrenia, these results were not significant (Blum and

Rosenweig, 1944). Dennehy (1966) found that loss of the father was more frequent in male depressives. This trend in depressives is the opposite of that found by Blum and Rosenweig for schizophrenics, where same-sex parent bereavement was related to adult psychosis. In a study of patients from private practice, Pollock (1962) found that 16.9% were fatherless women, compared with only 5.6% fatherless men; the percentages for motherless men and women did not differ significantly, 5.1% and 3.3% respectively. Thus, it appears from this study that fatherless women run a greater risk of psychopathology than any of the other groups. It may be important to note, however, that these percentages are not markedly different from bereaved adults in the general population (Brown, 1961; Munro and Giffiths, 1969; and Munro, 1965).

In a study of suicidal behavior, Bunch and Barraclough (1971) found that more than the expected number of suicides kill themselves in a time period near to that of the anniversary of fathers' deaths, but not to that of mothers' deaths; they also found that more females than males suicided near to the father's death anniversary. This finding of the importance of paternal loss is indirectly upheld by a study by Munro (1965) of psychiatrically normal bereaved individuals who reported viewing the loss of the father as a more emotionally traumatic event than loss of the mother; of course, these psychiatrically normal individuals may have experienced their bereavement somewhat differently from those bereaved individuals who later developed psychological problems.

As with the effects of maternal bereavement, the effects of paternal loss are not fully understood, and the studies of father

bereavement leave many questions as to the significance of age and sex of the bereaved child unanswered.

In summary, there appear to be no clear-cut effects of parent loss with regard to sex of parent, or age and sex of the child at the time of bereavement. The inconclusiveness of these studies may in part be a function of the different psychiatric populations studied, the different criteria for mental health and mental illness, the diverse research designs and the absence of consistent replicational studies. Certain trends are worth noting, however, so that future studies can begin to clarify these findings:

1. Maternal death appears to be a more critical factor in personality development than paternal bereavement, especially when the death occurs in early childhood.

2. Maternal death appears to affect both male and female children adversely, though perhaps in different ways.

3. Paternal death is most clearly related to psychiatric difficulties for women.

4. The significant age of paternal death is less clear-cut than that for maternal death, and it may be that loss of the father has significant, though different, effects throughout all of childhood and adolescence, at least for females.

5. The influence of paternal death for males needs further study before definitive statements can be made.

Age at the Time of Bereavement

The age of the child at the time of parent death, as seen from the previous section, appears to bear some relevance to the impact of loss on later development. However, the findings of the studies mentioned are conflicting. While Barry (1949) suggests that maternal bereavement is critical prior to 8 years of age and later focuses on 3 months to 4 years of age as the critical time for maternal loss

(Barry and Lindemann, 1960; and Barry, Barry, and Lindemann, 1965), Archibald et al. (1962) and Hill and Price (1967) found no significant differences between early and late maternal bereavement. Similarly, paternal bereavement has been found to be harmful both when it is early (Sutton-Smith et al., 1968; and Birtchnell, 1970b) and when it is late (Munro, 1966), and Archibald et al. (1962) found no differences with respect to early or late paternal bereavement. Studies of the significance of age of bereavement for either mother or father loss also conflict with regard to the significance of early or late bereavement in childhood; while Beck et al. (1963), Langner and Michael (1963), and Birtchnell (1972) suggest that early parent bereavement is more harmful, Birtchnell (1970c) found that bereavement between 10 and 19 years is more significant, and Gregory (1966) found no difference with regard to bereavement age.

The Ability to Mourn

There is some consistency, however, between several of the aforementioned studies and the theoretical constructs concerning critical ages of bereavement. It is generally agreed among psychological theorists that the very young child is more likely to be damaged by parent loss. According to Deutsch (1937), the more immature the ego, the more needed is the primary object relationship, and thus the more intense the anxiety as a result of object loss. Around 6 to 7 months of age the infant first shows a preference for a particular person, usually the maternal figure, and separation anxiety when the mother is not present first occurs (Bowlby, 1961; Yarrow, 1964; and Maccoby and Masters, 1970). Before this attachment to a human is

formed, the infant has not established a libidinal cathexis with an object and is thus not distressed if an object is lost. Once the child has formed a specific attachment, however, this initial attachment becomes extreme in intensity until the age of about 3 years when the child begins to form strong attachments with other people.

A controversial question related to parent death is whether children from 6 months of age, when primary attachment first occurs, to 3 or 4 years of age, when an elemental concept of death first appears, can mourn; must the child understand death to some elemental degree before he can mourn a permanent loss? Freud (1917) in his paper on "Mourning and Melancholia" states that the very process of growth and maturation is comparable to what he calls "mourning work" in that steps toward maturation involve adaptation to numerous periods of separation during which some mourning occurs. He implies that during separation, the infant mourns the loss of the primary cathected object and that if this object failed to return, the infant would continue the "mourning work" and shift his libidinal cathexes from attachment with the lost mother to attachment to a new relationship. Bowlby (1960) goes into considerable detail about the infant's capacity to mourn. Like Freud, he states that the mourning process will be activated undifferentially to temporary and permanent separation. Although the scale of mourning time in infants and young children is somewhat abbreviated, Bowlby (1960) states that the child's "reaction to actual separation from the mother, especially between the ages of 6 months and 3 years, is longer-lasting and of more profound consequence than has been assumed" and is particularly violent and of great intensity. During the mourning process, the psychological craving for

the mother may over-ride all bodily sensations in the child for as long as several days. The young child may refuse to eat, sleep, or be comforted by others and may continually cling to objects associated with the mother. Bowlby states that these early childhood responses to loss are not significantly different from mourning responses of adults and he presents detailed clinical descriptions to prove his point (Bowlby, 1960).

Several professionals in the fields of child development and psychiatry are not convinced by Bowlby's presentations of the infant's and young child's capacity to mourn. Anna Freud (1960) states that similar cognitive capacities are needed both for a concept of death and for the ability to mourn. Because mourning involves the acceptance of the fact of object loss as well as internal changes involving the withdrawal of libido from the lost object, it cannot take place unless the individual had certain capacities in his mental functioning, such as reality testing, so that the loss can be realized. According to Anna Freud, the child younger than 3 years cannot mourn because he has no idea of the permanence of separation through death, and does not have the cognitive abilities necessary to test the reality of the loss. Spitz (1960) disagrees with Bowlby's conceptualization of infantile mourning from a different standpoint. He does not feel that the mourning of the infant and young child has the same quality or meaning as that of the adult. Spitz points out that the child at 6 months differs from the child at 3 years, who in turn is different from the adult, in terms of cognitive capacities, emotional development, and strength of personality organization. Both the nature of the psychological organization and the means--both internal and external

--available to the infant or adult for dealing with death are different and affect the meaning of the bereavement at different age levels. Spitz asserts that the more inadequate the personality organization in terms of understanding and defense, the greater will be the impact of the trauma of loss through death. If the ego is weak or nonexistent, as in children under three years of age, the tasks of defense and mastery of the traumatic event will be inadequately accomplished, if at all. Thus while the young child may go through the mourning process, the degree of resolution of the event will be quite different from that of the adult, and the meaning and later effects of the loss will reflect the inadequate resolution made by the young child.

Bowlby (1960) does agree with Spitz's contention that loss of the mother figure for the child of 6 months to 3 years of age has high pathogenic potential. Because the child cannot understand the cause or meaning of the separation, because he has a low tolerance for frustration, and because he may develop extreme despondency, prolonged or permanent separation may cause permanent psychological damage. In fact, Bowlby states, if separation during this age lasts longer than 6 months, the child may never regain trust and affection for his parents or other adults (Bowlby, 1961). Furman (1974) presents additional reasons for the high pathogenic potential of parent loss for the young child. In young children where the self-differentiation is incomplete, the defense structure is labile and reality-testing is limited, mourning will be inhibited because the child is too dependent on the love object for narcissistic gratification; loss of the love object would present a developmental difficulty for the young child because he has not yet differentiated himself completely from the dead parent.

Only in latency, Furman states, is the child completely differentiated from the parent and thus less threatened by decathexis.

The Concept of Death

The foregoing section has implied that a realistic concept of death, as well as psychological mechanisms of defense, differentiation and ego strength, is important in the process of mourning. Research has indicated that a realistic concept of death is not attained until at least 9 years of age. Before discussing the implications of this fact with regard to childhood bereavement and later psychiatric disturbance, a brief discussion of death-concept development in children seems appropriate.

It is not until 3 to 5 years of age that the child develops a rudimentary concept of death. Prior to 3 years of age, the young child has no conception of death and knows only the ideas and feelings associated with physical separation. The 3 to 5 year old develops a concept of death in which death is temporary, reversible, and the result of defiance of authority, aggression, or sexual impulses. The child's characteristics at this age, of belief in the omnipotence of his wishes, egocentricity and sense of helplessness, and his dependence on authority figures and dread of abandonment, all play a critical role in the development of his death concept (Rochlin, 1953). The fact that the 3 to 5 year old views death as accidental (i.e., not inevitable) and reversible has also been explained in relation to his stage of cognitive development. The preoperational child is said to be unable to use logic, is egocentric, and his thought processes are tied to perceptual facts rather than conceptual ideas (Anthony, 1940; Nagy,

1948; and Piaget, 1951). Three to five year olds also attribute life and consciousness to the dead, who may be described as "just sleeping;" this fact also can be explained in terms of the young child's egocentricity and reliance only on perception. Because the young child experiences everything as living, he projects life-like qualities onto all objects; egocentricity inhibits him from conceptualizing non-being (Nagy, 1948).

From 6 to 9 years of age, the child can neither deny nor accept death fully; death is seen as real and permanent, but external and distant and thus not related to the self (Kastenbaum, 1967). Biological interest in death related to its causes and irreversibility are explored at this time as well as the social meaning of death to the child and the family (Jackson, 1967). The appearance of biological interest in death and the ensuing attempts at logical definitions of death can be explained from a cognitive framework; the "age of reason" and the emergence of logic occurs between 6 and 7 years of age. It is during the concrete operational period, between approximately 6 and 9 years, that the child is ruled by artificialism, the belief that the world is made by and for man. Thus death is seen as an eventuality but is outside of man and not universal (Nagy, 1948). Interest is directed toward objective aspects of death, such as biological facts and social customs including details about funeral ceremonies. The 8 to 9 year old progresses his interest in death to what happens after death, such as bodily disintegration (Gesell and Ilg, 1946).

As the child approaches adolescence, he becomes increasingly equipped with the intellectual tools needed to understand both life and death realistically (Piaget, 1960). At about 9 or 10 years of age, the

child is finally able to recognize the universality of death and the inevitability of his own death (Nagy, 1948). Nagy attributes this stage to Piaget's period of formal operations when the child becomes governed by reality and causal thinking. Like cognitive development, the development of a mature death concept follows a fairly fixed, irreversible order of succession through the different levels of death conceptualization.

From the research on death concept development in children, it appears that there is a definite shift in the child's ability to comprehend death which occurs at approximately nine years of age. At that time, the child develops the ability to form abstract conceptualizations and becomes able to understand the concepts of finality and causality in relation to death. Thus for the child younger than 9 years of age, not only does emotional trauma result from parental loss, but a parent death increases the likelihood of additional trauma because of the child's intellectual inability to comprehend death in its permanence and finality. Becker and Margolin (1967), in a study of bereaved children under 7 years of age, found that even if the child was told that the dead parent was in heaven, the child would interpret "heaven" in a concrete manner and wish to buy or make something for the deceased. In this example, concretizations allowed the children to believe that the dead parent continued to exist and might return. Arther and Kemme (1964) have equated the young child's inability to comprehend death with his inability to comprehend the concept of finality. Because the child younger than 9 cannot comprehend finality, he is forced to substitute this abstraction with concrete and familiar terms; this inability to comprehend death's finality has been related to the

child's inability to grieve appropriately (Hilgard et al., 1960). Similarly, the young child is unable to grasp the concept of causality, and thus the intellectual problem of what caused the death may be translated into who was to blame (Arthur and Kemme, 1964). This may lead to undue guilt in the child for his aggressive actions, wrong-doings, or wishes to harm the dead parent. The child may also blame the surviving parent, especially if the child was witness to marital discord. These misunderstandings about the parent's death and the young child's inability to comprehend death in its entirety may create later problems for the child if he continues to misconstrue the events surrounding the death and the actual death itself. Arthur and Kemme (1964) state that "it is evident that the emotional implications of the death are so profound, and the dynamic task of dealing with the trauma so complex and torturous, that the child's wishes and fears concerning the dead parent may persist, isolated from, and minimally influenced by, his intellectual ability to conceive of death realistically." The age of nine, representing the age at which the child begins more readily to comprehend the entire situation of the death, marks the age after which such intellectual and emotional fixations are less likely to occur. Therefore, it seems likely that children bereaved after nine years of age would be more able to mourn realistically and more able to resolve their grief than those younger than nine years of age. Hilgard et al. (1960) did, in fact, find that the age of nine presented a definite shift in the child's ability to mourn. After age nine, the children could begin to identify with the surviving parent's depressed mood, and rituals such as the funeral were more likely to be remembered with some recall of grief.

From this discussion of the young child's unique emotional and intellectual handicaps in dealing with a parent death, it seems likely that children bereaved before 9 years of age would be more likely to develop later psychopathological problems due to their misconceptions of the death and their incompleted mourning process. While several studies have observed the difficulty of loss for the child younger than nine (Hilgard et al., 1960; Sutton-Smith et al., 1968; and Birtchnell, 1972), the significance of nine years as a critical age in childhood bereavement has never been directly tested.

Attendant Circumstances of Childhood Bereavement

Thus far, the implications of sex of the dead parent and age of the child at the time of bereavement have been discussed. Many authors have presented other complicating issues concerning parent death that may further impede emotional growth, as well as factors that can help to minimize the trauma of death for the young child.

Complicating Issues

Lindemann (1944) suggests that the psychological work of mourning may be partially accomplished before the death occurs if the death is expected, and he terms such grief "anticipatory mourning." Unfortunately, many deaths are sudden and unexpected, especially in cases where small children are involved whose parents are also fairly young. Thus for most young children, the death of a parent is unexpected and bereavement is more difficult to cope with since anticipatory mourning cannot take place.

When a sudden death does occur, the surviving parent is also overwhelmed with grief, and the loss may be difficult to face and work

through. Furman (1964) contends that parents are often so disturbed by their own grief and by the pain suffered by the child that they do not permit the mourning process in the child to proceed. In a study of bereaved children under 7 years of age, the parents admitted avoiding the topic of the death because they could not face the intensity of their children's feelings (Becker and Margolin, 1967). These parents also avoided the subject of death to protect the child from feelings of loss or pain. Thus the child's unwillingness or inability to face the loss realistically was reinforced by the protective attitude of the surviving parent. Harrison et al. (1967) also discovered this adult tendency to distract children from the topic of death and deny that the children were emotionally upset. Such restriction of the mourning process in children may predispose the child to develop psychiatric problems as an adult (Deutsch, 1937; and Fleming and Altschul, 1963).

When well-meaning but "adult" (symbolic, religious) or incomplete explanations are given concerning the death, these explanations often serve only to perpetuate the child's concretizations and fantasies concerning death (Bromberg and Schilder, 1933; and Becker and Margolin, 1967). The explanation of the death to the child should be as realistic and factual as possible, even if the child is too young to have a full grasp of the concept of death. Telling the child that the dead parent just got too old may only induce in the child a fear of growing old, an actual regression to infantile behavior, or a fear of the other parent's death, causing further stress on the child's personality structure (Anthony, 1972). Comparing death to a long sleep or a journey are likewise poor explanations and may cause night phobias, feelings of being unloved and abandoned, or feelings of

mistrust of the surviving parent when the child eventually learns the truth. Any unrealistic explanations may appease the child temporarily, but only cause further stresses later on. Several authors have suggested that it may not be the loss itself which acts traumatically on the child, but the memory of the loss in later years (Semrad, 1967; Brown, 1968; and Kastenbaum and Aisenberg, 1972). Because the young child cannot label and classify his experience of the death situation accurately, he relies on his parents for help and guidance with reality-testing, tolerance and expression of affect, behavioral control, and logical thinking (Furman, 1974). If this guidance is lacking, the child will be free to distort or exaggerate events in ways which may later lead to adjustment difficulties. Unfortunately, the studies previously mentioned indicate that most of the parents studied were unable to give much support to their children in the way of realistic discussions of the death.

Minimization of the Trauma

Perhaps the most important way of helping the child (and the family) to cope with death is the encouragement of free expression of feelings concerning the deceased, the death itself, and the family's future. Hilgard et al. (1960) stress the need for the expression of feelings to occur at the time of the loss, before feelings become repressed or based on fantasies. Furman (1964) and Sigel (1965) stress the need for expression of aggressive and ambivalent feelings and the acceptance of these feelings so that the child does not harbor any guilt or anxiety which may hinder his development. Grollman (1967) and Moller (1967) assert that feelings should be shared and the child

should be included in any mourning experience. Morarity (1967) disagrees with the latter view, stating that exposing very young children to the physical corpse may only serve to add the trauma, but Grollman (1967) states that at least from the age of 7 the child should attend the funeral. Krupp (1972) suggests that, in fact, first-hand experience with the death, through attending the funeral and seeing the dead person, may make death more real and natural and less feared, mysterious, and unnatural. When a child experiences any traumatic event, he is confronted with both understanding the facts and experiencing the feelings it produces. Thus in the work of mastery of a personal loss, verbalizing and experiencing both facts and feelings are of paramount importance (McDonald, 1964).

Because the loss of a parent threatens the family with disintegration of the once-stable unit, other activities in addition to mourning should be done as a family. The family should consolidate its efforts to maintain itself as an integrated whole. While a death is less disruptive for extended families (Krupp, 1972), there are things a nuclear family can do to accommodate for the loss. Social activities with other families and active participation of the family in religious groups are two suggestions made by Wargotz (1969) for maintaining family unity. Within the family itself, adjustments in roles among all of the family members to accommodate for the role of the dead parent will enable the family to function more efficiently as well as give each family member a feeling of contributing to the family adjustment process. Krupp (1972) warns that in incomplete adaptation to loss, a family may encourage one person to assume the role of the dead parent as if that parent were still alive. This may

conflict with the person's own fulfillment as an individual as well as push the burden of the loss off on one family member, a further disruption of the original family structure. It is also helpful for the surviving parent to serve the dual role of homemaker and breadwinner in the family. Hilgard et al. (1960) found that among a well-adjusted group of women whose fathers had died when they were children, the mother had kept the family together by serving both roles of mother and father.

The presence or absence of a parent-substitute has also been shown to make a difference between later psychiatric problems and a generally healthy personality (Yarrow, 1964; Furman, 1964; Dennehy, 1966; Grollman; 1967; and Wargotz, 1969). However, Furman (1974) warns that the new parent or parent substitute must allow for residual attachments to the dead parent by the child and must help with the child's mourning through encouragement of expression of feelings. Ideally, a new parent should not be introduced until the child has sufficiently completed his mourning and is capable of transferring his love to another person. Furman states:

> The mental representation of a dead parent is never completely decathected. It remains alive in the form of memories and feelings. . . . Loving a new parent cannot and should not erase the remaining traces of the earlier relationship. . . . A stepparent builds his or her relationship with the child in part by appreciating that a new parent cannot actually take the place of the dead parent and by empathizing with the child's feelings" (Furman, 1974, pp. 117-18).

Other difficulties of introducing a stepparent, such as the weaker incest taboo and associated anxieties, and competition between the surviving parent and children of the same sex for the stepparent have been described (Langner and Michael, 1963; Fast and Cain, 1966).

However, these hazards, if handled appropriately, may outweigh the hazards that a lack of parent model would produce. Furman (1964) states that without a substitute for the dead parent, the child may develop an identification with the lost parent which would impede his future development. Other hazards of no parent substitute such as attachment to a fantasy object, idealization of the dead parent, substitution of things or activities for emotional gratification, and the fear of investing love in people have been enumerated (Grollman, 1967; and Keeler, 1954).

Prior experience with death-related events can also aid in the child's adaptation to parent loss. While at first this appears like a variable which is not subject to external control, there are many opportunities in the child's daily life that can be made use of in explaining death to children. The death of plants, insects, and small animals are events that the child comes in contact with frequently in his first few years of life. If the parent is sensitive to these first experiences with death, the child may come to understand death as a natural and common-place event, and be somewhat more prepared for a parent's death than the child who was never given an explanation for the many small losses around him. The death of a pet can be an "emotional dress rehearsal" and a preparation for the greater losses yet to come if the event is handled sensitively by the parent (Levinson, 1967; and Jensen and Wallace, 1967). Furman (1974) states that completed mourning has a beneficial effect on a person's ability to mourn subsequent losses. The previous loss gives the individual an opportunity to tolerate and verbalize affect, improve his reality testing, and learn to deal with ambivalence in the lost relationship;

in subsequent loss experiences, these aspects of mourning will be realized more easily.

In summary, the two major circumstances that will help the child to deal with the loss of a parent are the free expression of feelings and consistency or little change in his daily life. Both of these situations can and should be accomplished by the family as a supportive unit, strengthening the family's integration and sense of unity. Perhaps this is the most important ingredient in coping with childhood bereavement--the strength of the family itself.

Psychopathology and Bereaved Individuals

Anxiety

Anxiety has been known to have a high involvement in psychopathological disorders, being a common element found in a wide range of neuroses, character disorders, and schizophrenia. Conversely, it is negatively associated with mental health and good social and emotional adjustment. Cattell and Scheier (1963), in their development of an anxiety scale questionnaire, have delineated five factors which are related to covert and/or overt anxiety: defective integration, lack of ego strength, suspicion, guilt, and frustrative tension. These factors can be related to any traumatic event which remains unresolved, and specifically, to unresolved mourning. Furman (1974) has stated that mourning involves tolerating and verbalizing affect, testing reality, and dealing with ambivalence in the lost relationship. The first of these aspects, if not dealt with adequately, may lead to a lack of integration of these feelings into the personality structure and to higher intrapsychic tension. If reality testing is not fully

explored, the individual's ego strength may be weakened as he may tend to confuse fantasy with reality. Similarly, if ambivalent feelings are not recognized and expressed, the bereaved individual may experience undue guilt; suspicion may develop if the bereaved child later learns that what he had been told about the death was not true, or if he was given no explanations at all for the death and related events. Thus, bereaved individuals who have not resolved their grief may be predisposed to higher levels of anxiety, as defined by Cattell and Scheier, than the normal population. This has been indirectly suggested by the studies of the higher incidence of psychopathology in bereaved adults.

Depression

Depression is an affect, associated with traumatic events such as the death of a parent, which usually runs its course in the process of grief and mourning. However, depression may continue to exist in people who do not resolve their grief. The previous two sections have discussed the developmental hazards of mourning for young children who have lost a parent, and numerous studies have linked childhood bereavement with depression in adulthood (Brown, 1961; Dennehy, 1966; Beck et al., 1963; Hill and Price, 1967; and Birtchnell, 1970a). It seems likely, then, that bereaved children who do not fully mourn the loss of the dead parent are likely to remain somewhat depressed as adults.

Another theory of depression which has relevance for bereaved children has been suggested by Seligman (1973) and has been shown to have some empirical validity (Miller and Seligman, 1973). According to this theory, depression is a form of learned helplessness. The depressed individual feels powerless to change his environment because

he has experienced important events as being out of his control. This theory of depression may help to explain why bereaved children who have not resolved their grief tend to have a higher incidence of depression in adulthood. The young child, fairly helpless and dependent on his parents for security, may be overwhelmed by the death of a parent. If the child is not helped by the surviving parent and other adults to grieve, if the death is not explained to the child so that he can understand how and why it occurred, the child may experience himself in a world which is mysterious, frightening, and not in his control. If further changes attendant to the death occur, such as a move to a new neighborhood or the introduction of a new parent and these changes are not discussed and explained to the child, the child may further experience that adults have power and that he has none. The world may be experienced as whirling and changing around him, unaffected by his own feelings and behaviors. Without some feeling of mastery and control over these external events, the child may not only learn helplessness but may also be more vulnerable to depression as a behavioral manifestation of such helplessness. It is possible that these feelings may persist into adulthood, where the individual, when faced with traumatic events, withdraws and allows these events to impinge on his life without attempting to gain some control over them. Thus, depression may be related to childhood bereavement both because of incomplete mourning and because of learned helplessness in the face of a traumatic loss.

External Locus of Control

Rotter's (1966) theory of locus of control also has relevance to childhood bereavement. If the child has experienced the death of a parent as a situation over which he has no control behaviorally or emotionally, he may generalize this lack of control to other situations and develop a view of life which is based on determinism, a life which is controlled by external events. Thus, he may develop an external locus of control. Externalizers have been described as less able to deal constructively with frustration and thus more anxious, while internalizers are more confident in their ability to have an impact on their environment, even in frustrating situations (Rotter, 1966). Many studies using Rotter's I-E scale also suggest that there is a linear relationship between internal versus external control and adjustment, with externals being more likely to exhibit maladjustment (Shybut, 1968; Smith, Pryer, and Distefano, 1971; and Pryer and Steinke, 1973). Thus if bereaved individuals are more likely to exhibit psychological disturbances and if they have experienced the bereavement as out of their control, they may be more likely to exhibit an external locus of control as measured by Rotter's I-E scale.

Interpersonal Mistrust

Interpersonal trust can be defined as "an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon" (Rotter, 1967, p. 651). From this definition, it seems likely that interpersonal trust is first learned in the relationship between parent and child where the child, fairly dependent upon his parents, learns

through experience to believe or disbelieve what his parents say. Especially with regard to traumatic events, the child not only relies on his parents for support and for answers, but such events are likely to leave a deeper impression on the child with regard to his ability to trust his parents' verbal and nonverbal responses. It has been previously mentioned in the present paper that two elements are especially important with regard to the child's experience of the death of a parent: (1) that consistency in his day-to-day experiences be maintained; and (2) that explanations about the death be truthful and age-appropriate to the child. Should the surviving parent's responses to the child become inconsistent, unpredictable, and severely disrupted, or should the child be told falsehoods (even if well-intentioned) about the death, the child may experience the adults as untrustworthy. Implied in social learning theory as it relates to the development of interpersonal trust, the expectation of trust or of unreliability may be generalized to include adults other than the parent and situations other than those related to death. Based on the assumptions that adults tend to avoid the subject of death with their children (Becker and Margolin, 1967; and Harrison et al., 1967) and that major disruptions in the family occur attendant to the death of a parent, one would expect that children who have experienced this unreliable and frightening situation would be less likely to maintain or develop a high sense of interpersonal trust with regard to people and situations in general.

Death Anxiety

It has also been suggested that anxiety specifically related to death is subject to environmental influences and the impact of interpersonal relationships (Templer et al., 1971). In young children, the fear of death is associated with the fears of punishment and retaliation, separation, and abandonment (Moller, 1967). The death of a parent may increase death anxiety in the young child if he is not clearly told the reasons for the death, as he may fantasize that his own omnipotent wishes or his disobedience has caused the death. Kastenbaum and Aisenberg (1972) have delineated three components of death anxiety associated with an actual death. When a death occurs, the bereaved individual may feel that an unknown fear has become a reality, that he is trapped in that reality, and that life is not what it seems to be. These feelings of disassociation and unreality are probably due to the fact that most people deny that death can happen to them or their loved ones. In fact, Freud (1924) has asserted that the idea of one's own death is subjectively inconceivable, as a concept of death does not exist in the unconscious. The idea of the death of those close to the individual is similarly hard to conceive of and denied for the most part on the conscious level. If the bereaved individual's feelings of denial and unreality are not dealt with and resolved, the individual may continue to feel extremely anxious in situations associated with death. The likelihood of high death anxiety is thus increased for the bereaved child, who must depend on his parents for help in the grief process that is not often given (see section on issues complicating childhood bereavement).

Statement of the Problem and Hypotheses

In the foregoing presentation, several issues were discussed which have relevance for the present study. The major issue, mentioned repeatedly throughout the literature review, is the paucity of normative data on bereaved individuals. Only three studies have examined bereaved individuals from a general or non-psychiatric population. Munro (1965) was mainly concerned with the incidence of childhood parent-loss and did not study the prevalence of psychopathology in a non-clinical population. Hilgard et al. (1960), conducting interviews and administering a social desirability scale, drew some conclusions about the possible causes of psychopathology in bereaved individuals but failed to specify the age at the time of bereavement and did not make a comparative study of the incidence of psychopathology in non-bereaved individuals as well. To date, Langner and Michael (1963) have done the most complete study of bereaved individuals in the general population, employing a variety of psychological dimensions and assigning individuals a mental health index score. They found that early parent death and death of the mother in lower-class subjects were related to later poor mental health. However, the use of a mental health index may mask particular differences with regard to more specific psychopathological traits. In addition, no study since the Langner and Michael study has attempted to explore the effects of parent death in a non-psychiatric population.

The first goal of the present study, then, is to compare non-psychiatric groups of bereaved and non-bereaved individuals on a variety of psychological dimensions to ascertain if, indeed, the results of studies of psychiatric populations are indicative of a trend in the

general population as well. To answer this question, the following hypothesis will be tested:

Hypothesis I: In the general population, bereaved young adults will display a greater tendency towards psychopathological traits than young adults with no history of bereavement.

"Bereaved" in this study will be synonymous with the loss, through death, of a parent before the subject reached his seventeenth birthday. This definition of bereavement will be used because most of the psychiatric studies have been concerned with childhood bereavement, specifically by 16 years of age, and the consistency with other studies will make a comparison with other findings more feasible. "Psychopathology" will be confined to the traits of anxiety, depression, external locus of control, and low interpersonal trust, as these traits have been shown to have theoretical relevance for bereaved individuals.

A second issue which has been discussed is the significance of the sex of the parent who died for later psychological development. Numerous studies of psychiatric populations have shown that the loss of the mother appears more likely to have severe effects than the loss of the father. While several studies have shown evidence of detrimental effects of father loss, other studies have shown no differences between father-bereaved and normal adults. This same inconsistency has also been demonstrated in studies of mother loss, but the extent of discrepant results is less than that for father loss. Thus it appears that while father loss may produce subsequent psychopathology, there is a greater likelihood of later psychological problems if the mother has died. The theoretical literature, with its stress on the importance of the maternal figure in childhood development, would also support

this assumption. A test of the following hypothesis would support or discount the importance of maternal loss through death:

Hypothesis IIa: Bereaved adults who lost a mother will display a greater tendency towards psychopathological traits than bereaved adults who lost a father.

Because the literature has also suggested that parental loss is more significant for females, a corrolary hypothesis will be tested:

Hypothesis IIb: Bereavement will have a greater influence on psychopathological traits among women than among men.

Age at the time of bereavement has also been shown to be a significant factor in the incidence and severity of later adult psychopathology. Specifically, the younger the child at the time of bereavement, the more likely the development of later psychological problems. Both the empirical and theoretical literature point to 9 years of age as the critical time after which bereavement is more easily handled and resolved. However, a study which compares adults bereaved from birth through 9 years of age and those bereaved after 9 years of age has not been done with samples from the general population. The present study will examine this critical age hypothesis:

Hypothesis III: Bereaved adults who lost a parent between the ages of 0 through 9 years will display a greater tendency towards psychopathological traits than those who were bereaved from 10 through 16 years of age.

The interaction of age of the child and sex of the parent has been explored in several studies, but the results have been inconclusive at best. However, there appears to be a trend towards a greater significance of early maternal bereavement than of later maternal or early and late paternal bereavement. Archibald et al. (1962) conducted the only study which directly examined the interaction

of age of the child and sex of the parent as related to later psychopathology. There were no significant differences between early and later maternal and paternal bereavement in their study; unfortunately, they used 6 years of age as the critical age variable, and their results may be confounded by the possible significance of bereavement between the ages of 6 and 9 years as well as for younger children. The present study will examine the interaction of the effect of early and late bereavement with maternal and paternal loss, using 9 years as the critical age of bereavement after which psychopathology is less likely to occur. Sex of the child will also be included as a possible significant variable, based on previous empirical and theoretical considerations.

Hypothesis IV: There will be differential effects in psychopathological tendencies as a function of the interaction between age of bereavement, sex of parent, and sex of child.

Many of the psychiatric studies of bereaved adults suggest that it may not be the death of the parent per se, but how the bereavement was handled, that is the significant factor in later psychopathology. Obviously, not all people who had a parent die while they were growing up seek or need later psychotherapy. It may be that there are significant historical differences between non-psychiatric bereaved adults and bereaved psychiatric patients. Many suggestions have been given for what the differentiating factors may be: open discussion of the feelings surrounding the death, surrogates for the deceased parent, a stable monetary situation, religious affiliation and participation, etc. A questionnaire was devised to tap several areas of possible differentiating factors relating to level of psychopathology in bereaved

individuals. This instrument is described in Chapter II. The following hypothesis will be tested using responses to this questionnaire:

Hypothesis V: Bereaved adults who exhibit a greater tendency toward psychopathological traits will have suffered more additional losses and changes attendant to the death of a parent than those bereaved individuals who exhibit low psychopathology.

Exploratory Question:

While Hypothesis V may or may not be valid, it is possible that certain losses or events related to parent death may be more significant than others in increasing the likelihood of subsequent psychopathology. A question which this study will attempt to answer is: What are the significant factors that increase the trauma of parent death and differentiate between later psychopathology and normal development? This question will be explored using the questionnaire mentioned above.

Finally, some studies have suggested that death need not be an event leading to the disruption of growth, but that it may, in fact, enhance individual growth if the experience is adequately resolved. Such a resolution would strengthen the individual's coping mechanisms and make him more able to adapt to future death experiences. Theoretically, then, a psychologically normal bereaved population would be less anxious when faced with death or death-related concerns than a healthy non-bereaved population that had never fully exercised the coping mechanisms related to facing a parent death. While a study by Durlack (1973) failed to show a difference between bereaved and non-bereaved college students with regard to the fear of death, he did not control for resolved versus non-resolved loss, and it may be that this lack of

significant differences between the bereaved and non-bereaved subjects is due to a leveling effect within the bereaved group between extremely high and extremely low death anxiety individuals. The idea that resolved loss may minimize death anxiety has never been fully explored:

Hypothesis VIa: Bereaved individuals who exhibit low psychopathological tendencies will have less death anxiety than a similar group of non-bereaved individuals.

Similarly, a bereaved population that had not resolved the parent death would be sensitized to death and might exhibit more than the average death anxiety because of the lack of resolution of the trauma. However, if massive denial and repression were used to defend against the trauma, some of these individuals might report less death anxiety than the normal population. Thus a high psychopathology bereaved group would probably exhibit either extremely high or extremely low death anxiety when compared to the general population:

Hypothesis VIb: Bereaved individuals who exhibit high psychopathological tendencies will have a higher or lower death anxiety than a similar group of non-bereaved individuals; the distribution of the former individuals with regard to death anxiety will be bi-modal.

CHAPTER II

METHODOLOGY

Instruments

A personal data sheet was devised to collect developmental information relevant to the study. Several questions asked about parent death and the age of the subject when the death occurred, so that bereaved subjects could be identified. Questions unrelated to the present study were also included so that the purpose of the study was initially not readily identifiable by the subjects. (See Appendix A for a copy of the data sheet).

Psychopathology Indices

Four tests were selected to measure the following psychological traits: anxiety, depression, external locus of control, and lack of interpersonal trust. These traits have been shown to have theoretical relevance to bereaved individuals.

Anxiety has been found to have a high involvement in psychopathology and is a common element found in a wide range of neuroses, character disorders, and schizophrenia. The IPAT Anxiety Scale Questionnaire was chosen to measure anxiety in the present study because it is a brief, valid, and nonstressful test suitable for use with college populations and has a high reliability ($r = .87$).

Normative scores for college students are also available (Cattell and Scheier, 1963). This questionnaire measures free-floating anxiety, a quality not found in mentally healthy and well-adjusted individuals. Five factors of the total anxiety score have been delineated which appear relevant to bereaved individuals: defective integration, lack of ego strength, suspiciousness, guilt, and frustration. (A copy of this questionnaire is available to professionals through the Illinois Institute for Personality and Ability Testing.)

The Beck Depression Inventory was used in the present study because it has been shown to differentiate between high and low depressed psychiatric patients, has been significantly correlated with clinical ratings of depression (Beck et al., 1961), and has a high degree of reliability ($r = .86$). While this inventory has been used mainly with psychiatric patients and is not as widely known in research on nonpsychiatric individuals, it correlated highly with the Depression Adjective Checklist (Lubin, 1967), a more well-known and used test, but one not as easily available for use with large populations. The Beck Depression Inventory consists of 21 items with four to five alternatives on each item from which the subject chooses the one most indicative of his feelings. The item choices are coded along a continuum from no depression to high depression. High depressed and low depressed scores have been delineated by Beck et al. (1963) in a clinical study, giving some indication of the upper and lower extreme scores one can anticipate with this inventory. (See Beck et al., 1961 for a copy of the Depression Inventory.)

Rotter et al.'s (1962) Internal-External Control scale was chosen to measure external locus of control in both bereaved and non-bereaved subjects. This scale has been widely used with psychiatric and normal populations, and normative expectancies have been established. Rotter (1966) reports test-retest reliabilities ranging from .49 to .83, depending upon the time interval and the sample involved. External locus of control has been associated with general emotional and social maladjustment and appears to have theoretical relevance for bereaved subjects. The Rotter I-E scale is a short and simple test consisting of paired attitudinal statements that the subjects are asked to choose between. Each pair of statements, except for several filler items, contains one statement of external and one statement of internal locus of control.

Rotter's scale of interpersonal trust was chosen to measure trust, or the lack of it, in bereaved and non-bereaved subjects. This scale was developed in a student population and has been shown to have satisfactory reliability ($r = .76$) and validity (Rotter, 1967). The trust scale consists of 40 statements to which the subject responds on an agree-disagree continuum of one to five. Because trust is an important variable in the development of adequate social and interpersonal relationships, this scale is included as a measure of psychopathology, a low score being indicative of low interpersonal trust and a tendency towards maladjustment.

Death Questionnnaire

A questionnaire was devised as an objective measure of significant experiences related to the death of a parent which might

influence the incidence and/or degree of later psychopathology. Five subject areas were included in the questionnaire, with statements which appeared relevant to each area. The five subject areas were: (1) prior experience with death (items 1-5), (2) trauma at the time of death (items 6-8), (3) how the death was handled by the family in relation to the child (items 9-13), (4) other losses or changes in the subjects' lives as a function of the death (items 14-19), and (5) indicators of acceptance/resolution of the parent's death (items 20-22 and item 24). These areas were chosen based on the literature which points to the importance of prior experience, anticipatory grieving, free expression of feelings, and family stability as significant variables in minimizing the amount of trauma and conflict associated with the death of a parent. Subjects rated most of the items on a one to five scale from strongly agree (or true) to strongly disagree (or false); this range of responses offered more variability to the subjects' scores. Several questions relating to affective concerns, although scored on a one to five continuum, listed a range of feeling from positive to negative rather than a choice of true to false. Four items not included in the five subject areas tapped subjects' concepts of death and three questions were factual questions about information relevant to the study. (The death questionnaire, with the direction of scoring of each item, is given in Appendix B.)

Death Anxiety Scale

A death anxiety scale devised by Templer (1970) was chosen to explore the level of death anxiety of bereaved and nonbereaved subjects. It consists of 15 death-related statements to which the subject

responds true or false. This scale has been shown to be both a valid and reliable (r = .83) measure of personal death anxiety, and was used to test the assumption that bereaved individuals' reactions to death will differ from those of nonbereaved individuals, and that resolution of a death experience will minimize death anxiety. (See Templer, 1970 for a copy of the scale.)

Subjects

Subjects were contacted through undergraduate psychology classes at Michigan State University. It was announced to each class that the present author wished to conduct a study related to developmental experiences and their effects on personality, attitudes, and feelings. No mention was made as to the exact topic of the research, namely parent death, so that subjects who were particularly anxious about death would not initially exclude themselves. Subjects were told that some of them would be recontacted at a later date for further testing. Of course, students were free to decline participation in the study.

At the time of the announcement, all subjects were given the personal data sheet. Because it was relatively easy to fill out, most of the students were willing to participate in this part of the study, and thus a fairly unbiased student sample of psychology classes was obtained. A total of 1630 students filled out the personal data sheet. Of this number, 83 or 5.1% had experienced the death of a parent by 16 years of age, 97 or 6% had experienced parent separation or divorce by 16 years of age, and 59 or 3% had experienced parent death or divorce after 16 years of age. Eighty-five percent of the students were from intact families. These figures closely resemble those of national census studies, if one assumes that siblings were not enrolled

in the same college classes, a fairly safe assumption based on the limited age-range of the subjects. It was concluded that the sample was thus fairly representative of the general population, except for age and sex. Most of the students were freshmen or sophomores 18 years of age, although the age range was from 17 to 35 with a mean age of 19.2 years (students older than 23 years of age were excluded from the study because they were atypical of an undergraduate student population). The female/male sex ratio was 1.65:1; this is fairly typical of the enrollment in undergraduate psychology classes.

It was decided to include subjects from divorced families so that a comparative study of family disruption could be made. By including this group, it could be determined whether any loss of a parent led to psychopathology or whether there were differential effects of parent loss depending upon how the loss occurred, by divorce or by death. It was also decided to exclude students with a history of parent loss after 16 years of age for two reason: (1) based on the literature, parent loss in "childhood" has more detrimental effects than later losses, and (2) the inclusion of these students in the parent loss groups might confuse ongoing mourning processes with the longer-term developmental effects to be studied.

In order to have fairly equal cell sizes of subject groups, eighty controls were randomly selected from each psychology class in a similar proportion to the representation of the divorce and death groups, so that they would be as similar to the bereaved groups as possible with regard to age, sex, class enrollment, and knowledge of psychology. Of the eighty controls, 52 were females and 28 were males.

Subjects were recontacted by phone and asked if they would participate further. Again, they were not told the nature of the study, so that bereaved subjects with high death anxiety or unresolved conflicts would not be any more likely to exclude themselves from the study than other subjects. Envelopes containing the following materials were delivered to students' dormitories or apartments with instructions to return these materials through the campus mail system: the IPAT Anxiety Scale Questionnaire, the Depression Inventory, Rotter's I-E scale, the Interpersonal Trust Test, Templer's Death Anxiety Scale, an IBM sheet, and a scoring pencil. Several subjects could not be reached, several subjects never returned the materials, and several subjects left more than ten percent of the items blank and were thus deleted from the study as unusable. The actual subject sample is listed in Table 1.

Table 1.--The Subject Sample.

Subject Group	N	N Lost/Deleted
Intact Family	77	3
Death of Father	49	5
Death of Mother	18	1
Parents Divorced	81	6
Multiloss Family	13	2

The category "multiloss family" refers to subjects who experienced either the death of both parents (3 subjects), more than one divorce (3 subjects), or both divorce and the death of a parent (7 subjects). These subjects were omitted from the death and/or divorce groups

because it was felt that the experience of more than one major family disruption would increase the possibility of later psychopathology and that these subjects' experiences were sufficiently different from single loss subjects to warrant forming a fourth subject category. The ratio of father to mother death (approximately 2.3:1) paralleled that of census figures, providing further evidence that the subject sample was representative of the general population.

Subjects in the parent death group were contacted again after they had returned their test battery. At that time they were told that the study was exploring the effects of parent death in childhood. The death questionnaire was described in general terms and they were asked if they would fill out this form. All of the subjects contacted agreed, although some subjects later could not be reached because they they had moved or left school. A total of 58 subjects (of the original 67) completed and returned the death questionnaire. During this same phone call, subjects were asked if they would be interested in participating in an hour-long interview in which a more complete history of their family life and the death experience could be explored. Again, most of the subjects were willing, and several appeared eager to participate. A few subjects were somewhat hesitant about the interview and were told that they could decide after filling out the death questionnaire, which was an example of the issues that would be explored in the interview. Throughout the study, subjects were never pressured to participate, as the material was of a very sensitive and personal nature and the privacy of the subjects was respected. To preserve confidentiality, all subjects were assigned a code number which indicated what group (intact, father death, mother death, divorce,

multiloss) they belonged to, and were not otherwise identified in further analyses or records of responses. Subjects from all of the four groups were told they could contact the present author if they wished to learn about the study's goals, rationale, or findings.

CHAPTER III

RESULTS

Total scores for each of the following tests were computed for all subjects: anxiety, depression, locus of control, interpersonal trust, and death anxiety. All the test were scored so that the higher the numerical score, the higher the level of psychopathology as measured by each test. Missing data were identified for each test and the subjects' total score was then prorated to account for omitted items. Subjects who omitted more than 10 percent of the items were deleted from the study so that test totals would be fairly representative of the index being measured.

Instruments

The scale characteristics of the four psychopathology indices and the death anxiety scale are presented in Appendix C. Cronbach's coefficient alpha, a measure of internal consistency, is the index of reliability. The anxiety and depression scales had the highest reliabilities ($r = .81$), followed by the trust scale ($r = .67$), the locus of control scale ($r = .63$), and the death anxiety scale ($r = .53$). The lower reliability of the death anxiety scale may be a function of the fact that this measure contains the fewest items and was originally designed for use with psychiatric populations. Based

on the high positive skew of the depression scale (skew of 1.19), it appears that college students are, on the whole, not likely to be depressed. However, the depression scale was also designed using psychiatric populations, and thus this positive skew is not surprising for a college population.

Pearson product-moment correlation coefficients were computed among the four psychopathology indices and the DA scale (Table 2). While the intercorrelations are all highly significant and it could be argued that all the tests represent a single dimension such as psychopathology, it could also be argued that each test measures somewhat different aspects of psychopathology, since none of the correlation coefficients approached 1.00. The measures of anxiety and depression were combined and treated as one scale (A/D), and the measures of locus of control and trust were combined in a second domain (LC/T) in order to test the later hypotheses. There were two reasons for this decision: (1) the two highest correlations are between anxiety and depression (.62) and locus of control and trust (.49), and (2) the content of anxiety and depression items appear to reflect internal affective states while the locus of control and trust items appear to be related to interpersonal (as opposed to intrapersonal) functioning. Thus the rationale for creating the measures A/D and LC/T was both empirical and subjective/theoretical. Scores on the four measures were converted to Z-scores so that each of the measures would be weighted equally when combined. The correlation coefficient between the two combined scales (A/D and LC/T) was .47.

The death questionnaire items were inspected for apriori clusters; a cluster analysis was performed based on the standard score

Table 2.--Intercorrelations of the Test Measures* (Based on an N of 238).

	Anxiety	Depression	Locus of Control	Trust	Death Anxiety
Anxiety	1.00				
Depression	.62	1.00			
Locus of Control	.36	.41	1.00		
Trust	.37	.29	.49	1.00	
Death anxiety	.46	.32	.38	.38	1.00

*Pearson R = .21 for the first correlation, df = 237, $p<.001$.

alpha coefficients for each of the five subject areas: (1) prior experience with death, (2) the immediate trauma of the parent's death, (3) how the death was handled, (4) concomitant losses/changes of death, and (5) indicators of acceptance of the death (Table 3).

Table 3.--Alpha Coefficients of DQ Clusters.

Subject Area	Coefficient
Prior experience	.48
Immediate death trauma	.50
How the death was handled	.37
Concomitant losses	.02
Indicators of acceptance	.37

Because of the low internal consistency of these subject areas (low alphas and inconsistent inter-item correlations within each cluster), a factor analysis of the DQ items was performed to find possible subject areas with higher reliabilities and internal consistencies.

These factors, however, also yielded poor alpha coefficients and lacked internal consistency, and in addition, the items of the new factors did not relate logically (i.e., it was difficult to see the commonality of subject matter within each cluster). It appeared that the items of the DQ were, for the most part, tapping fairly different or unrelated areas, as most of the inter-item correlations were less than .30 and ranged around a correlation of zero. In fact, only four inter-item correlations were greater than .40, and none was greater than .49. In light of the poor reliabilities of the clusters and the low correlations between items, it was decided to treat each of the DQ items separately when exploring the question of death-related losses relating to subsequent psychopathological tendencies.

The Hypotheses

Test of Hypothesis I

Stated in the form of the null hypothesis, it was predicted that there are no differences between intact and bereaved groups with regard to psychopathological traits. The means and standard deviations of scores for each subject group on each of the psychopathology measures are shown in Table 4. Four one-way ANOVAs were computed to test the null hypothesis (comparing subject groups on anxiety, depression, locus of control, and trust). The groups consisted respectively of subjects from (1) intact families, (2) single parent death families, (3) divorced families, and (4) multiple loss families. The results of the one-way ANOVA for each variable (shown in Table 5) indicate that there were no significant differences in psychopathology (at the .05 level) between any of the groups. Although depression tended to differentiate

Table 4.--Means and Standard Deviations of Psychopathology Measures by Subject Group.

Group	N	Mean	Standard Deviation
	Table 4.1. Anxiety		
Intact	77	32.97	10.35
Single Parent Death	67	33.62	9.90
Divorce	81	33.50	11.20
Multiloss	13	37.54	10.98
Total	238	33.58	
	Table 4.2. Depression		
Intact	77	6.60	5.46
Single Parent Death	67	6.39	5.31
Divorce	81	6.56	6.23
Multiloss	13	10.92	8.56
Total	238	6.76	
	Table 4.3. Locus of Control		
Intact	77	11.30	3.95
Single Parent Death	67	11.06	4.78
Divorce	81	10.76	4.15
Multiloss	13	13.11	4.98
Total	238	11.15	
	Table 4.4. Trust		
Intact	77	55.61	8.78
Single Parent Death	67	53.93	8.33
Divorce	81	55.24	8.95
Multiloss	13	52.62	8.68
Total	238	54.85	

Table 5.--Analyses of Variance among Subject Groups for Each Psychopathology Measure.

Source	df	Sum of Squares	Mean Squares	Eta^2	F ratio	F Prob
			Table 5.1. Anxiety			
Between groups	3	232.77	77.59	.009	< 1.0	.56
Within groups	234	26095.40	111.52			
Total	237	26328.17				
			Table 5.2. Depression			
Between groups	3	239.69	79.90	.028	2.31	.08
Within groups	234	8109.85	34.66			
Total	237	8349.53				
			Table 5.3. Locus of Control			
Between groups	3	64.69	21.48	.012	1.15	.33
Within groups	234	4365.90	18.66			
Total	237	4430.35				
			Table 5.4. Trust			
Between groups	3	178.05	59.35	.009	< 1.0	.51
Within groups	234	17751.51	75.86			
Total	237	17929.55				

between groups more than the other measures, the differences among groups were not significant ($p > .05$), accounting for only 3% of the variance ($eta^2 = .028$). In fact, the mean scores of the four groups were nearly identical on all measures, although the multiloss group did tend to score slightly higher on the measures of anxiety, depression, and external locus of control. Because the number of multiloss subjects was much smaller than that of the other groups, it is impossible to make any definitive conclusions about this group in relation to the other groups.

Thus the null hypothesis cannot be rejected; the groups did not differ with regard to psychopathology indices.

Test of Hypothesis IIa

Stated in the null form, there are no differences between adults whose mothers died and those whose fathers died with regard to psychopathological traits. Four one-way ANOVAs were computed to test the effect of sex of deceased parent on anxiety, depression, locus of control, and trust. No significant differences were found for mean scores of father versus mother bereaved subjects witb regard to any of the four measures of psychopathology (see Tables 6 and 7). Even though the size of the mother death sample was much smaller than that of the father death sample, the high probabilities make it doubtful that significant differences would emerge even if the mother death group were larger.

The null hypothesis cannot be rejected as no significant differences in psychopathology were found as a function of which parent died.

Table 6.--Means and Standard Deviations of Psychopathology Measures for Father and Mother Bereaved Subjects.

Group	N	Mean	Standard Deviation
	Table 6.1. Anxiety		
Father Death	49	33.25	9.35
Mother Death	18	34.61	11.51
Total	67	33.61	
	Table 6.2. Depression		
Father Death	49	5.98	5.32
Mother Death	18	7.50	5.26
Total	67	6.39	
	Table 6.3. Locus of Control		
Father Death	49	10.95	4.53
Mother Death	18	11.37	5.53
Total	67	11.06	
	Table 6.4. Trust		
Father Death	49	54.41	8.31
Mother Death	18	52.62	8.48
Total	67	53.93	

Table 7.--Analysis of Variance: Effect of Sex of Deceased Parent on Each Psychopathology Measure.

Source	df	Sum of Squares	Mean Squares	Eta^2	F ratio	F Prob
		Table 7.1. Anxiety				
Between groups	1	24.57	24.57	.004	< 1.0	.62
Within groups	65	6449.34	99.22			
Total	66	6473.91				
		Table 7.2. Depression				
Between groups	1	30.27	30.27	.019	1.07	.30
Within groups	65	1832.49	28.19			
Total	66	1862.75				
		Table 7.3. Locus of Control				
Between groups	1	2.27	2.27	.002	< 1.0	.76
Within groups	65	1504.78	23.15			
Total	66	1507.06				
		Table 7.4. Trust				
Between groups	1	42.54	42.54	.010	< 1.0	.44
Within groups	65	4540.80	69.86			
Total	66	4583.34				

Test of Hypothesis IIb

In the null form, no greater differences were predicted between bereaved and nonbereaved females than bereaved and nonbereaved males with regard to psychopathological tendencies. Because of possible sex differences with regard to scores on the psychopathology indices, two-way ANOVAs, which tested for main effects of sex and of intact/bereaved groups as well as for the interaction effects of sex and bereavement, were performed. On all but the locus of control index, there were no significant main effects and no significant interactions (Table 8). On the locus of control measure, however, there was a significant main effect for sex ($p<.05$, $df = 1.1$). Mean scores for males deviated in a negative direction (-1.03) from the overall mean for locus of control while mean scores for females deviated in a positive direction (.62). Thus, men report being more internally controlled than women at the .03 level of significance. However, the interaction of sex with bereavement yielded no significant findings ($p>.05$) with regard to locus of control, so it can be concluded that parent loss does not have a significant differential effect on males and females. With respect to the interaction of sex and bereavement, the null hypothesis cannot be rejected.

However, although the ANOVAs reveal no significant findings, there does appear to be an interesting trend in the interaction of sex and bereavement. Table 9 shows the mean scores of males and females from bereaved and nonbereaved groups. From the table, it appears that bereavement tends to increase psychopathological tendencies in men, while decreasing these tendencies in women. The lack of significance

Table 8.--Analysis of Variance of Sex x Bereavement for Each Psychopathology Measure.

Source	df	Sum of Squares	Mean Squares	Eta^2	F ratio	F Prob
		Table 8.1. Anxiety				
Sex	1	150.66	150.66	.011	1.46	.23
Bereavement	1	13.54	13.54	.001	< 1.0	
Sex x Bereavement	1	42.12	42.12	.003	< 1.0	
Residual	139	14389.75	103.52			
Total	142	14594.30	102.78			
		Table 8.2. Depression				
Sex	1	13.277	13.77	.004	< 1.0	.99
Bereavement	1	2.94	2.94	.001	< 1.0	.99
Sex x Bereavement	1	52.75	52.75	.002	1.83	.18
Residual	139	4016.21	28.89			
Total	142	4085.94	28.77			
		Table 8.3. Locus of Control				
Sex	1	90.61	90.61	.032	4.90	.03
Bereavement	1	2.15	2.15	.001	< 1.0	.99
Sex x Bereavement	1	18.66	18.66	.005	1.01	.32
Residual	139	2571.82	18.50			
Total	142	2683.83	18.90			
		Table 8.4. Trust				
Sex	1	.001	.001	.00	< 1.0	.99
Bereavement	1	100.85	100.85	.01	1.37	.24
Sex x Bereavement	1	176.98	176.98	.00	2.40	.12
Residual	139	10267.28	73.87			
Total	142	10545.13	74.26			

Table 9.--Means and Standard Deviations of Psychopathology Measures for Bereaved and Nonbereaved Males and Females.

Group	N	Mean	Standard Deviation
Table 9.1. Anxiety			
Nonbereaved Males	28	31.03	8.24
Nonbereaved Females	48	34.21	11.39
Bereaved Males	26	33.04	10.00
Bereaved Females	41	33.98	9.95
Table 9.2. Depression			
Nonbereaved Males	28	5.54	4.21
Nonbereaved Females	48	7.36	5.98
Bereaved Males	26	6.81	5.46
Bereaved Females	41	6.13	5.27
Table 9.3. Locus of Control			
Nonbereaved Males	28	9.86	3.79
Nonbereaved Females	48	12.21	3.83
Bereaved Males	26	10.54	5.49
Bereaved Females	41	11.40	4.31
Table 9.4. Trust			
Nonbereaved Males	28	54.24	7.83
Nonbereaved Females	48	56.41	9.37
Bereaved Males	26	55.42	7.98
Bereaved Females	41	52.99	8.51

of these tendencies may be either due to nonsignificant trends or to the fairly small sample sizes of the sex x bereavement groups.

Test of Hypothesis III

Stated in the null form, no differences are predicted in psychopathological traits between subjects who lost a parent before 10 years of age and those who were bereaved later. One-way ANOVAs were performed to examine the effect of age of bereavement on the four psychopathology indices. At the .05 level, the F ratio was not significant for any of the four tests (df = 1.65; Table 10). Thus, no test of significance of mean differences is warranted; means for early and late bereaved subjects are almost identical (Table 11). The null hypothesis cannot be rejected.

Hypothesis IV

Because of the small sample size, the interaction of sex of the dead parent, sex of subject, and age of the subject at the time of the death could not be tested statistically. However, means and standard deviations were calculated for these subject cells. Descriptive results and interesting trends will be discussed in Chapter IV.

Test of Hypothesis V

Stated in the null form, there are no differences between high and low psychopathology bereaved subjects with regard to additional losses attendant to the death of a parent. Two T-tests were calculated to test this hypothesis, one using A/D as the independent variable and one using LC/T as the independent variable. Bereaved subjects were divided into high and low psychopathology groups, based on the medians

Table 10.--Analysis of Variance of Early and Late Parent Death for Each Psychopathology Measure.

Source	df	Sum of Squares	Mean Squares	Eta^2	F ratio	F Prob
			Table 10.1. Anxiety			
Between groups	1	6.73	6.73	.001	< 1.0	.80
Within groups	65	6467.18	99.50			
Total	66	6473.91				
			Table 10.2. Depression			
Between groups	1	23.00	23.00	.12	< 1.0	.37
Within groups	65	1839.75	28.30			
Total	66	1862.75				
			Table 10.3. Locus of Control			
Between groups	1	11.22	11.22	.007	< 1.0	.49
Within groups	65	1495.84	23.01			
Total	66	1507.06				
			Table 10.4. Trust			
Between groups	1	34.93	34.93	.008	< 1.0	.48
Within groups	65	4548.41	69.98			
Total	66	4583.34				

Table 11.--Means and Standard Deviations of Psychopathology Measures for Early and Late Bereaved Subjects.

Group	N	Mean	Standard Deviation
Table 11.1. Anxiety			
Early Parent Death	21	33.14	9.70
Late Parent Death	46	33.83	10.10
Total	67	33.61	
Table 11.2. Depression			
Early Parent Death	21	5.52	4.37
Late Parent Death	46	6.79	5.69
Total	67	6.39	
Table 11.3. Locus of Control			
Early Parent Death	21	10.46	5.10
Late Parent Death	46	11.34	4.66
Total	67	11.06	
Table 11.4. Trust			
Early Parent Death	21	55.00	7.88
Late Parent Death	46	53.44	8.57
Total	67	53.93	

of A/D and LC/T. Loss scores were based on the sum of scores on the death questionnaire items which related to prior experience with death, the trauma of the parent's death, how the death was handled, losses/ changes concomitant to the death, and level of acceptance of the death (items 1-22 and item 24). The DQ score was the dependent variable in the T-tests. The results are shown in Table 12. There were no significant differences between the high and low psychopathology bereaved subjects (as defined by either of the two combined scores--A/D and LC/T) with regard to losses as measured by the death questionnaire. Based on these findings, the null hypothesis cannot be rejected.

Table 12.--Comparisons between High and Low Psychopathology Groups in Mean Losses as Measured by DQ.

Group*	N	Mean	Standard Deviation	T Value	df	2-Tail Prob
			Table 12.1. A/D			
1	26	35.69	9.66	-1.07	56	.29
2	32	38.38	9.38			
			Table 12.2. LC/T			
1	32	36.25	9.57	- .82	56	.42
2	26	38.30	9.53			

*Groups: 1 = low psychopathology bereaved subjects
2 = high psychopathology bereaved subjects

Exploratory question:

What are the significant factors that modify the trauma of parent death and differentiate between later psychopathology and normal development? In order to investigate this question, multiple regression analyses were performed using the psychopathology indices A/D and LC/T as dependent variables and the 23 Death Questionnaire items as

independent variables. In these analyses, the independent variables were weighted to produce the equations best predictive of psychopathology. From these equations, the most salient combination of death-related experiences with regard to later psychopathology could be identified.

The first step in the multiple regression analysis was to compute a correlation matrix of the DQ items, A/D, and LC/T (see Appendix D). The DQ items most highly correlated with A/D were items 21 ($r = -.41$), 14 ($r = -.36$), 17 ($r = .33$), and 7 ($r = -.32$); these items related to lack of growth from the death experience, financial difficulties, poor relationship with the surviving parent, and trauma of the parent's death respectively. The DQ items most highly correlated with LC/T were items 9 ($r = .36$) and 22 ($r = -.29$); these items related to not understanding how and why the parent died and feeling positively about the dead parent respectively. Given the reliabilities of these items, these are relatively strong correlations. Most of the correlations between the DQ items and the psychopathology indices ranged between $\pm$ .20 with many items having virtually no correlation with A/D or LC/T.

Two stepwise multiple regression equations were constructed, one predicting A/D and one predicting LC/T (Table 13). In the stepwise regression procedure, only variables which were predictive of the dependent variable at the .05 alpha level were entered into the equation. In the equation fro A/D, DQ item 21 accounts for the greatest amount of variance (beta = -.366, p = .003). In conjunction with DQ item 21, DQ item 16 accounts for the next greatest amount of variance in A/D (beta = .264, p = .031). While the R square is not very high

Table 13.--Stepwise Multiple Regression Equations Predicting A/D and LC/T from DQ Items.

Item	Cumulative R^2	R^2 Change	Simple R	Beta	Signif. of Beta	Cumulative Significance
			Table 13.1. A/D			
21	.170	.170	-.412	-.366	.003	.001
17	.238	.078	.329	.264	.031	.001
			Table 13.2. LC/T			
9	.130	.130	.360	.346	.006	.005
22	.206	.077	-.295	-.277	.025	.002

(only 24% of the variance is accounted for), the relative combined impact of DQ items 21 and 17 is significant, and for these data, is the best predictor of A/D. In relation to anxiety and depression, then, bereaved subjects who feel that their parent's death has had a negative effect on their lives (DQ item 21) and who report being more distant or alienated from their surviving parent (DQ item 17) are more likely to be anxious and/or depressed as adults. In the equation for LC/T, DQ item 9 accounts for the greatest variance (beta = .346, p = .006). In conjunction with DQ item 9, DQ item 22 accounts for the next greatest amount of variance in LC/T (beta = -.277, p = .025). The relative combined impact of DQ items 9 and 22 accounts for 20% of the variance in LC/T and is the best predictor of LC/T. Thus, bereaved subjects who report that as children they did not understand how and why their parent died and that they felt positive about their deceased parent are more likely to have an external locus of control and be mistrustful in interpersonal relationships.

In addition to these regression equations, two multiple regressions were performed using the backward elimination procedure. In a backward multiple regression, all of the independent variables are entered in the equation, and then variables are singly removed until only those variables with significant contributions remain. It was decided to calculate backward multiple regressions in addition to stepwise regressions because the weighting and thus the significance of each item shifts as a function of the items already in the equation. It was likely that performing backward multiple regressions would produce a somewhat different set of variables that would also be predictive of psychopathology.

The backward multiple regression for A/D yielded four totally different predictors from the stepwise regression (Table 14). Draper and Smith (1966) note that this is not surprising due to the differing nature of the selection procedure for the two methods; the beta weights of the variables in the backward equation change as items are deleted, while the beta weights in the stepwise equation change as variables are added. DQ items 1, 5, 14, and 7 all affected changes in the standard deviation of A/D. Thus, reports of not talking openly about death (DQ item 1), not thinking about death (DQ item 5), financial difficulties following the parent's death (DQ item 14), and feeling that one would not survive the parent's death (DQ item 7) all relate to later anxiety and/or depression in bereaved subjects. In fact, the combination of these four variables account for a greater amount of variance (.315) in A/D than DQ items 21 and 17 (.238). The backward regression for LC/T yielded the same DQ items as the stepwise regression (DQ items 22 and 9).

Table 14.--Backward Multiple Regression Equations Predicting A/D and LC/T from DQ Items.

Item	Simple R	Beta	Significance of Beta	Cumulative Significance
		Table 14.1. A/D*		
1	-.211	-.293	.014	.000
5	.171	.221	.050	.000
14	-.360	-.319	.008	.000
7	-.323	-.310	.011	.000
		Table 14.2. LC/T**		
22	-.295	-.277	.025	.002
9	.360	.346	.006	.002

*Cumulative R Square = .315

**Cumulative R Square = .206

The significance of these findings will be discussed in Chapter IV.

Test of Hypothesis VIa

Stated in the null form, there are no differences between bereaved and nonbereaved individuals who exhibit low psychopathological tendencies with regard to death anxiety. Stated another way, the variables of bereavement, psychopathology, and their interaction may be important determinants of levels of death anxiety. To test the significance of these variables in relation to death anxiety, a series of multiple regression equations was computed to explore the percent of variance in death anxiety attributable to the following input variables: (1) the subject group (SG), divided into intact family subjects and single parent death subjects, (2) the psychopathology

indices (A/D and LC/T), and (3) the interaction variables, subject group X A/D (SGA/D) and subject group X LC/T (SGLC/T).

Multiple regression equations were run with all possible ordering of the three input variables. The findings can be most clearly described by presenting the two most salient orderings: SG, A/D and LC/T, SGA/D and SGLC/T; and SG, SGA/D and SGLC/T, A/D and LC/T (Table 15). In all the regression equations, the subject group had virtually no input into the significance of the equations; thus knowledge of whether the subject was from an intact or single parent death family was not at all predictive of death anxiety. It appears from Chart I of the table that the interaction of SG with psychopathology contributes significantly to the prediction of death anxiety. SGA/D accounts for .148 of the variance of DA, and SGLC/T accounts for .034 of the variance of DA. After these interactions are entered in the equation, the simple psychopathology indices, A/D and LC/T also contribute significantly to the prediction of DA, accounting for .155 and .036 of the variance respectively. If one looks only at this equation, it appears that both psychopathology and the interaction of psychopathology and subject group are important determinants of death anxiety, and the null hypothesis could be rejected. However, Chart II of the table reveals that the variance attributable to the interaction is, in fact, a function of the input of the psychopathology measures alone. When A/D and LC/T are the second variables added to the equation, they account for .372 of the variance of DA. After these variables are entered, the addition of the interaction variables does not significantly improve the prediction equation. In this equation, SGA/D and SGLC/T account for only an additional .001 of the variance,

Table 15.--Multiple Regression Equations Predicting Death Anxiety.

Step	Var. Entered	Cum. R Square	R Square Change	Sig. of R Square Change	Simple R	Cum. Sig.
			Chart I			
1	SG	.000	.000	.817	-.019	.817
2	SGA/D	.148	.148	.001	.385	
	SGLC/T	.183	.034	.017	.338	.000
3	A/D	.337	.155	.000	.548	
	LC/T	.373	.036	.006	.483	.000
			Chart II			
1	SG	.000	.001	.817	-.019	.817
2	A/D	.301	.301	.000	.548	
	LC/T	.372	.071	.000	.483	.000
3	SGA/D	.373	.001	.644	.385	
	SGLC/T	.373	.000	.958	.338	.000

an insignificant amount. Thus, this equation reveals that death anxiety is primarily a function of an individual's psychopathological tendencies (regardless of his family history), with psychopathology being positively related to death anxiety.

The null hypothesis cannot be rejected because death anxiety is solely a function of psychopathology regardless of family history.

Test of Hypothesis VIb

Stated in the null form, there are no differences in the distribution of death anxiety scores between bereaved and nonbereaved high psychopathology individuals. While the test of Hypothesis VIa tends to indicate that there is no significant interaction between subject group and level of psychopathology with regard to death anxiety, Hypothesis VIb specifically refers to the distribution of DA for

bereaved high psychopathology subjects. Stated a different way, bereaved individuals with high scores on psychopathology indices will produce a bi-modal distribution along the variable death anxiety; their scores will be either lower or higher than the average score for non-bereaved subjects. To test this hypothesis, the frequency distribution of DA was divided in four fairly equal sections with approximately 25% of the subjects in each section. Low DA, midlow DA, midhigh DA, and high DA had the following respective values: 0-4, 4.20-6.43, 7-8, and 9-15. Bereaved subjects and those from intact families were then divided into high and low psychopathology groups with regard to A/D and LC/T. The medians of A/D and LC/T served as the dividing points so that cell sizes for high and low psychopathology would be nearly equal. If there were no differences between these groups along the DA continuum, frequencies of subjects would be fairly equal in the cells of Table 16.

The distribution tables exhibit the positive relationship between psychopathology and death anxiety predicted by Hypothesis VIa. It is obvious from the tables that there is not a bi-modal distribution of bereaved individuals with high psychopathology along DA.

Chi squares of the entire distribution for A/D and LC/T were computed and were significant (X^2 = 37.209, df = 9, $p<.001$; X^2 = 30.952, df = 9, $p<.001$ respectively). It was probable that the significance of the chi squares was related to the dependence between DA and level of psychopathology (independent of subject group), as shown in the test of Hypothesis VIa. Chi squares were then computed comparing the high psychopathology bereaved and intact groups to test for differences with regard to the distribution along DA, as implied by

Table 16.--Death Anxiety Frequency Distributions for Each of the Combined Psychopathology Indices (A/D and LC/T).

Subject Group	Low DA	Midlow DA	Midhigh DA	High DA	Row Total	
Table 16.1. Anxiety/Depression (A/D)						
Intact Low A/D	15 (38.5)	11 (28.2)	9 (23.1)	4 (10.3)	39 (27.1)	
Bereaved Low A/D	10 (30.3)	13 (39.4)	6 (18.2)	4 (12.1)	33 (22.9)	
Intact High A/D	2 (5.3)	5 (13.2)	9 (23.7)	22 (57.9)	38 (26.4)	
Bereaved High A/D	6 (17.6)	5 (14.7)	9 (26.5)	14 (41.2)	34 (23.6)	
	33 (22.9)	34 (23.6)	33 (22.9)	44 (30.6)	144 (100.00)	Column Total
Table 16.2. Locus of Control/Trust (LC/T)						
Intact Low LC/T	12 (33.3)	11 (30.6)	9 (25.0)	4 (11.1)	36 (25.0)	
Bereaved Low LC/T	13 (36.1)	12 (33.3)	6 (16.7)	5 (13.9)	36 (25.0)	
Intact High LC/T	5 (12.2)	5 (12.2)	9 (22.0)	22 (53.7)	41 (28.5)	
Bereaved High LC/T	3 (9.7)	6 (19.4)	9 (29.0)	13 (41.9)	31 (21.5)	
	33 (22.9)	34 (23.6)	33 (22.9)	44 (30.6)	144 (100.00)	Column Total

N = cell frequency

(N) = cell percent

Hypothesis VIb. Chi squares for the A/D and LC/T distributions along DA for these groups were not significant (X^2 = 3.697, df = 3, p>.30 and X^2 = 3.147, df = 3, p>.30 respectively).

The null hypothesis cannot be rejected. There was no evidence of bi-modality of death anxiety scores among high psychopathology bereaved subjects.

CHAPTER IV

DISCUSSION

The Subject Sample

As with all research using a specific subpopulation, it is important to ascertain to what extent the subpopulation is representative of a more general population of individuals. In the present study, using the subpopulation of college students enrolled in psychology classes brings into question the ability to generalize findings to the general population of adults. As stated earlier, there is empirical evidence for concluding that the student sample was fairly representative of the general population with respect to bereavement. Assuming that siblings were not enrolled in the same classes, the percent of single parent death families paralleled that of national census figures (5.1%). Similarly, the ratio of father to mother death (approximately 2.3 to 1) also paralleled census figures of the general population. These similarities imply that the death of either parent does not prevent those bereaved individuals from attending a Midwestern university. The unbalanced ratio of bereaved females and males (1.57 to 1) is indicative of a traditional trend of female interest in psychology classes and is not a function of selection due to parent death. The ratio of nonbereaved females and males was similar (1.71 to 1).

The college student sample does, of course, differ in age from the general population of bereaved adults. While it could be argued that psychological problems could develop later in life, and thus the general population of bereaved individuals might, in fact, be more likely to exhibit psychopathological tendencies, it is generally assumed that late adolescence is a stressful time of life during which latent problems usually emerge. Thus, one might expect that a late adolescent student sample would exhibit levels of psychopathology comparable to, if not higher than, the general population. However, it may be that psychopathology relating to parent death in childhood does not emerge until the bereaved individual is himself a parent. There is tentative evidence that psychological stress increases when a person reaches an age which has a significance in connection with an important bereavement. Hilgard and Newman (1959) reported a higher-than-chance incidence of psychiatric admissions relating to anniversary dates of mother death for females; it appeared that when the individual reached the age at which a mother died or when the individual's child reached the age at which the individual suffered a bereavement, emotional crises were likely to develop. A similar trend was found by Bunch and Barraclough (1971) in relation to suicides occurring near the anniversary of father's deaths. By limiting the present study to college-age individuals, this tendency to later psychological dysfunction could not be studied.

Another problem posed by a college student sample is that the sample is likely to be biased in favor of middle and upper class individuals who are fairly well adjusted. It is generally accepted that individuals who attend college exhibit positive academic and

social functioning, two indices associated with good mental health. In addition, lower class individuals are less likely to attend college than middle and upper class individuals. Based on an item on the personal data sheet, 60 of the 67 bereaved subjects reported being from the middle or upper class, while only 7 reported being from the lower class. Langner and Michael (1963), in a study which controlled for socio-economic status, found that lower class bereaved individuals were more likely to exhibit psychopathological traits than individuals from middle and upper classes, especially with regard to maternal death. Thus, the present sample is a biased one in terms of young age, positive academic and social functioning, and mid- to high socio-economic status, all variables associated with more positive mental adjustment.

It should be re-emphasized at this point that the hypotheses tested in this study were generated mainly from studies of psychiatric populations as well as from clinical theories. Thus, the lack of significant replication in this study may reflect, in part, the differences between psychiatric populations and college students.

The Hypotheses

Hypothesis I

There were no significant differences in psychopathological traits among subjects from intact families, divorced families, single parent death families, and multiple loss families. It can be concluded that the loss of a parent in childhood does not predispose the child to have later emotional difficulties. Thus the conflicting results of previous studies of psychiatric patients may be a function of sampling error, diagnostic subjectivity, or experimenter bias. The results of the present study are significant in that the controversy about the

later effects of parent death can be concluded in favor of those studies which found no significant differences between bereaved and nonbereaved psychiatric patients.

While it cannot be argued that the death of a parent is a disruptive experience in the life of a child, it appears from the present findings that most children cope with parent loss in a constructive way and are able to adjust to the loss over time. With regard to multiple losses of parents in childhood (by death and/or divorce), the results are somewhat ambiguous due to the small sample size of this group. On all but the measure of interpersonal trust, the multiloss group tended to score several points higher than the other subject groups on the psychopathology indices (Table 4). Given a sample size comparable to the other subject groups, this trend of the multiloss subjects might become a significant one. This would not be surprising, as several major disruptions in family structure over a period of fifteen years would not allow much time for resolution of one loss before another loss occurred. However, until a larger number of subjects from multiloss families can be studied, the implications of multiple family disruptions cannot be identified.

Hypothesis IIa

No differences in psychopathological traits were found between father and mother bereaved subjects. This finding contradicts most of the empirical studies involving mother death and also the theoretical significance of the mother figure in childhood development. However, it should be noted that in 9 of the 18 mother death cases, the father remarried, compared to only 8 remarriages in the 49 father death cases.

Thus, men who lose their wives through death are more likely to remarry, providing a mother surrogate for their children, while bereaved women are more likely to maintain their families without a father figure. Similar trends with regard to remarriage were found by Langner and Michael (1963). Thus, subjects whose fathers died were more likely to experience the permanent loss of a parent than subjects whose mothers died. In fact, in those cases where the father did remarry, the remarriage most often occurred within a fairly short period of time (within 2 years). Thus, while permanent mother loss may be more detrimental to childhood development than father loss, this possible significance may have been confounded by the high incidence of fathers who remarried. In fact, for those mother-bereaved subjects who scored fairly low in the psychopathology indices, remarriage occurred within several years. While the small sample size does not allow for statistical tests of this trend, Langner and Michael (1963) also found that the sooner the remarriage occurred, the better the child's mental health. This may be a function of the fact that the relationship of the child with the surviving parent may develop in intensity over the years, making later remarriage a more disruptive event.

It should also be noted that the impact of father absence is not entirely clear, and recent studies of father death have suggested that the role of the father in relation to childhood development is more crucial than previously thought (Munro, 1965; Hill and Price, 1967; Sutton-Smith et al., 1968; Birtchnell, 1970b; Bunch and Barraclough, 1971). As the traditional role of the father expands to include more of the caretaking and nurturing responsibilities, the significance of father loss may increase.

Thus, the fact that there were no differences in psychopathological traits between subjects whose mother died and those whose fathers died may be due both to the higher incidence of remarriage shortly following the death in cases of mother death and to the increasing importance of the father role in the family.

Hypothesis IIb

There were no significant differences in psychopathological traits between males and females who experienced the death of a parent in childhood. Previous studies have suggested that there were differential effects of parent death depending on the sex of the child. While no significant results were found in the present study, there does appear to be an interesting sex difference trend with regard to bereavement and psychopathology. Table 9 shows that for the measures of anxiety, depression, and locus of control, bereavement tends to minimize differences between males and females compared to the sex differences in the general population, and in relation to depression and trust, to reverse the sex differences. This equalization and/or reversal of the psychopathology scores between the sexes suggests that there is a slight tendency for bereavement to affect males and females in opposite ways. One possible explanation of this trend is that parent death tends to sensitize males to their feelings while encouraging females to be more defended against their feelings. Thus, males may tend to focus more on the loss of the parent and their feelings about the loss while females may tend to focus more on the increased responsibilities and the concomitant need to be more assertive and independent (i.e., less vulnerable to emotion). However, these trends are minimal,

and further research should be done before making any generalized statements or conclusions.

Hypothesis III

There were no differences in psychopathological traits in bereaved subjects as a function of age at the time of bereavement. This finding conflicts with most of the theoretical and empirical literature which suggests that young children are very dependent on their parents, may not have a realistic understanding of death, and may not have the emotional capacities to mourn the loss completely. However, while younger children may experience parent death as more disruptive and may not have the cognitive or emotional capacities to resolve the grief process at the time of the loss, the fact that they only understand selective aspects of the death implies that they have, in a sense, less to grieve. For example, the young child may comprehend the immediate impact of a parent's death but not the long-range implications of the death. As his cognitive and emotional capacities broaden, the child has the opportunity to regrieve those aspects of the death that were not understood or even anticipated at a younger age. Thus, it may be that limited cognitive awareness about the full impact of death may be a protective mechanism for young children who could not emotionally integrate the full impact of parent death on their lives at the time of the death. The older child, who understands the more long range effects of parent loss, also has greater cognitive and emotional capacities to handle future anticipated losses. Much of the immediate trauma of the death also is less likely to be remembered by very young children compared to the older child.

Similarly, younger children have not developed as broad and integrated a relationship with the deceased parent as have older children, who will remember more about their relationship with the deceased parent and thus have more to work through in the grief process. Young bereaved children will have spent more of their lives without their deceased parent by the time they reach college age and will have had a longer time to adjust to a one-parent family than older bereaved children. To elucidate the effect of age at the time of parent death, a study which examined the grief process in bereaved children over time could more clearly delineate the developmental differences in coping with death between younger and older bereaved children.

Hypothesis IV

Although the sample size was too small to allow for statistical procedures, the interaction of sex of dead parent, sex of child, and age of the child at the time of bereavement suggests some interesting trends. Mean scores on the test measures for subgroups of the bereaved subject sample are listed in Appendix E.

Although there are only 4 subjects in the early mother death group, it is interesting to note that this group scored much lower on the anxiety scale than any of the other groups. It may be that early mother death reduces anxiety because the worst of all situations (death of the mother) has already occurred, or it may be that these subjects are using denial as a defense against overwhelming insecurity or anxiety. From the personal data sheet, it appears that all of the subjects of this group have stepmothers, which perhpas has made them feel that even the worst circumstances can be ameliorated to a degree,

lessening their feelings of anxiety. In looking at the subjects' scores individually, however, three of the four subjects (excluding one male) tended to score lower on most of the psychopathology measures, an indication in favor of massive denial as a defense against any feelings of vulnerability. Whether due to denial or due to actual low anxiety, these early mother death subjects report feelings less anxious than other bereaved subjects and than those in the general population.

With regard to late mother death, the opposite trend appears in relation to anxiety. These subjects, particularly the males, reported feeling more anxious than other bereaved subjects and subjects from intact families. Of these 14 subjects, 9 do not have a step-parent. The absence of a female role model in the preadolescent and adolescent years may be a factor relating to higher levels of anxiety in those subjects with no mother substitute. However, four of the five subjects with a stepparent also reported high levels of anxiety. Langer and Michael (1963) suggest that the introduction of a stepparent at a later age in childhood is not as successful as at earlier ages, when the child may be more willing to accept a parent substitute. This trend towards higher anxiety related to late mother death is minimal, however, and a larger sample size is needed before any conclusions can be made.

With regard to late father death, there is an interesting sex difference on the trust scores, with males reporting less trust and females reporting more trust than the general population. Scores on the other measures did not differ as a function of sex of subject for this group. It may be that males between 10 and 16 years of age rely on their fathers for role modeling and companionship more than do

females on the same age; loss of the father at this age would thus tend to make males more mistrustful of interpersonal relationships involving dependency. However, females in the late mother death group do not exhibit this same tendency. It may be that the role of the female in this society is more flexible, so that females are less dependent on the mother as a role model. In addition, father-bereaved males entering adolescence may feel responsible for assuming the role of the father in the family. Being in a position of making decisions for the family at this early age may tend to make males more cautious in their relationships with adults in the society at large.

There is also a slight trend for males whose mothers died to be more depressed than females. This trend parallels findings by Dennehy (1966) that male depressives in a psychiatric setting were more likely to have experienced the death of a mother than female depressives. However, Dennehy's finding that depression in females were related to father death was not substantiated by the present data. It should also be noted that the mother-bereaved males' scores in the present study on the depression index were still within the range of Beck et al.'s (1963) definition of no depression.

In general, the subjects in the early and late father and mother death groups do not appear to be markedly different from each other or the general population with regard to psychopathological traits. The small sample size inhibits further assumptions or conclusions.

Hypothesis V

There were no differences between high and low psychopathology bereaved subjects with regard to additional losses attendant to the death of a parent. This finding suggests that additional losses are inevitable following parent death and are not necessarily a separate function related secondarily to parent death. In addition, since the intercorrelations of the DQ items were low, it appears that families do not deal with the issue of death in a predictable way, but rather in an individual and highly idiosyncratic way. Thus, the weaknesses as well as the coping mechanisms of a particular family may be different from other families, but these differences may not be quantitative. For example, while one family may discuss death openly, another family may cope better financially when faced with parent death. It was assumed that all the DQ items were equally significant when, in fact, some items may reflect variables more important in predisposing to psychopathology than others. Thus, a simple total score of losses may not be useful in delineating possible differences between high and low psychopathology bereaved subjects.

Exploratory Question:

Several significant variables related to later psychopathology were identified through the regression analyses of death questionnaire items. The following sets of variables are significant predictors of high anxiety and depression in bereaved subjects: (1) feeling that the parent's death has had only negative implications for the subject's life (DQ item 21) and becoming more distant from the surviving parent following the parent's death (DQ item 17); and (2) not talking openly

about death before the parent died (DQ item 1), not thinking about death before the parent died (DQ item 5), suffering financially after the parent's death (DQ item 14), and feeling that the subject would not live through the experience of the parent's death (DQ item 7). The first set of items suggests that the death has remained unresolved and that the subject lost, in part, the relationship with the surviving parent as well. These variables suggest a sense of abandonment by both parents and a fixation at the bargaining stage of grief, as defined by Kubler-Ross (1969). In the bargaining stage, mental statements such as "if only my parent hadn't died, things would be better" indicate that the loss has not been totally confronted and the subject maintains a wish to undo the death. In essence, subjects fixated at the bargaining stage have not been able to let go of the dead parent and begin to look for other significant object relationships. The first set of variables, then, implies additional losses following the parent's death in that the subject does not allow himself to establish other meaningful relationships, resulting in feelings of insecurity (anxiety) and isolation (depression).

The second set of variables predictive of anxiety and depression reflect a lack of preparation on the part of the subject and his family for dealing with death. Not talking or thinking about death before it occurs is likely to increase the trauma of the death experience. The item relating to a feeling of not surviving the parent's death further implies that there was no internal preparation for death, and the item relating to financial difficulties implies that there was no external preparation for the death by either the deceased parent (in the form of life insurance and will) or the surviving parent (in

the form of career or financial budgeting). Lack of emotional, cognitive, and financial preparation for death all appear to increase the likelihood of anxiety and depression in bereaved subjects by making the environment seem less predictable and the loss unexpected and thus more profound.

With regard to external locus of control and mistrust in interpersonal relationships, only one set of variables is significant. The items in this set of variables refer to a positive relationship with the deceased parent (DQ item 22) and to not understanding how or why the death occurred (DQ item 9). An external locus of control may be reinforced by feeling that one has no control over a positive relationship, i.e., that the relationship can end regardless of the individual's feelings and investment in it. Similarly, not understanding how and why the relationship ended also reinforces a feeling of powerlessness in that it may appear that fate, rather than a specific causal entity, has produced the parent's death. However, it is also possible that subjects who were or became externally oriented for other reasons construe the parent's death in this way in retrospect. With regard to level of trust, interpersonal mistrust may develop as a function of being abandoned by someone the subject felt positively about. The hurt and anger accompanying abandonment may inhibit the subject from trusting further emotional attachments. Similarly, mistrust may be fostered if the subject does not understand the death. He may have been misinformed or told nothing at all; both situations would conceivably foster feelings of mistrust in others.

From these data, it can be concluded that preparing individuals for death, helping bereaved individuals understand the death and work

through their grief, and fostering a sense of personal potency and trust in interpersonal relationships may help to minimize the long-term detrimental effects of parent death in childhood as well as foster new growth and self-awareness.

Variables with little impact on later psychopathology in bereaved subjects were those relating to role replacement of the dead parent (DQ item 16), the unexpected nature of the death (DQ item 6), having been to a funeral prior to the parent's death (DQ item 4), attending the parent's funeral (DQ item 10), and moving to a new neighborhood following the parent's death (DQ item 15). These variables have been assumed by the theoretical literature to be important in coping with the death experience. However, unlike most of the significant predictors of psychopathology which focus more on internal affective reactions to the death, these variables related more to factual circumstances, and it may be that the feelings of bereaved individuals about the experience are the more crucial aspects related to psychological adjustment. For example, it may not be moving to a new neighborhood in and of itself that is disruptive, but rather how the individual feels about the move that will affect his present and later adjustment, i.e., whether he experiences it as another loss or a new opportunity. In a highly emotionally charged situation, it appears that the feelings and reactions of the individual to the situation should be the primary concern, rather than specific events in the external environment. However, since this is a retrospective study, personality variables may also be complicating responses to the more affective DQ items.

Hypotheses VIa and VIb

There were no differences in death anxiety levels between bereaved and nonbereaved individuals who exhibited similar levels of psychopathology. It was confirmed that the level of death anxiety was a function of an individual's psychopathological tendencies and not of his family history of bereavement. Thus, bereaved individuals do not appear to be overly sensitized to death, nor do they appear to use repression and denial extensively. The experience of the death of a parent in and of itself, while potentially traumatic and disruptive, does not appear to affect an individual's coping mechanisms in relation to death either positively or negatively. More specifically, the resolution of the death experience--defined in terms of low psychopathological traits--does not enhance one's ability to cope with death nor does the lack of resolution of a parent death predispose one to greater difficulties in coping with death than nonbereaved subjects with similar levels of psychopathology.

However, two assumptions were made in relation to Hypotheses VIa and VIb which, if inaccurate, may have served to minimize any significant trends. It was assumed that within the bereaved group, the level of psychopathology on the measures of anxiety, depression, locus of control, and trust were indicative of the extent to which the death experience was resolved. It may be that the level of death anxiety itself is a more accurate index of death resolution or conflict in bereaved subjects. Secondly, it was assumed that the nonbereaved group had had minimal contact with death-related experiences; however, experiences with the death of grandparents, of siblings, of relatives

outside of the nuclear family, of friends, and of pets were not identified in the present study. These experiences, while probably less traumatic and disruptive than the death of a parent, are still potential experiences in which the individual may exercise his coping mechanisms with regard to death, loss, and the grief process. In a previous study by the present author (Wulf, 1973), children who had had experiences with the death of a pet, grandparent, or neighbor exhibited a higher level of death conceptualization than children of similar ages who had not had these experiences. Thus, it appears that any experiences with death may enhance one's understanding of, and presumably one's ability to cope with, death-related issues. Since death-related experiences other than parent death in the intact family group were not identified, the assumption that this group had little experience with death and was in fact "nonbereaved" may be inaccurate, thus confounding the results of Hypotheses VIa and VIb.

The Interviews

When bereaved subjects were asked if they would be willing to participate in an interview which focused on their experiences with parent death, most of the subjects were cooperative and many were very interested in participating. Forty subjects were interviewed to explore in more depth their experiences, reactions, and coping mechanisms in relation to their parent's death. These interviews were not a formal part of this study, but will be analyzed in detail later. While they have not yet been coded or analyzed in depth, certain trends do emerge. The major theme that seems important is the impact of the death on the surviving parent. It appears that the resolution of the

death by the surviving parent positively influenced subjects' abilities to accept the death and resolve their own grief, although there were several subjects who felt that their parents' resolution did not facilitate their own acceptance of the death. The impact of the surviving parent's coping mechanisms is an area which may have greater significance for later adjustment than the death of a parent *per se*, and needs to be studied in greater depth. Similar trends have been cited by Furman (1964), Becker and Margolin (1967), and Harrison et al. (1967). Surviving parents, if overwhelmed by their own grief, may not be able to cope effectively with the grief of their children, and may consciously or unconsciously both avoid the topic of death and distract their children from the grief process. Such children may not have permission to grieve, and may thus carry this unresolved loss into adulthood, possibly causing later psychological dysfunction. Similarly, the death of a parent may be viewed very differently by the children and by the surviving parent. A study comparing the memory of the death of adults bereaved in childhood with the memory of their surviving parent may produce interesting findings.

For the most part, subjects that were interviewed revealed the individualistic and unique ways that families cope with loss, and many were aware of gains as well as losses related to their parents' death. Most subjects felt free to express issues which were problematic for them, often with some insight into the cause of their current attitudes and feelings. One theme that emerged in the interviews was that after the major aspects of the grief were resolved, conflict was likely to develop around the role redistribution in the family. This shift in the family structure was likely to occur some months after the death.

In working with bereaved families in a clinical setting, it would thus be important to continue the therapeutic intervention beyond the initial grief process to aid in the resolution of conflict related to the changing structure within the family.

In general, the bereaved subjects in this study appeared to be well adjusted individuals who felt they had developed more independence and become more responsible as a result of their parents' death. They expressed fairly defined philosophies of life, were interested in school, and appeared to have adequate social lives. It appears that the interviews provided a unique experience for many of the subjects to explore the impact of their parent's death on their lives and express these issues with a person unrelated to their family. These interviews were audiotaped and will be assessed in more depth to attempt to identify specific issues related to growth or the inhibition of growth of bereaved individuals.

Multiple Parent Death

At this point, a discussion of the three subjects who lost both parents seems appropriate. One of the subjects, a 21 year-old male, experienced the death of both parents before he was 5 years of age. His scores on all of the psychopathology measures were lower than the general population, indicating possible massive denial with regard to his intrapersonal and interpersonal feelings. However, from the personal data sheet, it was learned that he had had a 21 year-old brother who took responsibility for the subject and his siblings following the second parent's death. This older brother also married, providing the subject with a mother-figure as well. Thus, the

subject's low psychopathology scores may be a function of having experienced continuity and security in the face of total family disruption. Another multiple parent death subject, a 20 year-old male, scored higher than average on all of the psychopathology measures. This subject's mother died when he was 8 years of age and his father then soon remarried. When the subject was 15, his father died, leaving him in the care of his stepmother. It is possible that the introduction of a stepmother soon after the subject's mother died did not allow time for the resolution of grief and the acceptance of a mother substitute. If the relationship with his stepmother was poor, this may have worsened when the father died. Thus, this subject's high psychopathological tendencies may be a function of unresolved grief, multiple family disruptions, and conflict with the stepmother. The third multiple parent death subject was an 18 year-old female, who scored high on mistrust only. This subject's father died when she was 14, and her mother died when she was 16, before remarrying. It is likely that this subject had begun to depend more on her mother after the father's death, only to lose this relationship soon afterwards. Thus, her ability to trust the stability of interpersonal relationships may have suffered two-fold. These multiple parent death subjects exemplify the diversity of multiple death circumstances and the idiosyncratic ways that families attempt to cope with loss.

CHAPTER V

SUMMARY AND CONCLUSIONS

The present study has served to clarify and resolve the controversy created by previous studies concerning the impact of parent death in childhood on later psychological adjustment. It appears that parent death *per se* (at least in a college population) does not predispose an individual to develop later psychopathological tendencies. In addition, losses attendant to parent death are inevitable and do not in and of themselves create later maladjustment. Rather, the individual's feelings about these additional losses and about how the death was handled are the critical variables predictive of later psychopathological tendencies. Similarly, previous mental and environmental preparation for possible death experiences enhance the child's and the family's abilities to cope with the death of a parent.

Age of the child at the time of the death, sex of the child, and sex of the deceased parent also do not appear to influence later adjustment when studied as single variables. However, it appears that the interaction of these variables create differential effects which the present study, because of the small sample size, could not statistically identify. The importance of mother and father figures in the life of the child varies throughout the child's developing years

differentially as a function of the sex of the child. The impact of loss may thus involve more specific issues related to developmental stages and sex of the child and the parent which the present study failed to identify.

The negative findings of the present study may also be a function of the particular indices of psychopathology used. While anxiety, depression, external locus of control, and interpersonal mistrust measure a range of psychopathological traits, the impact of parent death in childhood may relate to more specific psychological phenomenon such as dependency, insecurity, mood swings, rigidity, and hostility. In addition, the use of objective self-report questionnaires does not account for the possible presence of defense mechanisms. As a part of their coping behavior, bereaved individuals may resort to defenses which may or may not break down under stress. The kind and quality of these defenses may differ from those of non-bereaved individuals, and a study which examined the strength and flexibility of such coping mechanisms might yield possible differences between bereaved and non-bereaved groups. Such a study would necessarily involve a more subjective clinical design involving interviews and possibly experimentally controlled situations to test for the presence and adequacy of defensive structures. Unless the presence and quality of defense mechanisms are accounted for, the actual vulnerability of bereaved individuals cannot be accurately determined.

Similarly, the strength of the personality structure and the quality of defenses prior to bereavement may also be an important factor in the development of psychological maladjustment following bereavement. Stress may accentuate or heighten pre-existing

psychopathology, and this may occur regardless of environmental attempts to minimize the trauma. While the present study could not explore this possibility, future longitudinal studies could perhaps identify those personality structures which would tend to break down under the stress of parent loss, resulting in later psychopathological dysfunction.

In relation to the child's vulnerability and his dependence of adult figures, much has been theorized and explored in previous research. However, the positive aspects of childhood, namely the flexibility and resiliency of children, have been overlooked for the most part. As parents, clinicians, and researchers, we may tend to project our own feelings of helplessness and fragility onto children and thus emphasize the vulnerabilities of childhood rather than the more positive attributes and strengths of children. Similarly, it has been easier to identify the weaknesses of families rather than their strengths. Family structure is probably more complex and individualistic than has been recognized. Families exhibit a diverse range of coping mechanisms, individual strengths, and external resources that vary tremendously from one to the next. The impact of interrelationships within each family unit has not been fully explored in relation to coping with family crises. It may be that the idiosyncratic nature of families precludes the generalization of loss-related circumstances from one family to all families.

To further complicate the study of the impact of death on the individual and the family, there is an emerging interest in the general population regarding the issues of death and dying. It appears that the layman as well as the professional is beginning to confront

the issue of death and its impact on the individual's life. This growing interest was exemplified in the present study by the bereaved subjects' willingness to participate. Many of the subjects expressed a great interest in the study on both a personal as well as a more general level. The fact that there appears to be a trend in the general population to confront death-related issues directly may alter the awareness of, preparation for, and thus the impact of death in the family in ways yet to be defined.

The present study has raised several questions and revealed possible areas which need to be studied further. As previously mentioned, a larger subject sample is needed so that the interactions between sex of parent, sex of child, and age of the child at the time of the death can be studied. Death experiences other than those of parent death need to be identified, so that a clearer delineation can be made with regard to a "nonbereaved" sample to constitute a better control group in future studies. The issue of the impact of remarriage following parent death also deserves exploration in terms of the variables of how and when the stepparent is introduced into the family and the subsequent incorporation and acceptance of the stepparent into a predefined family system. Similarly, the strengths of one-parent families deserve further study and may produce interesting findings which might alter the theoretical literature regarding the assumed importance of the traditional two-parent family. As more single women decide to keep children born out of wedlock and as adoption becomes more acceptable for single men and women, the incidence and acceptance of the single parent family may increase. These single parent groups should be studied in contrast to those where there was no planned

choice to be a single parent (single parent families caused by death, divorce, or separation).

A final area of investigation suggested by the present study is the impact of multiple parent loss on the child. A larger sample size may produce significant trends related to psychopathology as well as reveal the capacities of individuals to deal with major or total life disruptions.

In conclusion, it appears that the death of a parent is a highly individualistic and personal experience which does not easily lend itself to generalized conclusions about the impact of parent death on the life of a child. Objective tests do not tap the full range of intrapsychic experiences related to the death of a parent, and future studies may be more productive if in-depth explorations of individual experiences are designed. Ideally, a longitudinal study which followed families from the time of a death through the entire span of childhood and maturation would produce important knowledge in the area of death, loss, and the resolution of grief. The strengths of individuals faced with crises of loss and death have yet to be fully explored and understood.

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APPENDICES

APPENDIX A

PERSONAL DATA SHEET

APPENDIX A

PERSONAL DATA SHEET

This study is interested in looking at developmental factors in a person's life to determine how one's family and growing up influence how we are as adults. Please fill in these forms to the best of your ability.

Some of you will be contacted at a later date to see if you would like to participate in this research further.

ALL INFORMATION IS STRICTLY CONFIDENTIAL. Please put your name and phone number on this cover sheet. This sheet and your answer forms will be coded, and will be kept separately to insure confidentiality.

Thank you for your participation in this research!

NAME:

PHONE NUMBER:

Personal Data Sheet

First name: _____ Religion: _____

Age: _____ Year of college: _____

Sex: _____ Major: _____

Marital status: _____

Family Environment in Childhood

Were your parents unavailable to you due to occupation? Yes ☐ No ☐

Were your parents frequently absent from the home for any reason? Yes ☐ No ☐

Do you come from a broken home? Yes ☐ No ☐
If yes, circle one:
Separation Divorce Death Other

If yes, what was your age at that time? _____

Do you have a step-parent? Yes ☐ No ☐
If yes, what was your age when the step-parent appeared? _____

Were you adopted? Yes ☐ No ☐
If yes, what was your age at the time of adoption? _____

Were there any marked parental discords or other unusual environmental stresses or related hardships in your family when you were young? Yes ☐ No ☐

How would you describe your childhood (ages 1-16 years)? (Circle one):

happy unhappy in-between

Family Composition

Is your father still living? Yes ☐ No ☐
If deceased, what was his age at the time of death? _____
If deceased, what was your age when he died? _____

If still living, what is your father's occupation? _____

Age? _____

Is your mother still living? Yes ☐ No ☐

If deceased, what was her age at the time of death? _____

If deceased, what was your age when she died? _____

If still living, what is your mother's occupation? _____

Age? _____

Number of siblings: _____

Please list their ages: _____

What is your birth-order (first-born, second-born, etc.)? _____

Do any grandparents, aunts, uncles or other relatives live with you and your family? Yes ☐ No ☐

What would you describe as the socio-economic position of your family? (Circle one)

Lower-class Middle-class Upper-class

Attitudes and Feelings

Do you feel that premarital sex is morally acceptable? Yes ☐ No ☐

Is birth control a necessary ecological device? Yes ☐ No ☐ It Depends ☐ Uncertain ☐

Should abortion be available to anyone who wants it? Yes ☐ No ☐ Uncertain ☐

The ideal number of children in a family is _____.

Personal Concerns

Have you ever received counseling or therapy of any kind? Yes ☐ No ☐

In general, how do you feel about your life right now? (Circle one)

Happy Satisfied Bored Unhappy

How do you feel about your personal future? Optimistic ☐ Pessimistic ☐

APPENDIX B

DEATH QUESTIONNAIRE

APPENDIX B

DEATH QUESTIONNAIRE

Experiences & Attitudes Towards Death

Do not put your name on the answer sheet. The sheet has already been coded for you.

This questionnaire concerns circumstances related to your attitudes and experiences with death, specifically your parent's death. Please answer these questions to the best of your ability. If you were too young to remember some of the things these questions ask, score the item as number 3 (neutral).

Put your answers on the IBM sheet. Except for those items which are multiple choice, respond to the statements with the number which most closely reflects your feelings about that statement, based on the following:

1 - strongly agree, or totally true
2 - agree, or true for the most part
3 - undecided, neutral, or don't remember
4 - disagree, or false for the most part
5 - strongly disagree, or totally false

1. The subject of death was not talked about openly in my family before my parent died.

2. A person that I was close to had died prior to my parent's death.

3. Prior to my parent's death, a pet that I was attached to had died.

4. I had been to a funeral before my parent's death and can remember this experience fairly well.

5. I had never thought much about death before my parent died.

6. My parent's death was unexpected.

7. At the time, I thought I would never live through the experience of my parent's death.

8. My surviving parent's reactions to the death scared me a great deal.

9. My parent's death was described to me in detail so that I understood how and why it had happened.

10. I attened the funeral and remember the experience.

11. At the time of the funeral:
    1 - I was glad I attended the funeral
    2 - I was glad I did not attend the funeral
    3 - I felt neutral about the funeral
    4 - I wish I had attended the funeral
    5 - I wish I had not attended the funeral

12. I felt free to express my feelings, both positive and negative, about my dead parent.

13. My family participated as a group in religious and/or social activities during or after the period of my parent's death.

14. My family's financial situation suffered greatly after the death.

15. We moved shortly after the death (within 6 months) to a new neighborhood.

16. My surviving parent became both the homemaker and breadwinner for the family, or someone (relative, stepparent, hired help, etc.) came to replace the homemaker or breadwinner role of my dead parent.

17. Regarding my surviving parent,
    1 - I became very close and was afraid of losing him/her
    2 - I became closer because we had shared the experience of my parent's death
    3 - I did not become closer
    4 - I became more distant from him/her
    5 - I became alienated from him/her

18. My surviving parent:
    1 - never remarried
    2 - remarried within one year of the death
    3 - remarried sometime after a one year period following the death

Answer either 19a or 19b, depending on your situation.

19a. If you do have a stepparent, how do you feel about him or her?
    1 - We have a perfect relationship
    2 - We generally get along, although we have some differences
    3 - I feel neutral about him or her
    4 - We usually don't get along; there are lots of problems
    5 - I hate my stepparent

19b. If you don't have a stepparent, how do you feel about not having one?
    1 - I feel that not having a stepparent is the ideal situation
    2 - I feel generally positive about this
    3 - I feel neutral about this issue
    4 - I wish I did have a stepparent
    5 - I feel that not having a stepparent is a very negative situation

20. I became close to an adult friend or relative or stepparent who became a kind of substitute for my dead parent.

21. My parent's death had had only negative implications for my life--I have not grown from this painful experience.

22. Choose one of the following statements:
    1 - I think my dead parent was a very wonderful person
    2 - I feel generally positive about my dead parent
    3 - I have conflicting feelings about my dead parent
    4 - I feel generally negative about my dead parent
    5 - I hate my dead parent

23. My concept of death is that of:
    1 - nothingness
    2 - a kind of eternal sleep
    3 - a life after death (but not a heaven or hell)
    4 - heaven and hell
    5 - reincarnation
    6 - if none of these choices seems appropriate, leave this item blank and explain your answer on the back of the IBM sheet

24. Life has no meaning. (Refer to code at the top of this page.)

Close your eyes for a moment and try to get a picture of death as a human form. If death were a person, Death would be:

25. 1 - male
    2 - female
    3 - neuter

26. 1 - old
    2 - young
    3 - ageless

27. 1 - a gentle and kind person
    2 - an evil and scarey person
    3 - a seductive and deceiving person
    4 - an exciting and mysterious person
    5 - a person void of all feelings

28. Which of your parent died?
    1 - father
    2 - mother

29. What was your age at the time your parent died?
    1 - four years or younger
    2 - five through nine years
    3 - ten through twelve years
    4 - thirteen through sixteen years
    5 - older than sixteen years

30. What is your sex?
    1 - male
    2 - female

This is the end of the questionnaire. Please return all materials to me via the on-campus mail (no postage stamp is necessary).

Thank you for your participation in my research. Please feel free to call me (355-5763) if you have any questions about this questionnaire or the study in general.

Ginny Wulf

Scoring Directions for the Death Questionnaire

The questionnaire was scored so that a high score was indicative of a high number of losses. Each item was scored on a scale of one to five (agree to disagree) except for item 18, which was scored on a scale of one to three. Scoring was reversed for the following items (in which a response in agreement with the item was indicative of loss): items 1, 5, 6, 7, 8, 14, 15, 18, 21, and 24. Items 23 and 25-30 were not scored as they did not pertain to the concept of loss attendant to the death of a parent.

APPENDIX C

CHARACTERISTICS OF THE TEST MEASURES

APPENDIX C

CHARACTERISTICS* OF THE TEST MEASURES

Test	Reliability	Mean	SD	Kurtosis	Skew	Range	Pos. Range
Anxiety	.81	33.79	10.69	- .29	.13	4-64	0-80
Depression	.81	6.87	6.11	1.08	1.19	0-28	0-62
Locus of Control	.63	11.50	4.53	- .53	.02	0-21	0-23
Trust	.67	55.44	9.07	- .28	.02	31-78	0-100
Death Anxiety	.53	6.97	3.33	- .36	.13	0-15	0-15

*Based on an N of 238

APPENDIX D

INTERCORRELATION MATRIX OF DEATH QUESTIONNAIRE ITEMS, A/D SCORES, AND LC/T SCORES (FOR BEREAVED SUBJECTS)

INTERCORRELATION MATRIX OF DEATH QUESTIONNAIRE ITEMS, A/D SCORES, AND LC/T SCORES*

(For Bereaved Subjects)

	DQ1	DQ2	DQ3	DQ4	DQ5	DQ6	DQ7	DQ8	DQ9	DQ10	DQ11	DQ12	DQ13	DQ14	DQ15	DQ16	DQ17	DQ18	DQ19	DQ20	DQ21	DQ22	DQ24	A/D
DQ2	-.02																							
DQ3	.22	.40																						
DQ4	-.21	.47	.12																					
DQ5	.08	-.05	-.19	-.15																				
DQ6	.11	.22	.14	.01	.23																			
DQ7	-.15	.03	-.16	-.03	.05	.13																		
DQ8	.02	-.03	-.08	-.15	.14	.28	.35																	
DQ9	-.47	.11	.13	.27	-.12	-.16	-.18	-.22																
DQ10	-.16	.12	.10	.40	-.22	-.12	.07	-.19	.30															
DQ11	-.24	.07	-.16	.21	-.04	-.13	.07	.01	.11	.24														
DQ12	-.33	-.01	-.08	.03	-.06	-.33	-.04	-.18	.38	-.18	.14													
DQ13	-.15	-.05	.10	-.20	.00	.06	-.16	-.04	.12	-.11	.00	.34												
DQ14	-.05	.09	.00	-.05	.03	.21	.21	.21	-.15	-.23	-.29	.12	.00											
DQ15	.27	.18	.11	-.19	.05	.15	.06	.15	-.34	-.43	-.22	-.07	-.02	.14										
DQ16	-.18	.13	-.27	.06	.23	-.02	.21	-.17	.05	-.03	-.17	.06	.10	.09	.13									
DQ17	-.08	.12	-.12	.02	.07	.01	-.27	-.23	.11	-.07	.21	.10	.30	-.30	.03	.15								
DQ18	-.07	.19	-.10	.25	.17	-.10	.17	.14	.16	.14	.21	.12	.02	.04	-.17	-.06	.04							
DQ19	-.14	.34	-.15	.09	-.02	.03	-.10	-.26	.15	.14	.08	.11	.14	.18	.06	.21	.19	-.25						
DQ20	.21	.06	-.02	-.16	.07	-.05	.10	-.11	-.18	-.02	-.16	-.12	-.03	.00	-.02	.16	-.12	-.42	-.01					
DQ21	.07	.21	-.06	.07	.05	.08	.37	.30	-.21	-.19	-.08	-.08	-.27	.32	.02	.24	-.18	.12	.04	-.20				
DQ22	-.12	-.00	-.07	.24	.09	.23	.38	-.04	-.05	.02	-.02	.07	.08	.19	-.10	.21	-.15	.07	-.21	.08	.02			
DQ24	-.14	.14	.10	-.03	-.07	-.15	.00	.29	.02	-.14	.28	.25	.19	.10	-.14	.04	.21	.09	-.14	-.05	.11	-.02		
A/D	-.21	-.21	-.22	.02	.17	.01	-.32	-.22	.26	.13	.08	.05	.23	-.36	-.24	.03	.33	.07	.07	-.15	.41	-.06	-.05	
LC/T	.01	-.05	.03	-.07	-.12	-.10	-.17	-.22	.36	.16	.11	.02	.03	-.21	- 08	-.12	.10	-.04	.26	.00	.26	-.29	-.21	.47

*N = 58

APPENDIX E

TEST MEASUREMENT MEAN SCORES AND STANDARD DEVIATIONS FOR BEREAVED SUBJECTS

TEST MEASUREMENT MEAN SCORES AND STANDARD DEVIATIONS FOR BEREAVED SUBJECTS
(Breakdown of Sex of Parent, Sex of Subject, and Age* of Subject at the Time of Bereavement)

Group	N	Anxiety		Depression		Locus of Control		Interpersonal Trust		Death Anxiety	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Early Mother Death											
Total	4	23.25	8.46	9.25	6.18	8.00	5.89	49.50	7.94	5.25	3.20
Male	2	22.50	13.44	11.00	9.90	12.00	5.66	53.50	6.36	5.00	4.24
Female	2	24.00	5.66	7.50	2.12	4.00	2.83	45.50	9.19	5.50	3.54
Late Mother Death											
Total	14	37.86	10.29	7.00	5.11	12.33	5.25	53.51	8.70	7.57	2.57
Male	7	39.43	11.53	9.57	6.19	12.43	6.13	52.44	11.47	7.29	3.35
Female	7	36.29	9.29	4.43	1.72	12.23	4.69	54.57	5.44	7.86	2.54
Early Father Death											
Total	17	35.47	8.60	4.65	3.52	11.04	4.91	56.29	7.51	7.30	3.23
Male	4	33.00	6.98	2.75	1.50	7.25	6.70	56.00	4.76	3.03	1.13
Female	13	36.23	9.15	5.23	3.79	12.20	3.83	56.38	8.34	8.62	2.36
Late Father Death											
Total	32	32.06	9.65	6.69	6.00	10.91	4.39	53.42	8.66	6.26	2.79
Male	13	31.23	8.30	5.92	4.52	10.31	4.89	57.13	6.99	5.80	1.93
Female	19	32.63	10.65	7.22	6.91	11.32	4.11	50.87	8.93	6.59	3.27
Totals	67	33.61	9.90	6.39	5.31	11.06	4.78	53.93	8.33	6.74	2.96

*Age: Early - 0-9 years; Late - 10-16 years