

The Role of Systems-Level Variables  
in Family Adaptation to Bereavement:  
A Concept-Validation Study of Cohesion and Expressiveness

by

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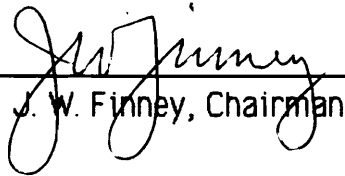
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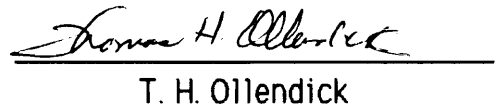
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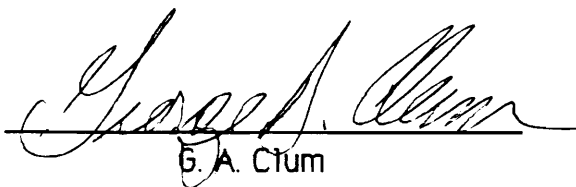
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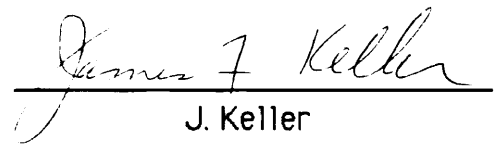
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## Abstract

Understanding and prediction of children's adaptation to loss requires attention to family characteristics and interpersonal patterns, in addition to individual variables. Empirical inquiries into family variables have indicated that the concepts of cohesion and expressiveness in particular may be useful in explaining members' adjustment. Using both deductive and inductive methods, this study developed a reliable, behavioral coding system for observing family members as they described the story of a child's death. The study also examined the relationship of these observable behaviors to both self-reports of cohesion and expressiveness and measures of individual adjustment. In terms of convergent validity, the Expressiveness subscale of the Family Environment Scale (Moos & Moos, 1986) was more readily associated with observable behaviors than was the Cohesion subscale. Discriminant validity was not established, however, and possible explanations for this were discussed. Examination of criterion-related and predictive validity demonstrated the utility of both self-report and behavioral measures of cohesion and expressiveness in accounting for parental depression, child behavior problems, and other specific indicators of distress. Implications for clinical intervention with bereaved families were discussed.

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## Review of Literature

Although it is not clear exactly how many young people are affected by the death of an immediate family member, it has been estimated that three and one-half million children, under age nineteen, die each year in this country (Rosen, 1986). These extremely painful losses create tremendous stress in the family, and may be accompanied by serious emotional as well as physical symptoms in both children and adults. Indeed, several authors have suggested that the death of a child is one of the most stressful life events an individual may encounter (Dohrenwend & Dohrenwend, 1974; Osterweis, Solomon, & Green, 1984).

Children's responses, both short- and long-term, to a loss by death include a wide diversity of outcomes, as the range of studies on this topic reveal. The most common or modal responses of bereaved children may be described as dysphoric mood (especially sadness and crying), disturbances of appetite and sleep, aggression, temper tantrums, resistance to discipline, restlessness, academic difficulties, withdrawal, and dependency on adults (Koocher, 1983; Osterweis, Solomon & Green, 1984). Of course, none of these manifestations is pathognomonic of bereavement; it is through their onset or exacerbation following a loss experience and, to some extent, their clustering together, that we may identify them as children's expression of grief.

This review will begin by presenting empirical evidence illustrating the broad range of outcomes among bereaved children. Next, several possible explanations for these individual differences will be discussed. In particular, theoretical hypotheses and research evidence regarding the role

of both individual and family variables in children's adaptation to a loss by death will be discussed. The point will be made that efforts to operationalize and reliably observe family interaction variables will validate the utility of such variables in understanding this adaptation process. Finally, methodological issues in the assessment of family interactions and systems-level constructs will be discussed.

### Children's Range of Responses

In their study of 25 paternal-bereaved kibbutz children aged 2 through 10, Elizur and Kaffman (1982) found that the majority (70%) showed signs of severe emotional disturbance (defined as clinical symptoms interfering with daily life) in at least one of the periods measured, either 6, 18, or 42 months after the death. Emotional and behavior problem scores included measures of dependency, withdrawal, low adaptability, stubbornness, hyperactivity, and low self-control, and were determined based on ratings by both the mother and the teacher.

Forty percent of this sample of children continued to exhibit such symptoms over either two or three of these assessment periods. However, no steady pattern of timing of the appearance or disappearance of grief reactions could be identified, and across three and one-half years, the elapsed time since loss was not a principal determinant of pathology. As the authors point out, no uniform psychological syndrome that could be considered "typical" of childhood bereavement emerged; a wide range of symptoms was present, and the specific combination of reactions, as well as their intensity and duration, varied from child to child.

Van Eerdewegh, Bieri, Parrilla and Clayton (1982) looked at 105 children aged 2-17 years compared to 80 matched controls, and found that one month postloss 70% showed dysphoric mood (sadness, crying, and/or irritability), including 14% who showed a depressive syndrome (defined as dysphoric mood in addition to three additional depressive symptoms). The latter occurred among only 4% of controls. Sleep difficulties, poor appetite, withdrawn behavior, temper, bedwetting, and decline in school performance were also more frequent among bereaved children. Even thirteen months post-loss, they showed significantly more dysphoria, minor depressive symptoms (such as sleep troubles and decreased appetite), decreased school performance, and withdrawal compared to controls.

McCown & Pratt (1985) administered the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) to parents of 65 children from 44 families who had lost a child between 2 and 13 months prior to the study. Behavior problems significantly different from the checklist norms were evidenced only by the 6- to 11-year-olds. While it is possible that the subsamples for the other CBCL age groups (4-5 and 12-16) were too small to detect differences, parent interviews corroborated that the behavior of only 38% of the children worsened after the death.

In fact, and to support further the point that a broad array of responses is to be expected, in each of these three studies a significant minority of children did not show a deterioration in their behavior. Among Elizur and Kaffman's (1982) sample, 30% showed no overt signs of emotional problems, and achieved satisfactory family, school, and social adjustment throughout three and one-half years following a parent's death. McCown and

Pratt (1985) found that while 88% of the subjects showed no behavior problems before the death, 44% of the total sample showed no change following it, suggesting a sizable proportion continued their appropriate behavior. In addition, the comportsment and responsible helpfulness of some children in these studies actually improved: Van Eerdewegh and others (1982) report 49%, while McCown & Pratt (1985) report 18%. In the former study, there is clearly an overlap between these children and those who showed symptoms of depression (70% of the sample), indicating the importance of assessing children's desirable behaviors in addition to their problematic ones.

Siblings showed behavior and adjustment problems in approximately one-half of bereaved families studied by Spinetta, Swarner and Sheposh (1981; N = 23 families). Martinson (1980, cited in McCown & Pratt, 1985) reported the occurrence of "moderate to severe" problems in only 24% of 139 children whose siblings had died of cancer. Further, Iles (1979, cited in McCown & Pratt, 1985) pointed out that certain benefits may accompany having a chronically ill sibling, including compassion, tolerance, empathy toward parents, and appreciation of one's own health. Indeed, a sibling's longer illness prior to death has been found to be associated with higher social competence scores among surviving children (McCown & Pratt, 1985).

What we can see from these data is that children exhibit a wide range of responses in adapting to loss: many show increases in behavior problems, while the conduct of others actually improves. Moreover, even among those studies that reveal a high level of disruption, a notable minority of children without behavior problems is also present.

Two well-known practitioners have provided experiential accounts which may in part explain such findings. Elisabeth Kubler-Ross (1981, cited in Bowlby-West, 1983) said that dying children showed little fear of their own death and were more concerned for what would happen to their parents afterward. She concluded that children are not afraid of death unless shown otherwise. Similarly, Murray Bowen (1976) reported that he had never seen a child hurt by exposure to death, but rather only affected by the anxiety of survivors. In each of these explanations, the role of significant others in modeling and shaping behavior for children is implicated to account for some individual differences in the manifestation of grief.

However, much of the research on children's adjustment emphasizes the individual's responsibility to cope with the loss. That is, it tends to focus on personal attributes such as age, sex, and ordinal position, rather than interpersonal patterns of support and communication. In addition, such work focuses on experiences before and at the time of the death, rather than during the subsequent months when adaptation is actually occurring. This continues to be the case although we know that children's early responses to and integration of the loss, their parents' coping, and the family environment also seem to influence later adjustment. Further research is needed on ongoing process variables, to illuminate not only which circumstances and experiences influence a child, but also how these factors operate.

#### Individual Variables Affecting Adaptation

In regard to individual and historical variables, the following have been implicated in at least two empirical studies, with minimal

contradicting evidence from other research: quality of the preexisting relationship with the deceased and of the child's support system (including parental adjustment), prior experience with or knowledge of death, and circumstances of the death. Age of the child at the time of death has also been found to be related, yet the range of estimates for an age of greatest risk includes considerable contradictory evidence.

Nonetheless, the timing of a loss in the life of an individual child also has implications for adjustment reactions. Developmental factors such as cognitive conceptualization of death and extent of dependency on parents clearly play a part in children's adjustment. Several studies investigating children's responses to questions about death and dying have suggested, and generally agreed upon, a series of stages in their understanding (see Kastenbaum, 1981, for a review). However, this progression does not fit neatly with demarcations of chronological ages.

In fact, Koocher's (1973) study of children of average mental ability, aged 6 to 15 years, revealed that the developmental progression of children's thoughts about death is more closely related to their cognitive maturation--as indicated by performance on Piagetian tasks--than to their chronological age. For instance, children whose thinking is primarily preoperational are not likely to comprehend the permanence of death, while the arrival of concrete operations may allow for sensing the irrevocability of death, without perceiving it as the outcome of a biological process (Koocher, 1973; White, Elsom & Prawat, 1978).

Considerable debate over the presence of maturational prerequisites for successful adjustment to death has characterized the theoretical

literature on childhood bereavement, particularly that which takes a psychoanalytic point of view. Estimates of an age at which a child is capable of successful mourning range from six months (Bowlby, 1980) to four years (Furman, 1973) or even adolescence (Wolfenstein, 1966). In his review, Kastenbaum (1981) points out that realistic death concepts are typically expressed by children in the 9- to 11-year-old age range; this cognitive achievement has been posited to relate to children's mourning (Inhelder & Piaget, 1958; Tallmer, 1975).

Yet empirical research suggests that no universal pattern of relationships exists between developmental capacities and responses to death. That is, although attainment of certain developmental milestones may facilitate a child's adaptation to loss, the evidence for any of these being singly determinant is inadequate (e.g., Black, 1978; McCown & Pratt, 1985). For instance, among large, retrospective chart-review studies of adult psychiatric patients who were bereaved in childhood, findings indicative of an age of greatest risk for subsequent psychiatric problems have ranged from prior to age eleven (Brown & Harris, 1978; Brown, Harris & Copeland, 1977) to between ages 10 and 14 (Hill, 1969) and between ages 12 and 18 (Ragan & McGlashan, 1986). Clearly, each of these estimates contradicts the theoretical hypothesis that with greater age and maturity, children are better able to cope with a loss by death.

Retrospective studies of adult psychiatric patients have also suggested that although childhood bereavement itself is not predictive of later disturbance, events and circumstances within the family following the death may affect long-term outcomes. For instance, Birtchnell (1980)

failed to find significant differences between bereaved and nonbereaved female inpatients on psychiatric symptomatology, personality characteristics, or age at the time of psychiatric breakdown. However, those who had bad relationships with at least one mother replacement were more likely to require psychiatric services before the age of thirty. This finding highlights the role of subsequent events in general and of interpersonal processes in particular in the genesis of disturbance following bereavement. The author concludes that this study reveals no evidence that the early death of a mother has any direct influence upon the development of mental illness in adult life, but that within the bereaved group, those women who reported bad relationships with their replacement mothers exhibited some identifiable clinical characteristics.

Similarly, Ragan and McGlashan (1986) found no association between childhood bereavement and adult psychiatric diagnosis. The patients with a parental death in childhood did have significantly greater family pathology, however, as well as impaired social and heterosexual functioning. The authors conclude that their results refute the view that childhood parental death is singularly causal of adult psychopathology in general or depression in particular, but support its role in a multidetermining matrix of contributing factors.

Finally, over thirty years ago, Hilgard, Newman and Fisk (1960) documented the importance of early relationship variables in predicting good and poor long-term adjustment among adults who were bereaved in childhood. Within a randomly selected metropolitan sample of 1,136 subjects, 97 parent-loss cases were identified, 65 of whom participated in

follow-up interviews. These data were compared with information obtained from 256 childhood-bereaved inpatients. The percentage of all hospital patients assessed over a five-year period ( $n = 3,579$ ) with a history of parent-loss (27%) was not significantly higher than in the metropolitan sample (21%). Rather, it was interpersonal events and patterns, particularly following the death, that were recognizable as protective factors against or potentiating factors for later maladaptation.

Protective factors included a compatible relationship and a clear definition of roles between the parents prior to the death, a strong surviving parent who accepts his or her dual role with courage and with a minimum of conflict and who keeps the family together, a network of family or community resources that the parent is able to use, and separation tolerance developed prior to the death. Potentiating factors included little emotional expression by the surviving parent, and dependence, particularly of the mother, on the growing and grown children.

Based on this discussion, it appears that universal laws, such as stages of grief or developmental prerequisites to successful mourning, cannot adequately explain the range of responses in childhood bereavement. Moreover, research has shown that the death itself cannot adequately account for this diversity of outcomes. Better prediction of children's adaptation requires greater attention to differences in individual skills and experiences, particularly variables that mediate or potentiate the effects of static elements such as age, sex, and chronicity of illness. The family's characteristics and interpersonal patterns are proposed to be such

mediational variables, particularly in terms of conveying openness and support.

One way in which such familial support has been conceptualized is in terms of "cohesion." Cohesion has been defined as the degree of commitment, help, and support family members provide for one another (Moos & Moos, 1986), or the extent of emotional bonding and individual autonomy in a family (Olson, Sprenkle, & Russell, 1979). The role of this systems-level construct in family functioning has been explored in a variety of areas, including parental schizophrenia (Janes & Hesselbrock, 1976), adolescent runaways (Steinbock, 1978), alcoholism (Finney, Moos, & Mewborne, 1980), opiate abuse (Filsinger, 1983) and hospitalized adolescents (Lewis, Beavers, Gossett, & Phillips (1976). As will be discussed below, cohesion has also been considered by some authors in examining family adaptation to bereavement, and the proposed research intended to validate the utility of this concept, as well as that of expressiveness, in accounting for the range of outcomes among bereaved children and their parents.

#### Epigenesis of Responses in the Family Context

Viewed from this systemic perspective, it becomes clear that although the single event of a family member's death or terminal diagnosis initiates subsequent processes, actual adaptation to bereavement consists of an epigenetic progression of multiply determined and determining events, each of which contributes to the individual's coping or maladaptation. As such, the development of a successful or pathological grief reaction is similar to the genesis of other behavioral disturbances, with the important difference

that bereavement is not necessarily of itself abnormal. A series of transactions between the child and his\* environment, particularly the family, shapes his responses, and over time takes the form of a pattern of behavior. Empirically-supported hypotheses about the role of such transactions in the development of other, specific behavior patterns suggest this is a useful conceptual model, and one which provides a basis for analyzing the sequences that shape and maintain these patterns.

For instance, with antisocial children, Patterson (1986) hypothesized that disrupted family management skills lead to the development of aggressive and other conduct-disordered behavior. While multiple indicators of child, family, and school functioning were obtained and factor analyzed to build an explanatory model, the transactional process itself was illustrated through microsocial analysis. Precise measurement of family interaction sequences showed that relatively trivial coercive behaviors such as noncompliance, whining, teasing, and yelling by children co-occur with parental threatening, nagging, scolding, and nattering. Longer coercive chains develop, with children engaging in higher amplitude aggressive behaviors, and parents infrequently exploding and becoming physically assaultive. Patterson describes these reciprocally determining patterns as "basic training for antisocial behavior."

Much of the family systems literature, however, is typically more descriptive than prescriptive. The research often relies on constructs that

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\*The author has elected to use the masculine pronoun. The reader may assume that both sexes are represented in all cases.

are neither well operationalized in behavioral terms nor standardized, yet are determined a priori to be meaningful and pertinent, and subsequently are applied as labels to family processes or characteristics (see Foster & Hoier, 1987 for a review). Examples of terms that are often inadequately defined include "role flexibility," "enmeshment," and "coalitions."

Taken together, these comments suggest that while both research and clinical practice with bereaved children would benefit from greater attention to the family as a system and to ongoing transactional processes within it, existing models and methodologies have not yet been applied to produce sufficiently precise assessment of important, systems-level variables, such as cohesion and expressiveness. One purpose of the present study was to develop a reliable, behavioral coding system by which to measure interpersonal behaviors that are both theoretically indicative of these constructs, and inductively determined to be useful in discriminating families with high and low self-reported cohesion and expressiveness, in order to identify factors related to their psychological adjustment in response to the loss of a child.

#### Family Environment and Coping: The Role of Cohesion

As discussed briefly above, cohesion has been conceptualized as a global family attribute related to individuals' provision of and receptiveness to support. As such, research has sought to determine whether a relationship exists between self-reports of cohesion and outcome measures of grief-related behaviors and symptoms: this is an indirect testing of the complex hypothesis that transactions between family

members, especially regarding supportiveness and emotional availability, will influence adjustment to loss.

What is often missing from this research is direct measurement of these relationships; specifically, behavioral validation of communication patterns and verbal reports of actual behaviors and interpersonal attributes that represent cohesion, as they operate in a family's adaptation to bereavement. Nonetheless, the results from these more general inquiries suggest that cohesion may indeed be a useful construct; as such, these studies serve as background to work that directly inquires into the microsocial processes comprising adaptation.

For instance, Weber and Fournier (1985) developed hypotheses about family functioning based on the circumplex model (Olson, Russell & Sprenkle, 1983), which considers cohesion and adaptability to be the fundamental dimensions of family functioning. Decisions regarding a child's participation in death-related activities (particularly mourning rituals) were predicted to be related to scores on family cohesion and adaptability, and active participation was in turn hypothesized to be associated with greater conceptual understanding of death. The study included 91 children between the ages of 4 and 17, from 50 families who had experienced a death between 1 and 44 months prior to interviewing.

A significant relationship between cohesion as measured by the Family Adaptability and Cohesion Evaluation Scale (FACES, Olson, Bell & Portner, 1978) and both decision-making autonomy and participation was demonstrated. Families with higher reported levels of cohesion made decisions for their children, who in turn had the lowest participation

scores. Families with balanced levels of cohesion made decisions jointly and their children had the highest participation scores, but these were not significantly different from those obtained by children from low cohesion families. No significant relationship was established between adaptability and decision making; the authors attribute this to inadequate sensitivity of the measure.

Finally, children who participated more fully in their families' death-related events had a greater conceptual understanding of death, suggesting participation may provide cognitive and emotional support. However, the relationships of age and cognitive development to understanding of death were not considered. Further, the reader cannot rule out the influence of family environment and communication on the child's understanding of death; those children from highly cohesive families who did not participate in the funeral might also have been protected from the facts about death. Nonetheless, this study does suggest that emotional bonding (cohesion) in a family may be related to problem-solving, and in turn to children's direct experience with death and its rituals. What is also needed are data indicating the relationship of these variables to children's expression of grief symptoms.

Balk (1983) addressed this question by administering a structured interview and a self-image questionnaire to 33 adolescents ranging in age from 14 to 19, none of whom were related. The subjects had each lost a sibling by death between 4 and 84 months prior to participation; given that the interview asked about reactions in the first weeks post-loss as well as currently, this broad range of intervening time is a weakness. The data are

presented descriptively rather than in terms of statistics, and family cohesion was estimated from interview reports of open communication and feelings of closeness, rather than a psychometrically-sound, standardized instrument.

Groups of subjects from relatively high- and low-cohesion families expressed different patterns of emotional responses: the former felt shocked, fearful and lonely at the time of death and depressed at the time of interview, while the latter reported feeling guilty and angry at the time of death and confused, fearful, lonely, and somewhat relieved at the time of interview. Interestingly, this pattern of results does not suggest that either high or low family cohesion is conducive to successful adjustment. Perhaps further inquiry would suggest that the author's decision to divide cohesiveness ratings at the median may have obscured meaningful differences between subjects at the extremes on this dimension.

In another study looking at the relationship of family environment to self-esteem and adjustment among adolescents, Partridge and Kotler (1987) compared adolescents from 54 intact, divorced, and paternally bereaved families. Subjects were recruited from a nonclinical population, and matched for sex, age, birth order, family size, SES, time since separation, and mother's present marital status. This methodological rigor lends credibility to the findings.

Adjustment was determined from items answered by the mother about her child, including desirable and undesirable behaviors. Family environment was determined from answers provided by both mothers and adolescents, on such topics as cohesion, mutuality, autonomy, support and

stress; again without a standardized instrument. Results showed that family type (intact, divorced or bereaved) was not significantly related to self-esteem, adjustment, or any of the family environment variables, while family environment correlated significantly with both adjustment and total self-esteem, as well as self-esteem subscales of behavior, anxiety, popularity, and happiness.

Failure to support a "family deficit model," which predicts impaired functioning in father-absent families, in conjunction with evidence for the influence of the family environment, highlights the need for attention to family processes. The ability of families to be flexible and supportive when confronted with change may be important in determining their level of functioning; at the same time that some intact families may have rigid expectations that discourage successful adaptation, some father-absent families may be capable of adjusting to changed circumstances. "Family types" are not homogeneous, and the degrees of cohesion and adaptability that differentiate them may be of considerable scientific and practical utility.

Mulhern, Lauer & Hoffmann (1983) also found family environment measures of cohesion, independence, and moral and religious emphasis to differ between families who had a child die of cancer either at home or in the hospital. Families who participated in the home care program reported significantly more commitment, support, and ethical and religious values, and significantly less assertiveness and self-sufficiency, as indicated by the Moos Family Environment Scale (Moos, Insel & Humphrey, 1974).

Between 3 and 29 months after the death, siblings in home care families were rated by their mothers as exhibiting behaviors well within normal limits on the standardized Louisville Behavior Checklist (Miller, 1977), while the siblings of patients who were not provided home care showed fears and neurotic behavior in the clinical range. These subjects also showed more social isolation, sensitivity, fear, and somatic behaviors than their home care counterparts, and fewer socially valued qualities.

The parents who did not provide home care scored higher on seven clinical scales of the Minnesota Multiphasic Personality Inventory, assessing somatic complaints, depression, denial of problems, anxiety and self-doubt, expression of anger and social maladjustment, alienation and self-dissatisfaction, and social withdrawal. It is important to note that several of these characteristics are typically stable over time (e.g., anxiety and alienation), and so may have influenced parents' decisions to participate in the home care program in the first place, which was voluntary.

Similarly, family environment variables may have contributed to parents' assessment of their ability to care adequately for their child at home, although these early data are not directly available here. That is, both parental adjustment and family environment may be related to decisions about caring for a terminally ill child at home, which in turn influences family cohesion and the adjustment of both parents and siblings following the patient's death. This research provides further support for the contention that ongoing processes and patterns in the family are part of a transactional epigenesis that determines subsequent events, which in turn contribute to adjustment.

In conclusion, empirical evidence suggests that global indicators of family functioning, especially cohesion (commitment and support), are related to adjustment following a death, as well as to decision-making and participation in death-related events. However, because this work typically relies on unstandardized and self-report measures without behavioral referents, the present research intended to examine actual interpersonal processes that may discriminate families with good and poor adjustment, and the relationship to ongoing adaptation (as indicated by a six-month follow-up assessment) of such interactions relatively proximal to the death.

### Expressiveness and Adjustment

A second systems-level concept that has been implicated in research with bereaved families, and which is also representative of transactional processes between individuals, is expressiveness. Here again, as in studies looking at cohesion, interview data and self-report measures are employed as indicators of the variables of interest; in this case primarily communication patterns and particular expressions of feelings, thoughts, and beliefs surrounding the bereavement process. The intended purpose is to delineate communication styles that characterize families who adjust successfully to loss.

Davies, Spinetta, Martinson, McClowry, and Kulenkamp (1986) explored the communication patterns and other systems-level attributes of 111 bereaved families, by applying a theoretical framework describing functional and dysfunctional coping with death (based on McCubbin & Figley, 1983) to interviews obtained between 2 and 9 months postloss.

Unfortunately, methodological issues present some difficulties in drawing firm conclusions. The authors relied on a priori assumptions about what constitutes functional adaptation in order to delineate subsets of families who appeared to be at the extremes of functionality or dysfunctionality--without any standardized measures of adjustment--and then explored the content of these interviews for specific examples of those attributes, creating a danger of obtaining the expected results via a Rosenthal effect. Therefore, a conservative interpretation would suggest that the characteristics of families who cope effectively cannot be definitively identified by this study. Rather, it provides preliminary evidence for observable patterns of interpersonal behavior that may be related to adjustment. Again, greater standardization and use of operational terms is a necessary direction for future work.

Families were determined to differ on twelve elements of "functional coping," such as openness, a process focus, and acceptance of vulnerability. No information is provided on how particular patterns may have clustered together, or whether they were present in all "functional" families. Additional work is needed to determine the relationship between these self-reports and overt behaviors, and between such patterns and objective measures of adaptation.

One of the few controlled intervention studies with bereaved families that is available (Black & Urbanowicz, 1987) also shows how expressiveness within a family may be related to measures of adjustment. In addition, this study suggests how changes may be brought about by a preventive intervention. Thirty-three families initiated treatment, of

which 22 completed four to six treatment sessions (the majority completing six), and 34 families were assigned to a no-treatment control group. Twenty-one treatment-group families and 24 control families participated in a one-year follow-up; 21 and 18 completed the two-year follow-up, respectively.

Family therapy sessions took place in the home, spaced at 2-3 week intervals, approximately 2-3 months after the death. The aims were to promote mourning in the children and surviving parent, and to improve communication between them, especially in regard to the death. Follow-up interviews acquired information on the children's health and behavior, the parents' health and psychiatric state, and the death and events surrounding it. Information about the children was also obtained from the schools when possible.

Data from the one-year follow-up interview suggested the treatment group had done slightly better than the controls in terms of behavior, mood, and health. Significant differences showed the children were less restless and engaged in less nailbiting, and the surviving parents of children over five were less depressed. At the time of the two-year follow-up interview, most significant differences had disappeared; the only one which remained was the surviving parents having better health in the treatment group.

Non-significant trends from the first year's interviews suggested that among treatment and control groups combined, children over five who cried more and talked about the dead parent in the month following bereavement had fewer and less serious behavioral and emotional problems. The well-being of the surviving parent, including grief, worry, depression,

suicidal thoughts and physical health, was also associated with fewer behavior problems in the children. The intervention seems to have facilitated these outcomes, as it was associated with increased crying scores and decreased parent problems, and with a decrease in children's behavioral problems.

For the purpose of the present paper, these findings imply that the death itself does not necessarily lead to a cluster of behavioral consequences, but rather the events and ongoing processes following the death, particularly those regarding emotional expression and verbalization within the family, may be influential in determining the adaptation of both children and their parents.

These conclusions are also important in their implication that expressiveness and overtly expressed support are better than their absence (no data are available on the behaviors that replaced these in the other families). This is consistent with the findings of Davies and others (1986), but contrast with Balk's (1983) failure to find evidence for higher cohesion being associated with better outcome among bereaved adolescents. Standardized measures of adjustment and blind ratings are still needed in order to solidify support for the hypothesis of many family therapists that openness, expressiveness, and overt support are "healthy" (e.g., Bowen, 1976; Minuchin, 1974).

One such study was done by Spinetta, Swarner and Sheposh (1981), who concluded that openness of communication is beneficial for both the surviving family members and the terminally ill child. Objectively scored statements from structured interviews with 23 families who had lost a

child to cancer within the past 3 years indicated that three major factors were related to the success of adaptation. Parents who were best adjusted were those who (1) had a consistent philosophy of life during the child's life, which helped the family accept the diagnosis and cope with its consequences, (2) had an ongoing, supportive relationship with a significant other, usually a spouse, and (3) gave their child the information and emotional support he or she needed during the course of the illness at a level consistent with the child's questions, age, and level of development. In each of these elements, open communication plays an important and beneficial part.

Similarly, Rando (1983), in a sample of 27 married couples who had lost a child to cancer, found that anticipatory grief (e.g., discussing with someone the possibility that their child would die, or making funeral preparations) was associated with a low level of abnormal or atypical grief responses, as well as with more participation during the child's hospitalization (e.g., rooming in, or helping hospital staff with procedures). Non-significant trends suggested that support was also positively related to anticipatory grief, and that participation was related to subsequent adjustment. Thus it appears that relationship and communication variables, notably support and anticipatory grief, may encourage involvement with the ill child, which in turn may work together with these factors to promote successful adjustment after the death.

In conclusion, findings from research suggest that families differ on distinct and measurable indicators of expressiveness, and these patterns appear to be related to both short- and long-term adjustment to loss. This

preliminary evidence provides guidelines for discriminating functional from dysfunctional families and subsequently predicting their long-term outcome, and as such provides direction for the present work: what is now especially needed is more rigorous conceptual validation of "cohesion" and "expressiveness"--particularly as they relate to bereavement--through the use of not only standardized instruments, but also direct observations of family interaction.

### Theoretical and Conceptual Issues in the Assessment of Families

Issues in behavioral assessment of family systems variables have been discussed elsewhere. For instance, Foster and Hoier (1982) have compared the theoretical assumptions of behavioral and family systems therapies, and pointed out that the behavioral tradition has typically focused on descriptions of individual behaviors and the interpersonal contingencies that control those behaviors, rather than on the organization of the family system. Here, it is assumed that distressed families either lack or fail to use the skills necessary to alter the variables that control their behavior. These skill areas consist primarily of parenting, problem solving, and communication.

A family systems conceptualization views individual behaviors as important only in that they represent part of system functioning. Systems terms do not refer to specific sets of behaviors, but rather are constructs for viewing classes of interaction, types of family organization, and change processes (Foster & Hoier, 1982). For example, cohesion is a structural dimension, while expressiveness refers to an interaction process. Therapeutic interventions are designed to upset system regularities, for

instance by breaking coalitions, restructuring cognitions, or otherwise rerouting repetitive interactive patterns. As such, the goal of a systems intervention is not to change the behavior of any single individual, but rather to alter the structure of the system.

Both behavioral and family systems views emphasize observable regularities in interpersonal processes, and see problems as serving some function within the family and as being maintained by family processes. While behavioral descriptions are characterized by their direct relationship to observables, operationalizability, and molecular bias, systems descriptions are typically inferred from observations of interactions, are less specifiable, and represent molar level constructs. An area of rapprochement between these fields is greater use of molar descriptors by behavioral researchers (e.g. coercion), and greater emphasis on operationalized definitions and empirical bases by systems investigators; for example, Gottman's (1979; Mettetal & Gottman, 1980) work with the concept of dominance, and Barton and Alexander's (1980) work with intimacy and distance (Foster & Hoier, 1982).

Further, increased attention to interlocking contingencies by behavioral researchers (e.g. Patterson) shows a shift away from models implying linear causality, toward the notion of circular causality long espoused by systems theorists. According to Foster and Hoier (1982), further pursuit of these trends could assist both fields in overcoming some of their present limitations. Most pertinent to the present project, these authors have suggested that the methodology and concepts of behavioral assessment may allow for direct assessment of family process, in order to

demonstrate empirically and to define operationally systems constructs such as cohesion.

In their work with parent-adolescent conflict, Foster and Robin (1989) have speculated that higher-order descriptors borrowed from family systems theory, such as coalitions, triangulation, enmeshment, and disengagement, may be useful in creating molar-level response classes for describing family interactions. However, existing instruments purporting to assess these systems-level dimensions often lack the precise operationalization of the concepts that is required by behavioral assessors, and may show little evidence for content or convergent validity (Foster, 1987). Here again, this author has suggested that operationalizing systems-level constructs, developing reliable and valid methods for their assessment--with a special emphasis on content validity--and testing their predictive and discriminative power are needed in order to evaluate their utility for behavioral assessment of families.

Another important conceptual issue in the assessment of families pertains to defining and categorizing relevant dimensions. Forman and Hagan (1984) used a categorical schema developed by Fisher (1976) to compare ten standardized instruments designed to assess the entire family system. The dimension receiving greatest attention was Structural Descriptors, suggesting this domain may account for a substantial proportion of variance in family functioning. This category includes such descriptors as roles, alliances and communication patterns.

Both cohesion and expressiveness fall under this organizing label. In fact, cohesion is represented either by name or by function in nearly every

assessment method reviewed by these authors. However, this overarching concept actually spans several dimensions, making unclear the extent to which the various scale items and terms can be interpreted as representing a unitary construct that might be labelled "cohesion." To illustrate, Russell (1980) measured family cohesion using three self-report instruments: the Family Environment Scale (Moos, Insel, & Humphrey, 1974), the Bowerman and Bahr (1973) identification scale, and the Family Sculpture Test (Kvebaek, 1979). Results indicated a near zero validity correlation between the FES and each of the others, leading the author to suggest that the FES is actually measuring support rather than a feeling of emotional bonding within the family. On the other hand, significant correlations were obtained for the FES when assessing discriminant validity, and when comparing convergent validity between measures to discriminant validity within measures.

According to Forman and Hagan (1984), assessment of total family functioning is a field in its infancy, as indicated by the few standardized procedures available to operationalize constructs and by the wide diversity of behaviors that are included in conceptualizations of family competence. The broad array of methodologies suggests that adequate procedures for empirical study of family systems may still be lacking. Moreover, because the scientific process requires reducing observations of complex systems into manageable parts, discrete and discontinuous samples of behavior ironically constitute the data on system functioning. These authors have recommended that the next, necessary step for this field is to demonstrate

empirically the validity of the constructs currently advocated by systemic modes of thinking.

### Methodological Issues in the Assessment of Families

Similarly, a problem with the existing empirical literature regarding the role of cohesion, expressiveness, and other family-level concepts in adaptation to loss is that a variety of methods have been used to assess these dimensions, making comparison across studies a somewhat speculative endeavor. In fact, numerous authors have discussed the difficulty of operationally defining such constructs, and the lack of consistent meanings in various studies. For example, Grotevant and Carlson (1987) point out that the same behaviors may be labelled with different constructs based on their theoretically derived function. A theory that emphasizes relational aspects of interaction will label behavior in these terms, while another systems theory may recognize the same behavior as indicative of an individual quality. For instance, "permeability" reflects a relational dimension, while "support" indicates a more individual quality. These authors suggest that findings from research studies derived from different theoretical paradigms should be compared with caution.

In the same way, Green, Kolvezon and Vosler (1985) also raised the question of whether two different models mean the same thing when they refer to a construct such as "cohesion," in their empirical comparison of the Beavers-Timberlawn model of family competence and the Circumplex model. Indeed, Russell (1980) has pointed out that family cohesion has a central role in several major theories of family functioning (Bowen, 1960; Lidz, Cornelison, Fleck, & Terry, 1959; Minuchin, 1974; Wertheim, 1973; Olson,

Sprenkle & Russell, 1979), yet has remained very difficult to operationalize. Others have proposed hypothetical links between two theories that seem to employ similar constructs, and pointed out that the original paradigms are likely to differ in their uses of a concept that may be invoked to explain observed differences. For instance, pragmatic aspects such as the family's response to the investigator may figure largely in one model, while another model emphasizes family characteristics that are not influenced by the interpersonal research context (Sigafos, Reiss, Rich, & Douglas, 1985).

Moreover, the methods utilized by different studies may contribute to inconsistencies in the concepts being studied. As Foster (1987) points out, the use of self-report measures assumes the individuals' responses are directly and primarily influenced by the behavior that is specified in the item. Yet other influential factors may include labeling practices, distortions in recall, and response sets. To complicate the issue further, a self-report measure may reveal how family members perceive the family and describe it to an investigator, while a behavioral observation measure may show how family groups behave in a situation with unclear external demands. Although both may purport to show "cohesion" or "adaptability," they may show no association: this highlights the need for caution in considering descriptive labels at face value (Oliveri & Reiss, 1984).

This important role of the research context has been variously discussed in the literature on behavioral observation of family interaction, and particularly in inquiries into the convergence between different methods of measurement. Self-report measures provide the "insider's" perspective, while behavioral measures capture the "outsider's" perspective

(Olson, 1985); the former sets up a transaction between the investigator and the individual, while the latter creates a transaction between the investigator and the family group (Sigafos & Reiss, 1985). Further, the level of specificity--either global or molecular--differs with these diverse methods. Because the family members are insiders, they judge their family interaction according to more global experiential concepts, while outside observers use more molecular concepts to represent what they perceive about the family (Kog, Vertommen, & Vandereycken, 1987).

Each of these characterizations has been employed to explain the lack of convergence between self-report and behavioral methods of assessing family interaction variables when it occurs. However, this result is not consistently obtained, suggesting additional factors related to the specific measures in question may also play an influential role. For instance, the definitions of behaviors to observe may have no relationship to the items comprising a self-report subscale, although a proposed similarity between the names of the behavior (e.g. "support") and the subscale (e.g. "cohesion") may have face validity. In order to address this issue, the present study began by defining behaviors theoretically linked to subscale items, as well as deriving additional behaviors through an inductive analysis. Below, a review of empirical work examining the relationship between self-report and behavioral measures of cohesion, expressiveness, and related systems-level constructs will provide examples of these assessment issues.

Hannum and Mayer (1984) examined the validity of the FES subscales of cohesion, expressiveness, conflict, and control by considering the relationship of subscale scores to observable interactional behavior. The

latter was measured using the Family Interactional Coding System (FICS; Hannum & Casalnuovo, 1978), which includes categories such as agreement, support, constructive problem solving, democratic process control, and compliance. Hypotheses predicted significant relationships between FES cohesion, expressiveness, and conflict with the FICS categories of agreement, support, disagreement, and nonsupport; and FES Control with FICS authoritarian and democratic process control. The sample consisted of twenty-two families receiving family therapy.

Results indicated no significant or near-significant correlations between the cohesion and control subscales and their predicted behavioral counterparts. Expressiveness showed a positive correlation with nonsupport, total talk, and the combined negative category of disagreement plus nonsupport. Conflict showed negative correlations with an agreement/disagreement ratio, a constructive/nonconstructive problem solving ratio, and noninvolvement. Exploratory analyses suggested that a family's agreement was best predicted by the self-report scale of organization, while the most consistent correlations with negative behaviors were associated with the achievement orientation subscale.

Importantly, however, the authors point out that by having the families discuss an unresolved problem area, they may have inadvertently promoted conflictual behaviors and discouraged supportive behaviors. They recommend that further study of the validity of the cohesion scales should include more neutral behavioral tasks, that may permit more positive interactions. In the present study, the videotaped session consisted

primarily of telling the story of the child's death: this open-ended task encouraged neither agreement nor disagreement in particular.

Filsinger (1983) developed the Dyadic Interaction Scoring Code (DISC) and used it to assess the problem solving behaviors of 35 couples who were or had been involved in the use of opiates. Comparisons were made between the rates of individual behaviors and obtained scores on the FES cohesion scale, as well as self-reports of session satisfaction. Results showed that the husband's family cohesion score was negatively related to his negative self-statements and references to drugs, and to his wife's average speaking turn, and positively related to his positive self-statements. The wife's family cohesion score was negatively related to her number of disagreements and commands, to her speaking time, and to her husband's negative self-statements, and positively related to her husband's positive self-statements. Lag sequential analyses indicated that both negative reciprocity and negative reaction were negatively correlated with family cohesion and session satisfaction, not only in the first lag but also in the second and third.

In another study of self-reported and observed family characteristics, Oliveri and Reiss (1984) administered the FES and the Card Sort Procedure (CSP; Oliveri & Reiss, 1981) to 30 nonclinical family triads, consisting of two parents and an adolescent child. The CSP is a problem solving task which yields behavioral observations of family configuration, coordination, and closure. None of the thirty-three correlations testing the degree of association between the eleven FES dimensions with the three CSP dimensions were significant, even at the marginal level. The authors

conclude that future studies need to define more precisely the family and individual variables being measured, in order to delineate the family properties that are uniquely assessed by each instrument. As mentioned above, the present project intended to achieve this goal by deriving a behavioral code that is explicitly conceptually similar to the self-report instrument.

Studies have also empirically evaluated other measures of family level concepts, in addition to the FES. Russell (1979) examined the relationship of self-reports of adaptability and cohesion to behaviors as observed using the Simulated Family Activity Measurement technique (SIMFAM; Straus & Tallman, 1971). Factor analysis revealed that family adaptability and cohesion loaded on separate dimensions, while the behavioral measure of family support loaded with family cohesion. Moreover, self-report and behavioral measures of cohesion loaded together. This pattern of results contrasts with Filsinger's (1983) report that observed supportive behaviors are generally unrelated to self-reported cohesion.

Tests of hypotheses pertaining to the relationship of these factors to family functioning generally supported a curvilinear model, in which high family functioning is associated with both moderate cohesion and moderate adaptability. Since this study included nonclinical families recruited through a church, the author suggests that further testing should focus on families with various types of problems and at different stages of the family life cycle, in order to provide a more comprehensive assessment of the validity and utility of the circumplex model.

Finally, the difficulty of assuming unity within a concept not only across methods but also across theoretical models was illustrated in a study by Green, Kolevzon, and Vosler (1985). They developed the Beavers-Timberlawn Family Evaluation Scales (BTFES), based on the Beavers-Timberlawn model of family competence, and used it to code videotapes of three standardized discussions, in addition to obtaining self-reports of cohesion and adaptability using the FACES, which is based on the circumplex model. Raters' BTFES scores and subjects' FACES scores were not correlated for fathers or children, but a significant, low magnitude relationship was obtained for mothers. When a self-report measure based on the BTFES was employed, a significant relationship was found to raters' BTFES scores, and for mothers' and children's reported cohesion scores on the FACES. These findings provide some evidence for the stability of measures of cohesion, yet caution against the comparability of observed behaviors based on one model with self-report scores based on another. In conclusion, the authors point out that neither concurrent nor predictive validity was established by this study, and that prediction of individual and family characteristics using these models awaits further investigation. In addition, they suggest that subsequent research not focus on attempts to find the common core or the irreducibles of family life, but rather include attention to more subtle and complex sources of variation. Finally, it was noted that the authors of both of the circumplex and Beavers-Timberlawn models have asserted that the adaptability dimension is more problematic than cohesion; this study provides empirical evidence.

Among those studies that fail to find a relationship between self-report and behavioral methods, the authors commonly propose that these results do not indicate that one method is necessarily better or more useful than the other, but rather that they simply tap complementary components of the same dimension or each contribute meaningful information for understanding family functioning (Kog, Vertommen, & Vandereycken, 1987; Olson, 1969). That is, both the observer's objective quantification of certain behaviors and the participant's subjective experience of an atmosphere within the family may be helpful to a researcher or therapist conceptualizing the family's functioning. Nonetheless, Hannum and Mayer (1984) point out that the validity question cannot be dismissed easily.

The extant research in the area has focused on convergent and discriminant validity; a failure to demonstrate the former in particular does not indict one method or the other, especially when complementarity due to method differences is a useful explanation. Yet further inquiry and concept validation, especially including predictive and criterion-related validity, may indeed provide evidence for the superior utility of one method over the other. Criterion-related validity should particularly focus on the ability of two different methods to discriminate high- from low-functioning families.

For instance, although they did not directly compare self-report and behavioral measures of parent-adolescent conflict, Robin and Weiss (1980) discuss this question in general. They report that both types of measures successfully differentiated between distressed and non-distressed dyads, but the behavioral method was able to account for 25% more of the variance than either of the self-report methods. However, this inquiry was not

specifically directed at any family-level concepts. Extension of such currently available data was a primary goal of the present project.

#### Inductive Assessment Procedure

Thus far, this review has discussed the apparent value of several theoretically-derived family interaction variables which have received preliminary empirical support in research on childhood and family bereavement, albeit in the absence of actual, reliable observations of family communication patterns. Moreover, evidence for the utility of conceptually-based self-report and observational assessment strategies in general has been presented. In other, specific areas of behavioral assessment, however, most notably children's assertiveness skills, excessive reliance on theoretical hypotheses and exclusively deductive logic have been targets for criticism (Weist, Ollendick & Finney, 1991). A proposed alternative relies on empirical validation of selected treatment targets, which has been defined as "the use of observation or experimentation to demonstrate a positive relationship between the selection of specific behavioral targets and the occurrence of reliable and valid indices of outcome associated with changes in those targets" (Weist & Ollendick, 1989). This approach has indicated the utility of inductively-derived treatment targets in predicting adjustment among assertive and unassertive boys (Weist & Ollendick, 1991), disadvantaged children's interpersonal problem-solving skills (Shure & Spivack, 1979), and management of pediatric diabetes (Weist, under review).

The essential feature of this validation strategy is the identification of targets for intervention which will be meaningfully related to enhanced clinical outcomes. In the case of family adaptation to bereavement, the

process of defining appropriate treatment targets is in its infancy. As discussed above, many of the variables that have been found to be related to adjustment are static, historical attributes of the person or event, which are not amenable to change through therapy. These include the temporal proximity and expectedness of the loss, as well as the bereaved child's age, sex, and previous relationship with the deceased. Additional research that has looked into the role of family communication variables has suggested a relationship to children's adaption; here, an essential clinical benefit is that interaction patterns may be influenced through family therapy. As described above however, what is still needed is a valid observational measure of such sequences.

In working toward the goal of empirically verifying reliable measures of family interactions as they relate to adjustment, the present study included an inductive inquiry into the nature of these patterns, as a supplement to the exploration of deductively-derived classes of behavior. In this procedure, no a priori assumptions or hypotheses were tested. Rather, directly observed interpersonal behaviors were quantified, and their relationships to other measures of adjustment were determined. These behaviors included nonverbal gestures, conversational turn-taking, overt expressions of emotion, and quantity of speech--none of which were included in the deductively-derived codes. As such, the intention for the study as a whole was twofold: first, reliable, empirical support for the role of proposed, theoretical constructs (cohesion and expressiveness) in family adaptation to bereavement was investigated, and second, subsequent

inductive exploration indicated the utility of additional interactional variables which had not as yet been considered.

#### Derivation of a Clinical Intervention Protocol

While not unanimous, the majority of data on family bereavement reviewed above, and that which was most rigorously analyzed, indicates that family variables as they affect children's adjustment are manifest primarily in the domains of cohesion and support, openness of expression, parental coping, and flexible change in response to the loss. Consistent with such findings, clinical interventions with bereaved individuals and families have intended to promote these general categories of responses, such as support for significant others and attention to their individual needs, and open expression of grief. The previously described intervention study by Black and Urbanowitz (1987) provides an example of this approach.

Elsewhere, authors have recommended that clinicians utilize these strategies with their bereaved clients. Salladay and Royal (1981) state that the overwhelmingly consistent recommendation by professionals is for parents and therapists to help the child realistically confront, understand, and accept the death, and to encourage grieving. Paul (1973) also emphasizes the need to allow for open grieving, including detouring around the family's proscriptions against it. More specifically, the therapist must model and encourage empathy for individual family members' honest self-expression. Raphael and Nunn (1988) suggest that the clinician facilitate support within the family as members work through issues of ambivalence and dependence, while Valeriote and Fine (1987) view changing the old

family structure, to leave out the deceased child, as an important goal of family therapy.

The intervention protocol for which subjects in the present study were recruited was derived from such clinical and research sources. For instance, the treatment manual (Kemler & Koocher, 1988) explains that clinicians should point out differences between family members' grief reactions and ways of coping, and encourage their support for one another. Thus, it must be recognized that these behaviors by clinicians are intended to affect the interactional patterns of the families in the study, at the same time as they seek to emphasize respect for individual differences in ways of grieving. Consequently, the present research included measures of specific therapist behaviors that may influence the amounts of self-expression, emotion, and support exhibited by the families.

The guidelines for the initial intervention session, as described in the project treatment manual, state that the clinician's role is to provide a safe, non-judgmental setting in which each family member has an opportunity to express his own ideas, reactions, and feelings about what happened. It is proposed that even this presenting of different perspectives may form a foundation for additional communication and provision of support within the family. The clinician facilitates this sharing by openly asking direct questions about the death, accepting and tolerating the expression of strong emotions, and respecting differences in coping. In addition, she may need to educate families about children's comprehension of death, discuss issues pertaining to protectiveness or separations, or manage communications between members that are blaming in nature, as

they arise. This description provides an outline of the goals of the first intervention session, as well as a sketch of the clinician's role in achieving those objectives. Appendix A provides more details on the protocol for this session.

### Goals of the Present Project

This review has discussed relevant issues in the areas of childhood bereavement, adaptation in the family context, and assessment of family interactions and systems-level constructs. Several conclusions may be drawn from this discussion. Understanding and prediction of children's adaptation to loss requires attention to family characteristics and interpersonal patterns, in addition to individual variables such as age, sex, and the circumstances of the death. Empirical inquiries into such family variables have indicated that the concepts of cohesion and expressiveness in particular may be useful in explaining differences in members' adjustment. However, this work has relied primarily on self-report measures, oftentimes derived from unstandardized interviewing procedures.

At the same time, validation studies of various family assessment measures have shown that while coherent and meaningful concepts can be identified, self-report and behavioral measures often do not converge, suggesting that different and possibly complementary concepts are being tapped by these divergent methods. Moreover, these studies have focused almost exclusively on convergent and discriminant validity, leading various authors to propose that further construct validation is necessary, including demonstration of the utility of these constructs in differentiating families

with various types of problems. Finally, the few studies that have compared the utility of self-report and behavioral methods have suggested that the latter may be better able to discriminate distressed from nondistressed families, and to fit with existing theoretical models.

The primary purpose of the present study was to provide further validation for the concepts of cohesion and expressiveness, particularly as they may be able to account for differences in families' adaptation to the loss of a child by death. As such, several different assessment methods were employed, and conceptually-meaningful behaviors and self-report subscales were compared. Results revealed identifiable and distinct interpersonal behaviors and family-level concepts that are useful in predicting good and poor adjustment, both proximal to the death and after nine to fifteen months have passed.

## Hypotheses

1. FES Cohesion subscale scores will be positively correlated with behavioral observation measures of cohesion (convergent validity).

2. FES Expressiveness subscale scores will be positively correlated with behavioral measures of expressiveness (convergent validity).

3. Self-report (FES) and behavioral measures of cohesion will correlate higher than will the FES measure of cohesion with a behavioral measure of expressiveness, or an FES measure of expressiveness with a behavioral measure of cohesion (discriminant validity).

4. Self-report (FES) and behavioral measures of cohesion will correlate higher than will the FES measure of cohesion with an FES measure of expressiveness, or a behavioral measure of cohesion with a behavioral measure of expressiveness (discriminant validity).

5. Self-report (FES) and behavioral measures of expressiveness will correlate higher than will an FES measure of expressiveness with a behavioral measure of cohesion, or an FES measure of cohesion with a behavioral measure of expressiveness (discriminant validity).

6. Self-report (FES) and behavioral measures of expressiveness will correlate higher than will an FES measure of expressiveness with an FES measure of cohesion, or a behavioral measure of expressiveness with a behavioral measure of cohesion (discriminant validity).

7. Behaviors indicative of expressiveness will be negatively correlated with measures of parental depression and child behavior problems: families who are more expressive will have lower scores on the BDI and PSC (criterion-related validity).

8. A linear regression analysis will show that behavioral and self-report measures of expressiveness are more useful in predicting parental depression and child behavior problems than are traditionally employed variables such as the child's age, elapsed time since the death, and whether the cause of death was acute or chronic (criterion-related validity).

9. Behaviors indicative of cohesion will have a curvilinear relationship to parental depression and child behavior problems: families who exhibit behaviors indicating either very high or very low cohesion will have higher scores on the BDI and PSC, while families with moderate cohesion will have lower scores on these measures (criterion-related validity).

10. A linear regression analysis will show that behavioral and self-report measures of cohesion are more useful in predicting parental depression and child behavior problems than are traditionally employed variables such as the child's age, elapsed time since the death, and whether the cause of death was acute or chronic (criterion-related validity).

11. A profile of self-reported behavioral indicants of distress (i.e., consumption of alcohol, difficulty sleeping, missing days of work, seeing a physician, and taking medication for adults, and parental discipline, difficulty sleeping, missing days of school, seeing a physician, taking medication, and academic or behavioral problems in school for children) will be associated with a family's degrees of cohesion and expressiveness (criterion-related validity).

12. At the six-month follow-up assessment, behavioral and self-report (FES) measures of expressiveness and cohesion (obtained at the

initial assessment), will again be correlated with measures of parental depression and child behavior problems. Again, this predictive utility will be obtained even in conjunction with other variables, including depression and behavior problem scores at the time of entry to the study (predictive validity).

13. Clinician behaviors of "acknowledging," "requesting information," "recapitulation," and "describing normal grief" will not be significantly correlated with behavioral measures of cohesion or expressiveness.

## Method

### Subjects

Subjects were 38 of the participant families in the Family Bereavement Project (FBP), an ongoing research project funded by the National Institute of Mental Health (Gerald P. Koocher, Principal Investigator) for the years April 1988 through March 1992, which includes an intensive, preventive intervention with families who have lost a child through death. Subject participation criteria and recruitment procedures are defined in the grant proposal; the following descriptions are based on that text.

Inclusion criteria for participation required an intact couple, preferably with at least one surviving child. Deaths due to all types of causes were admitted, with the exception of cases in which a family member was suspected of inflicting the injury that caused the death, or if the attending physician of the deceased child cites contraindications to their participation. Each of these categories of excluded families might have either contaminated the study's sample or put participants at some special risk.

Potential participant families were located through searches of death certificates and medical records at Children's Hospital in Boston, as well as referrals from area funeral directors, public school counseling personnel, clergy, physicians, health maintenance organizations, and newspaper obituaries. Once a deceased child was identified, if he was recruited from the hospital, the attending physician of record was contacted and asked whether there were any contraindications to inviting the family to

participate. If there were none, a direct invitation was mailed to the family with a postpaid envelope to be returned, indicating whether the family wished to be contacted further. If no response was received within two weeks, one of the staff clinicians contacted the parents by phone to describe the project. Interested families were then given additional information; if they agreed to participate, an initial interview was scheduled.

Some characteristics of the present sample were as follows. Two-thirds of the sample were business- and professional-level families, based on the Hollingshead four-factor index of socioeconomic status (Hollingshead, 1975). The remaining third of the sample consisted of skilled and semi-skilled workers. Seventy-one percent of the families had one surviving child, while 16% had more than one. Thirteen percent ( $n = 5$ ) had no surviving children. Fathers were an average of 37 years old, while mothers had an average age of 35 years. Forty-eight percent of the surviving siblings were five years old and younger, and an additional 32% were between the ages of 6 and 10. Thirty-nine percent of the deceased children were under one year old at the time of death, while three-quarters of the sample were 5 years old and younger. Sixty-one percent of the deceased children were the last-born, with approximately two-thirds of the surviving siblings being older than the deceased.

Human subjects' approval for the FBP was obtained from the Institutional Review Board of Children's Hospital Medical Center. In going beyond the FBP's own data collection procedure, the present research added systematic review and analysis of videotaped sessions. Because informed

consent for participation in the project, including videotaping of sessions and review of these tapes by project staff, was obtained from families, further consent for participation in the present study was not necessary.

Those families who declined to be taped were not included. Thus, participants consisted of 38 families who agreed to be videotaped and who entered the project after February, 1990, when tapes of sessions began to be stored archivally. Two families agreed only to audiotape, and so were included only in the portion of the study that was based transcripts of the session, and excluded from the section that relied on actual observation. Two other families did not complete the intervention but dropped out of the study following the first session. However, they did fill out the six-month follow-up assessments. Three families completed the intervention but declined to participate in the follow-up; therefore the  $n$  for these analyses was 35.

### Setting

Intervention sessions took place in the office of the FBP. This environment was arranged as a small therapeutic setting, with a reception room and intervention room. Sessions were scheduled individually, such that any single family was the only one present at a given time. Video equipment was set up in a closet in the intervention room, behind one-way glass.

### Measures

In order to obtain well-standardized measures of individual adjustment, the FBP staff selected a self-report instrument pertaining to adult depression, and a child behavior problem checklist that a parent

completes for each child. In addition, parents completed measures of family environment. Each of these instruments was selected because it had been used effectively in previous studies, had sound psychometric properties, and included total or subscale scores that were directly related to experimental hypotheses. In order to provide further information, a questionnaire pertaining to behavioral indices of distress was developed by the project staff. The present study also incorporated each of these measures. The instruments were completed at the time of the family's entry into the project and approximately six months after their initial session.

In addition to these assessments that were part of the FBP, the present study also obtained behavioral measures of family interaction. This behavioral coding comprised several categories of observation: both deductively- and inductively-derived measures of family interaction, as well as measures of clinician behavior, were obtained from the transcripts and videotapes of initial intervention sessions.

Self-Report Measures: The Beck Depression Inventory (BDI; Beck & Steer, 1987) was used to assess severity of parents' depressive feelings. Its 21 items consist of a series of ordered statements relating to particular symptoms of depression. The BDI is well-known and widely used, and considerable psychometric data have been accumulated. It is sensitive to clinical change, and is frequently used as an outcome measure in therapeutic outcome studies (Rehm, 1981). Internal consistency estimates based on Cronbach's coefficient alpha for subgroups of a mixed psychiatric sample range from .79 to .90 (Beck & Steer, 1987). These estimates are consistent with mean coefficient alphas of .86 for the BDI in a meta-analysis with nine

psychiatric samples, and of .81 with 15 non-psychiatric samples (Beck, Steer, & Garbin, 1988).

Content validity of the BDI has been assessed through comparison with the DSM-III criteria for an affective disorder (Moran & Lambert, 1983). The BDI addresses six of the nine criteria; exclusion of the other three (increased appetite and sleep, and psychomotor agitation) was based on empirical data from depressed and normal adults (Beck & Steer, 1987). In terms of discriminant validity, a number of studies have indicated that the BDI can differentiate psychiatric patients from normals (Steer, Beck, Riskind, & Brown, 1986). Significant correlations between scores on the BDI and on the Zung Self-rating Depression Scale, the Hamilton Rating Scale for Depression, and the MMPI-D Scale provide evidence of concurrent validity (Beck & Steer, 1987).

The Pediatric Symptom Checklist (PSC; Jellinek, Evans, & Knight, 1979) provided an indication of behavior problems in children aged 2 and older (see Appendix B). This is a 27-item screening instrument including a wide range of problematic behaviors; a parent rated each item as occurring often, sometimes, or never in his/her child's behavior. Convergent validity of this measure has been demonstrated through a high degree of association (83% agreement) with ratings by guidance counselors and teachers of students' need for regular counseling meetings (Murphy, Jellinek, & Milinsky, 1989), as well as 89% agreement ( $Kappa = .52$ ) with scores on the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983; cited in Jellinek, Murphy, & Burns, 1986). In addition, the PSC requires considerably less time to complete than the CBCL. Predictive validity is indicated by the ability of

PSC scores in the clinical range to identify 48% of children who will have academic problems at the end of one year, and 41% who will have such problems at the end of two years. Similarly, a significant, negative association ( $\chi^2 = 6.49, p < .01$ ) was obtained for children who were academically successful at the end of one year (Murphy, Jellinek & Milinsky, 1989).

Parents' perceptions of the family environment were assessed through the Family Environment Scale (FES; Moos & Moos, 1986). The FES is a 90-item, true-false questionnaire with 10 subscales: Cohesion, Expressiveness, Conflict, Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active Recreational Orientation, Moral-Religious Orientation, Organization, and Control. The FES has been shown to have adequate test-retest reliability (approximately .80 over a two month interval) and to be internally consistent (Cronbach's alpha coefficients for subscales range from .68 to .86), while item-to-subscale correlations range from .45 (Independence) to .58 (Cohesion), with a mean of .52, according to the authors (Moos & Moos, 1986). Using a sample of 241 families, test-retest reliability over a 12-month interval was calculated to range from .52 (Independence) to .89 (Moral-Religious Emphasis); in a smaller sample ( $n = 35$ ) this stability was found to range from .54 (Independence) to .91 (Moral-Religious Emphasis) over a 4-month period (Moos & Moos, 1986).

Concurrent validity of the FES has been established in several studies, including correlations with the Parental Attitude Research Instrument (Schaefer & Bell, 1958; reported by Ollendick, La Berteaux, & Horne, 1978), with the Locke-Wallace Marital Adjustment Scale (Waring,

McElrath, Lefcoe, & Weisz, 1981), and with the Family Routines Inventory (Jensen, James, Boyce, & Hartnett, 1983), among others. Finally, the FES has been used to explore the differences between the perceived family environments of normal families and families undergoing psychological distress. Here, findings consistently show that the latter tend to portray less cohesion and expressiveness, poorer organization, and greater conflict (Forman & Hagan, 1986).

Parents completed a questionnaire developed by the FBP staff and consisting of behavioral indices of distress (see Appendix C). The following items were included in the present study: whether any prescribed or nonprescribed medications have been taken, number of alcoholic drinks consumed, and frequency of trouble sleeping (pertaining to parents during the previous week), as well as days unable to work due to illness, and visits to a physician (pertaining to the past month). For children, behavioral indices from the past week included prescribed and nonprescribed medications taken, instances of parental discipline, and frequency of trouble sleeping. For the past month, days home sick from school, visits to a physician, and academic or behavioral difficulties in school were noted. Because this is not a standardized instrument, and the items are neither rated on a single scale nor necessarily equally indicative of distress, these 11 items were retained in an individual format, rather than combined into a single index.

Observational measures. Based on the available literature in the area of family bereavement, it was hypothesized that cohesion and expressiveness are two family-level variables that are most related to

adaptation. A working definition of cohesion is the degree of commitment, help, and support family members provide for one another (Moos & Moos, 1986); others have characterized it as the extent of emotional bonding and individual autonomy in a family (Olson, Sprenkle & Russell, 1979).

"Expressiveness" as assessed by the FES is defined as the degree to which family members are encouraged to act openly and to express their feelings directly (Moos & Moos, 1986); "openness" has been similarly defined to mean that individuals are free to communicate a high percentage of their thoughts and feelings to others who reciprocate (Bowen, 1976). These concepts, then, center on support, autonomy and communication. Table 1 illustrates the derivation and conceptual bases of these measures.

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Insert Table 1 about here  
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Deductively-derived observational measures of family behavior:

These behavioral definitions were formulated based on items from two self-report questionnaires designed to measure family cohesion, expressiveness, and adaptability: The FES and the Family Adaptability and Cohesion Evaluation Scale (2nd edn., Olson, Bell, & Portner, 1978). The FES includes items such as "there is a feeling of togetherness in our family" and "family members really back each other up" loading on the Cohesion scale, and "we tell each other about our personal problems" and "we are usually careful about what we say to each other " loading on the Expressiveness scale (the latter indicates low Expressiveness).

As described above, the term "cohesiveness" is typically used to describe families in which emphasis is placed on unity, togetherness, shared experience, and intimacy. Consistent with this theoretical formulation, the following behaviors were observed, as verbal behaviors and verbal reports of behavior indicative of high or low cohesion:

States similarities between members (high cohesion): Indicates a way in which a member is similar to oneself or another; e.g. "If I start crying, he will, too," or "We both remember that part well." This item was omitted from the analyses because its rate of occurrence was exceedingly low.

Describes own behavior together with other survivors (high cohesion): Relates behavior or event in which speaker was with another immediate family member (includes a husband, wife, sister, brother, mother, father or in-law); e.g. "We haven't been back to church," or "I told her we'd see him in heaven." Includes descriptions of conversations. Includes thoughts but not necessarily feelings; e.g. "We thought he would live into his adolescence," but not "We were very upset by that."

Describes behavior of deceased with another family member (high cohesion): Relates behavior of deceased directly involving another family member; e.g. "She squeezed my hand," or "He told Suzy not to be afraid," or "They were always together."

Agrees with or affirms another's statement (high cohesion, and also shows expressiveness): States agreement with or elaborates on another family member's speech; e.g. "Yes, he was," or "I know," or "You think about that a lot, don't you?" Includes adding information to complete another

person's sentence or speech, and reiterating or re-wording what the other person said. Does not include agreeing with the therapist, and does not include continuing on with a different part of the story.

States differences between members (low cohesion): Indicates a way in which a member is different from oneself or another; e.g. "I go to the cemetery every week but she doesn't like to," or "She and I talk about it but he just withdraws." An independent sentence may be coded in this category if it describes one individual's behavior in contrast to another's that was described in a preceding sentence. This item was omitted from the analyses because its rate of occurrence was exceedingly low.

Describes own behavior alone (may show low cohesion): Relates behavior or event in which speaker was not with any surviving, immediate family members; e.g. "I was the one who visited every day," or "I sit in her room sometimes for hours."

Describes behavior of deceased alone (may show high cohesion): Relates behavior or quality of the deceased child, not directly involving another family member; e.g. "At the end she was so weak," or "He loved to play soccer." Includes descriptions of the deceased and medical personnel.

Disagrees with another's statement (low cohesion and also shows expressiveness): Provides information contradicting another's statement; e.g. "It was before that happened," or "They didn't tell us that right away." Includes invalidations; e.g. "You don't mean that," or "You know that isn't true," or "I never said that."

A family's communication style may be described as "expressive" if individuals feel free to express and discuss their emotions and personal

thoughts, as well as those of others. As such, the following behaviors were hypothesized to be indicative of high or low expressiveness:

Expresses own feelings or reactions (high expressiveness): Describes emotional or visceral states; e.g. "I guess I've been depressed," or "I feel so empty." Includes description of affective environment; e.g. "I didn't know what to do," or "It was terrible" (unless explicitly says "for us both"). Includes use of generic "you" to mean "one," e.g. "You just wait for the pain to subside," or "you feel sort of abandoned."

Describes another's feelings or reactions (high expressiveness, and also high cohesion): E.g. "I think she's afraid to explore those feelings," or "He's been very moody."

Describes feelings together with another (high expressiveness, and also high cohesion): Uses first person plural ("we") to describe emotions or reactions; e.g. "We didn't want to believe it," or "We were still adjusting to the news." Again, this may include descriptions of the quality of the experience, or the emotional atmosphere; e.g. "we were lucky."

Encourages expression of feelings or memories by another (high expressiveness): E.g. "Do you remember that?" or "You were really sad then, weren't you?" Includes requests for information to complete the story, e.g. "When was that?" or "What did they tell you?"

Rejects topic (low expressiveness): Verbally refuses to discuss, or states desire to change topic; e.g. "Let's not get into that," or "I don't think that's relevant," or "No comment." Includes description of rejecting a topic in the past; e.g. "I told him I didn't want to hear about that," or "I didn't want to have anything to do with her searching for answers."

Discourages expression of feelings or memories by another (low expressiveness): E.g. "Don't cry," or "Whenever you tell this story you get upset." These last two behaviors were not actually included in the analyses, because they occurred at extremely low rates.

Inductively-derived observational measures of family behavior:

These behavioral definitions were derived in an empirical manner. From the sample of 38 families, a distribution of FES Cohesion subscale scores was obtained, and high, medium and low scores delineated. Nine families whose videotapes were available were selected, based on their scores on these FES subscales (five high and four low). Videotapes of these families were reviewed by the author, who noted eight additional interactional behaviors that were not included in the deductively-derived definitions but that appeared to differentiate these families. The reliability of these behaviors in discriminating these families was confirmed by having two research assistants each rate two high- and two-low cohesion score family sessions.

A behavior rating scale was developed, including definitions of the items to be observed (see Appendix D). In the actual study, this instrument was used by having research assistants watch thirty minutes of the initial intervention session, beginning when the clinician asked the family to tell the story of the loss, and then complete the items. Several items were rated on a Likert scale ranging from 1 to 5, while others asked whether parents showed support, anger, crying, laughing, and affectionate touching during the session. Conceptual bases of these measures are provided in Table 2.

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Insert Table 2 about here  
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The Likert scales included anchoring definitions of each rating score (e.g. 1 = parallel speaking, highly separate). More general definitions of these items were provided as follows:

"Interactive" storytelling or talking means parents share a lot of the work of describing events (shows high cohesion and expressiveness). They may elaborate on and add to each other's statements, perhaps agreeing with them, finishing each other's sentences, and/or generally building on each other's statements.

"Parallel" storytelling means parents tell parts of the story very separately (low cohesion and expressiveness). They may describe only their responses, behaviors, and feelings, and then the other person does the same. The observer does not perceive a lot of exchange and overlap between the parents, or between their experiences as they have described them. They do not necessarily have to disagree, or to tell the same story from different points of view.

When storytelling was rated as being at all interactive, the tone of this exchange was also determined to be either critical and disagreeing (high expressiveness) or supportive and agreeing (may also show expressiveness).

Turn taking has to do with how often parents take turns speaking. Many, frequent turns occur when one parent speaks for a short time, followed by the other parent speaking for roughly the same length of time

(high cohesion). Few, infrequent turns occur when one parent speaks for a long time, followed by the other parent speaking for a long time, OR when one parent does the vast majority of the speaking (low cohesion). When parents took turns sharing the storytelling, the tone of this exchange was also determined to be either contradictory and disruptive (high expressiveness) or smooth and cooperative (may also show expressiveness).

Parents present a "united front" when they describe their responses, ways of coping, and/or lifestyle as being similar and congruent, and/or as fitting together well and working as a team (high cohesion). This may also include descriptions of being together or working out a routine, and being supported by each other during the child's terminal phase or following the death.

Parents convey a sense of isolation and distance when they describe their responses as very different and these differences as difficult to tolerate or accept (low cohesion). They may also describe often being alone, or not knowing what the other was doing or feeling. They may describe major or important differences in their outlook or philosophy, as well as in their ways of coping. OR, there may be almost no talk about working as a team either during the child's life or following the death. This separateness may pertain to the actual events surrounding the loss (e.g. being physically apart), as well as to the way in which they describe these events.

Observational measures of clinician behavior: Clinician behaviors were also observed. The intervention protocol was designed to encourage respect for differences in ways of grieving, and to mobilize support within the family. Some of the clinician behaviors that were observed were based

on this protocol, and on hypothesized links to the family behaviors that were of interest. In addition, several items were based on actual observations of clinician prompts during videotaped sessions with pilot families. Thus, both deductively- and inductively-derived items were included in the rating of clinician behaviors from the transcripts of the sessions:

Recapitulates information to provide integration: Makes a summary statement or restates what family members have been saying in regard to factual information (not emotions). e.g. "Going through this experience has brought your family closer together," or "So, you were able to spend a lot of time at the hospital," or "Sounds like your insurance company was very cooperative."

Encourages or affirms expression of emotion: Makes a summary statement about feelings, describes what family members seem to be feeling, or suggests an opportunity to talk more about their feelings. e.g. "You have been holding a lot inside," or "This is intended to be a time when you can let your feelings show," or "Many people find this work very difficult." Also, "Was that stressful/a relief/scary/etc.," or "Sounds like that was a really scary time for all of you," or "You must have been frantic."

Discourages expression of emotion: Suggests someone ought not to let their feelings show so much. e.g. "This is certainly very upsetting. Sometimes parents find it easier to cry when they are alone, or only with their spouse," or "You understandably have strong feelings about this, but this may not be a productive way to resolve them." This item was omitted from the analyses because its rate of occurrence was exceedingly low.

Describes normal grief reactions: Provides information or feedback about the ways people grieve, what the family might expect, or how their experience is similar to others'. e.g. "That sense of shock is very common," or "I hear from a lot of people that that was the hardest time," or "The feelings do seem less intense over time."

Acknowledges or shows listening: This includes all the sounds and comments made to indicate the clinician is paying attention and following along with the story. e.g. "mhm," "uh-huh," "boy," "gosh," "I see," "I understand," "hmm," etc.

Requests factual information: Asks a question regarding facts (not feelings). e.g. "How old was he then?" or "What do you do for work?" or "Did they bring him right to Children's?" or "Did you have a chance to say goodbye?"

### Behavioral Coding System

Behavioral coding of verbatim transcripts of video- and audiotaped sequences provided an objective measure of family interaction. The coding procedure for both family members and clinicians in the present study was based on two well-established systems for coding family interaction: the Parent Adolescent Interaction Coding Systems (PAICS, Robin & Fox, 1979), and the Family Discourse Code (Condon, Cooper & Grotevant, 1984), as well as a review of thirteen family observation coding systems by Grotevant and Carlson (1987). A frequency count represented the occurrence of each defined behavior. The unit of coding was the utterance, defined as an independent clause as well as any dependent clauses connected to it; a complete sentence was the longest utterance coded. For each utterance, the

coder identified the speaker and a single, categorical definition of its content. Categorization was based on the subject of the sentence, rather than the object, when applicable. Precedence rules determined which category to select if a statement might be dually coded. See Appendix E for hierarchical organization of behaviors to be observed.

#### Observer training and reliability

Undergraduate research assistants were trained to complete three tasks (see Appendix F for training protocols). One observer was trained to transcribe videotapes. Following explicit instruction, a practice transcript was reviewed and feedback given. At the same time, two others were trained to use the behavior rating scale, which required watching the thirty-minute segment and then filling out the items. Later, these three plus two more assistants were trained to code the transcripts, using the behavioral coding system described above.

Observers were trained to a criterion of 80% agreement prior to initiating data collection. This was achieved through memorization of operational definitions and scoring procedures, and coding of sample videotapes and transcripts. Weekly meetings were held to discuss difficulties in coding, and to clarify definitions when necessary. Observers remained blind to the hypotheses of the study, and were reminded of the importance of not discussing any problems in coding privately with one another, or making guesses as to the research hypotheses.

Interrater reliability was calculated during training, and periodically during data collection, by having two raters independently code the same videotapes and transcripts. Approximately one quarter of the coding done by

each observer was checked for reliability, which was computed for each category of behavior by dividing the sum of observer agreements by the sum of agreements and disagreements. Interrater reliability for the inductively-derived items is reported in Table 3.

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Insert Table 3 about here  
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Reliability checks on the deductively-derived family behaviors (see Table 4) revealed one problem: observers tended to confuse "describes own behavior with others" and "described deceased with others," producing an unacceptably low level of reliability for the latter item. When the two items were combined, however, reliability for the resulting category was adequate. Consequently, the sum of these two categories was utilized in analyses; the new item was renamed "describes behavior of family members together." Finally, reliability for the clinician behaviors (see Table 5) also produced one unacceptable percentage, for "encouraging emotion." This item was not consistently confused with any other one in particular, however, and so could only be eliminated from subsequent analyses.

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Insert Tables 4-5 about here  
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### Procedure

Family Bereavement Project: Families entered the FBP either 3-4 or 9-10 months after their child's death. The intervention took place during three intensive sessions, approximately every two weeks or as close to that

schedule as possible. Standardized assessments were completed at entry to the project, and at the six-month follow-up.

The format for the initial intervention session consisted primarily of a focus on the past, on the storytelling of the events surrounding the child's terminal diagnosis or accident, and the death itself. Family members described what happened, and how they coped with it. Oftentimes information was revealed that was previously unknown to other members, and this sharing was intended to open lines of communication and support. As mentioned above, the task of the clinician was primarily to elicit a factual account of the child's death. Appendix A describes the protocol for the first intervention session.

Pilot Work: The primary purpose of pilot work for the present study focused on clarification and refinement of behavioral codes. The author observed, transcribed and coded videotapes of the initial intervention sessions with two families, identifying defined behaviors and clarifying definitions of clinician and family interactions. Along with a second observer, one session transcript was coded. Here, interrater reliability of the behavioral codes was estimated, and definitions were refined further.

Data Collection Procedure: Actual data collection consisted of three phases. First, the thirty minute segment of interest from each initial intervention session (beginning when the clinician asked the family to tell the story of the loss) was transcribed by the author and a research assistant. Each speech was then divided into codable units or utterances by the author. Utterances were numbered serially, with the order of the numbers corresponding as closely as possible to the sequence in which they

occurred in time. These numbers were recorded on the coding sheets. Meanwhile, following training, two observers watched eighteen videotapes each, and completed the behavior rating scale (inductively-derived measure of family behavior).

Finally, the research assistants coded the transcripts, according to the protocol previously described (deductively-derived measure). They were instructed to code either the entire thirty minute transcript, or three hundred utterances, whichever came first. In most families, the transcript consisted of between three and four hundred utterances. Condon, Cooper and Grotevant (1986) found a high correlation between the first three hundred utterances and the entire transcript of a twenty-five minute family interaction. The frequency of occurrences of each of the behaviors by each of the family members was tallied, producing a total in each family for the father, mother, and child (if any were present and participating).

## Results

Data were analyzed in the following steps: (1) Pearson correlations and  $t$ -tests were calculated to explore the relationships between behavioral measures of cohesion and expressiveness and self-report measures of these constructs, (2) Hotelling's formula for comparing non-independent  $r$ 's was employed to test for significant differences between correlations obtained within- and across-constructs and methods of assessment, (3) Pearson correlations and  $t$ -tests were calculated to explore the relationships between behavioral and self-report measures of expressiveness and cohesion and measures of depression and child behavior problems, (4) multiple linear regression analyses were completed to identify (a) variables predictive of parental depression and child behavior problems at entry, (b) observable behaviors and self-report scores associated with specific indices of distress, and (c) variables predictive of parental depression and child behavior problems at follow-up, and (5) Pearson correlations were calculated to explore the relationships between clinicians' and family members' observable behaviors.

A large number of statistical tests are reported here. All were performed to address a priori hypotheses. Often two, parallel sets of tests were required, however, in order to address both the deductive and inductive portions of the data obtained. Performing such a large number of tests increases the risk of Type I error, suggesting that some findings may need to be cautiously interpreted. At the same time, low power due to a small number of subjects indicates that present marginal findings may have been more strongly supported with a larger sample. Within these constraints, results have not been omitted; while their interest in terms of addressing

hypotheses makes them relevant, some caution may be warranted in considering the obtained  $p$  values.

Convergent validity: Relationships between behavioral and self-report measures of cohesion

In order to assess the relationships between the deductively-derived behavioral measures of cohesion (agreeing, describing one's own or the deceased's behavior alone, describing the behavior of family members together, and describing another person's feelings or shared feelings) and the self-report measures of this construct (fathers' and mothers' scores on the FES Cohesion scale), six Pearson correlations each for fathers, mothers, and children were performed (Hypothesis 1). For fathers, describing shared feelings was positively related to their self-report scores on the FES ( $r = .34, p < .04$ ; see Table 6). No significant results were obtained for mothers. For children, agreeing with a family member during the session was negatively related to fathers' Cohesion scores ( $r = -.72, p < .001$ ), and describing shared feelings was positively related to mothers' scores on this measure ( $r = .45, p < .05$ ).

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 Insert Table 6 about here  
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The relationships between the inductively-derived behavioral measures of cohesion (interactive versus parallel storytelling, turn-taking, and presenting a united front versus isolation) and the parents' FES Cohesion scale scores were assessed using six Pearson correlations. No significant results were obtained.

Convergent validity: Relationships between behavioral and self-report measures of expressiveness

In order to assess the relationship between the deductively-derived measures of expressiveness (agreeing, describing one's own or another's or shared feelings, and encouraging another family member to express their feelings or memories) and the parents' FES Expressiveness scale scores, a series of five Pearson correlations each were performed for fathers, mothers, and children (Hypothesis 2). For fathers, describing shared feelings was positively associated with their self-reports of expressiveness ( $r = .34, p < .04$ ), and agreeing with another family member was marginally related ( $r = .30, p < .07$ ; see Table 7). No significant results were obtained for mothers. For children, describing shared feelings was negatively related to mothers' reported expressiveness ( $r = -.50, p < .02$ ), and agreeing was marginally related ( $r = .41, p < .07$ ).

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 Insert Table 7 about here  
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The relationships between the inductively-derived behavioral measures of expressiveness (interactive versus parallel storytelling and the tone of this interaction) and the self-report measures of this construct (fathers' and mothers' scores on the FES Expressiveness scale) were assessed by performing four Pearson correlations. In addition, displays of anger, crying, and affectionate touching, as well as the tone of the couple's turn taking, were examined for their relationship to the FES Expressiveness scale scores using eight t-tests.

Fathers' scores on this FES scale were marginally related to the tone of shared storytelling--i.e., whether the couple tended to agree or disagree

with one another in their telling of the story ( $r = -.32; p < .07$ ). The negative correlation here indicates that among couples who frequently disagreed with each other, fathers tended to describe their families as more expressive (see Table 8). Mothers' Expressiveness scores showed a trend similar to this observable pattern of behavior ( $r = -.30, p < .09$ ).

Among the t-tests, fathers' scores on the FES Expressiveness scale were higher in families where the couple tended to take turns in a contradictory and disruptive manner, rather than a smooth and cooperative one ( $t = -2.27, p < .03$ ; see Table 9). That is, consistent with the relationship to disagreements noted above, among couples who tend to interrupt one another in an abrupt and dyssynchronous manner, fathers' tend to describe their families as more expressive. Mothers' scores on this FES scale were significantly related to whether the parents touched one another affectionately during the session ( $t = -2.57, p < .02$ ). Among couples who were openly affectionate, mothers described their families as more expressive.

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 Insert Tables 8-9 about here  
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Discriminant validity: Comparison of correlations obtained within- and across-constructs and methods of assessment

Hypothesis 3 predicted the ability to discriminate the construct of cohesion using two methods of assessment; more specifically, that the relationships between the self-report and behavioral measures of cohesion would be stronger than those obtained between self-report measures of cohesion with behavioral measures of expressiveness, or self-report

measures of expressiveness with behavioral measures of cohesion (see Tables 10-14). No evidence to support this prediction was obtained, among either the deductively- or the inductively-derived variables. The obtained correlations across assessment methods and within the construct of cohesion were not significantly different from the relationships obtained across methods and across constructs.

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 Insert Tables 10-14 about here  
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Hypothesis 4 predicted that the relationships between the self-report and behavioral measures of cohesion would be stronger than those obtained using the same assessment method, across the two constructs of cohesion and expressiveness. Several significant results were obtained here, but they were contrary to the predicted direction. That is, correlations within a method of assessment, particularly self-report, were higher than those within the construct of cohesion, obtained across assessment methods.

Among the deductively-derived variables, fathers' FES Cohesion and Expressiveness scores were more highly correlated than were their self-reported Cohesion scores with two behavioral measures (see Table 15): describing one's own behavior alone ( $t = 3.30, p < .01$ ) and describing the behavior of the deceased alone ( $t = 2.98, p < .01$ ). No significant findings were obtained for mothers.

Among the inductive variables, fathers' FES Cohesion and Expressiveness scores correlated higher than did their FES Cohesion scores with two behavioral measures: turn-taking ( $t = -2.83, p < .01$ ) and presenting a united front during the session ( $t = -2.56, p < .02$ ; see Table 16). A corresponding difference was not obtained for mothers. Similarly,

the correlation between turn-taking and another inductively-derived behavioral measure, interactive versus parallel storytelling, was also higher than that between fathers' FES Cohesion scores and turn-taking ( $t = -2.99, p < .01$ ).

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Insert Tables 15-16 about here  
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Hypothesis 5 again predicted discriminant validity, this time pertaining to the two methods assessing the construct of expressiveness. In particular, it was hypothesized that the relationships between the self-report and behavioral measures of expressiveness would be stronger than those obtained between self-report measures of expressiveness with behavioral measures of cohesion, or self-report measures of cohesion with behavioral measures of expressiveness (again, see Tables 10-14). No evidence to support this prediction was obtained, among either the deductively- or the inductively-derived variables. The obtained correlations across assessment methods and within the construct of expressiveness were not significantly different from the relationships obtained across methods and across constructs, even considering several significant relationships between parental FES Expressiveness scores and observable behaviors, as discussed under Hypothesis 2.

Hypothesis 6 predicted that the relationships between the self-report and behavioral measures of expressiveness would be stronger than those obtained using the same assessment method, across the two constructs of cohesion and expressiveness. Five significant results were obtained here among the deductively-derived variables, but in each case these findings contradicted what was expected (see Table 17). Fathers' FES Cohesion and

Expressiveness scores correlated more highly than did their self-reported Expressiveness scores with the behavioral measures of describing another's feelings ( $t = 2.17, p < .05$ ), describing their own feelings ( $t = 4.41, p < .001$ ), and encouraging another to express feelings ( $t = 3.25, p < .01$ ). Mothers' two self-report scores correlated more highly than did their FES-Expressiveness scores with their rate of describing their own feelings ( $t = 2.15, p < .05$ ). In addition, fathers' encouraging others to express feelings was more highly correlated with a behavioral measure of cohesion--describing the deceased alone--than with their FES-Expressiveness scores ( $t = 4.20, p < .001$ ).

Two significant results were also obtained among the inductively-derived behaviors (see Table 18). Fathers' FES Cohesion and Expressiveness scores correlated more highly than did their self-reported Expressiveness scores with the behavioral measure of interactive versus parallel storytelling ( $t = 3.01, p < .01$ ). Two behavioral measures--interactive versus parallel storytelling and turn-taking--also correlated more highly than did the former with fathers' FES Expressiveness scores ( $t = 2.26, p < .05$ ).

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 Insert Tables 17-18 about here  
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Criterion-related validity: Relationships between measures of expressiveness and adjustment

The relationship between deductively-derived behaviors indicative of expressiveness (describing one's own or another's or shared feelings, and encouraging another family member's expression of feelings or memories) and measures of parental depression and child behavior problems was

assessed using four Pearson correlations each for the father, mother, and children (Hypothesis 7). Agreeing was not included because it was entered in the analyses pertaining to family cohesion, described below.

For fathers, two marginally significant findings emerged: describing their own feelings was positively associated with reported depression ( $r = .30, p < .07$ ), while describing shared feelings was negatively related ( $r = -.30, p < .07$ ; see Table 19). For mothers, none of these results were significant. For children, a marginally significant relationship between describing their own feelings and their Pediatric Symptom Checklist scores was found ( $r = .42, p < .06$ ).

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 Insert Table 19 about here  
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In order to examine the relationship between inductively-derived behaviors indicative of expressiveness (interactive versus parallel storytelling and the tone of this interaction) and self-report measures of parental depression and child behavior problems, six correlational analyses were performed. The Beck Depression Inventory scores for both mothers and fathers were unrelated to these observed behaviors. Only a single, marginally significant result emerged regarding the Pediatric Symptom Checklist, in relation to the parents' sharing of the storytelling ( $r = -.32, p < .07$ ). It appears that more independent and separate storytelling by parents may be associated with a higher score on the PSC (see Table 20).

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 Insert Table 20 about here  
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Displays of anger, crying, and touching, as well as the tone of turn taking during the session were also examined in relation to these outcome measures, using twelve t-tests. The only significant relationship obtained was between fathers' reported depression and displays of anger during the session ( $t = 2.51$ ;  $p < .02$ ; see Table 21). Among families in which this emotion was evident, fathers tended to report higher levels of depression ( $B = 0.40$ ). A single, nonsignificant trend was found for the PSC: displays of parental anger may be associated with more reported child behavior problems ( $t = -1.75$ ;  $p < .09$ ).

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 Insert Table 21 about here  
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Four additional correlations were performed, to assess the relationship of self-reported expressiveness within the family to these same outcome measures. Fathers' scores on the FES Expressiveness scale were highly related to their reported levels of depression ( $r = -.54$ ,  $p < .001$ ; See Table 22). The negative association indicates that in families where fathers perceive less expressiveness, they report more depression. Among mothers, a similar result was obtained ( $r = -.35$ ,  $p < .05$ ). No significant correlations emerged between the PSC and parental reports of expressiveness within the family.

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 Insert Table 22 about here  
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In consideration of the results from the preceding analyses, two deductively-derived items indicative of expressiveness (describing one's own feelings and describing shared feelings) were entered into a stepwise

regression analysis along with FES Expressiveness scores and the traditionally employed variables of months post-loss and whether the cause of death was acute or chronic, in order to predict parental depression scores. These same variables (including both parents' FES scores), as well as age, were also entered into a separate equation to predict child behavior problem scores (Hypothesis 8). For fathers, self-reported expressiveness ( $t = -2.81, p < .008$ ), along with describing their own feelings ( $t = 2.37, p < .03$ ), was predictive of BDI scores (see Table 23). Fathers who perceived their families as less expressive ( $B = -0.41$ ) and who described more of their own feelings ( $B = 0.33$ ) reported higher rates of depression.

For mothers, less elapsed time since the death ( $t = -2.06, p < .05$ ) and less reported expressiveness in the family ( $t = -2.13, p < .04$ ) were associated with higher depression scores. For children, only elapsed time since the death ( $t = -4.17, p < .001$ ) was predictive of PSC scores. A more recent death ( $B = -0.60$ ) was associated with a higher number of reported behavior problems.

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 Insert Table 23 about here  
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In order to address the second aspect of this hypothesis, two inductively-derived items (display of anger and the tone of parental sharing of the storytelling) were entered into a stepwise regression analysis along with FES Expressiveness scores, months post-loss and whether the cause of death was acute or chronic, in order to predict parental depression scores. Again, the behavioral items were selected based on significant findings from Hypothesis 7. For fathers, two predictors were included in the final equation: self-reported expressiveness within the family ( $t = -3.29$ ;

$p < .002$ ) and display of anger during the session ( $t = 2.59$ ;  $p < .01$ ). Fathers' perceptions of less expressiveness within the family ( $B = -0.46$ ) and either parent's display of anger during the session ( $B = 0.36$ ) were associated with higher reported paternal depression (see Table 24).

For mothers, two different predictors emerged from the analysis: elapsed time since the death ( $t = -2.24$ ;  $p < .03$ ), and the tone of the storytelling interaction ( $t = 2.22$ ,  $p < .03$ ). Here, less time since the loss ( $B = -0.40$ ) and more agreeing during the storytelling ( $B = 0.40$ ) were associated with higher BDI scores.

These same variables (including both parents' FES scores), along with the traditionally employed one of the surviving child's age, were entered into stepwise regression analyses to predict children's behavior problem scores. Here, months post-loss ( $t = -4.10$ ,  $p < .001$ ) and parental anger during the session ( $t = 1.82$ ,  $p < .08$ ) were predictive. Similar to the parents, children were described as having more signs of difficulty adjusting in closer proximity to the death ( $B = -0.58$ ), and in families where the parents expressed anger while telling the story of the loss ( $B = 0.26$ ).

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 Insert Table 24 about here  
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#### Criterion-related validity: Relationships between measures of cohesion and adjustment

Four deductively-derived behaviors indicative of cohesion (describing one's own or the deceased's behavior alone, describing the behavior of family members together, and agreeing) were entered into separate regression equations allowing quadratic terms, in order to predict mothers'

and fathers' depression scores, as well as children's behavior problem scores (Hypothesis 9). None of these deductively-derived items were significantly related to either fathers' or mothers' scores on the BDI.

For children, describing their own behavior alone showed a positive, linear relationship ( $t = 2.37, p < .03$ ; see Table 25). Children who were described by their parents as exhibiting more behavior problems also showed a higher rate of talking about themselves alone ( $B = 0.29$ ).

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 Insert Table 25 about here  
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Three inductively-derived items indicative of cohesion (turn-taking, interactive versus parallel storytelling, and presenting a united front) were entered into separate regression equations allowing quadratic terms, in order to predict mothers' and fathers' depression scores, as well as children's behavior problem scores. None of these inductively-derived items were significantly related to fathers' scores on the BDI. Mothers' depression scores, however, were predicted by the family's rating on interactive versus parallel storytelling (see Table 26). Although the linear equation was not able to predict mothers' depression score, the quadratic equation was significant ( $t = 2.30, p < .03$ ;  $B = 2.18$  for the quadratic term and  $t = -2.22, p < .03$ ;  $B = -2.10$  for the linear term), as hypothesized. A graph of this relationship also illustrates the curvilinear pattern: both highly shared (interactive) and highly independent (parallel) storytelling are associated with higher maternal depression (see Figure 1).

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 Insert Table 26 and Figure 1 about here  
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A similar result was obtained for children's PSC scores in relation to the parents' storytelling style (interactive versus parallel). Both the linear and quadratic equations were significant, and a graph of these two variables shows a primarily negative slope, followed by a moderate increase among the children whose families received the highest rating (consistently interactive) on this item (see Figure 2). The quadratic equation was given as having a beta coefficient of 1.62 for the quadratic term ( $t = 1.70, p < .10$ ) and -1.96 for the linear term ( $t = -2.05, p < .05$ ; see Table 26).

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 Insert Figure 2 about here  
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Four additional regression analyses were performed, to assess the relationship of self-reported cohesion within the family to these same outcome measures. Fathers' scores on the FES Cohesion scale were linearly and negatively related to their reported levels of depression ( $t = -4.74, p < .001$ ; see Table 27). The direction of this relationship indicates that in families where fathers perceive less cohesion, they report more depression. Among mothers, a similar result was obtained ( $t = -2.63, p < .01$ ). Mothers' FES Cohesion scores were also associated with children's PSC scores ( $t = -3.00, p < .005$ ). As in the case of parents' own reported distress, they are also more likely to report behavior problems in their children, when mothers perceive less family cohesion.

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 Insert Table 27 about here  
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Based on the significant findings in the preceding analyses, two deductively-derived items (describing one's own behavior alone, and

describing the behavior of the deceased alone) were entered into a linear regression equation along with self-reported cohesion scores and the traditionally-employed variables of months post-loss and whether the cause of death was acute or chronic, in order to predict parental depression (Hypothesis 10; see Table 28). In predicting fathers' depression, indicators of cohesion proved to be useful, while the traditional variables were not. FES Cohesion scores accounted for thirty-nine percent of the variance in this measure of adjustment ( $t = -5.00, p < .001$ ), and an additional six percent was accounted for by describing one's own behavior alone ( $t = 1.85, p < .07$ ). More frequent talking about themselves alone, which was deduced to indicate lower family cohesion, was associated with higher reported levels of depression ( $B = 0.24$ ).

For mothers, the most useful predictor was again FES cohesion score ( $t = -2.71, p < .01$ ). The second predictor to be added was elapsed time since the death ( $t = -1.98, p < .05$ ). Together these variables were able to account for twenty-five percent of the variance here.

In the analysis performed to predict children's PSC scores, both mothers' and fathers' FES Cohesion scores and the child's age, in addition to describing one's behavior alone, describing the behavior of the deceased alone, months post-loss, and whether the cause of death was acute or chronic were included, as above. Elapsed time since the death was the first predictor to be added ( $t = -4.83, p < .001$ ); more behavior problems were reported closer to the death ( $B = -0.65$ ). Fathers' self-reported cohesion scores accounted for an additional ten percent of the variance here ( $t = -2.41, p < .02$ ), for a total of forty-six percent. As in the prediction of fathers' depression, this was a negative relationship.

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Insert Table 28 about here  
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In addressing the inductive portion of this hypothesis, interactive versus parallel storytelling and touching replaced the deductively-derived behaviors in the initial, full model. Again, the decision to include these particular variables was based on previous, significant findings. Among the obtained results for fathers, the foremost predictor was again FES cohesion score ( $t = -5.72, p < .001$ ; see Table 29), accounting for thirty-nine percent of the variance. Touching during the session was also included ( $t = -1.99, p < .06$ ). The negative slope here indicates that in couples who did not touch one another affectionately during the session, the fathers tended to report more depression ( $B = -0.26$ ). For mothers, the result was the same as that obtained when entering the deductively-derived variables. For the children, months post-loss ( $t = -3.90, p < .001$ ), mothers' self-reported cohesion scores ( $t = -3.82, p < .001$ ), and interactive versus parallel storytelling ( $t = -2.02, p < .05$ ) were significant. Children were reported to have higher rates of behavior problems temporally closer to the death ( $B = -0.49$ ), when mothers perceived less family cohesion ( $B = -0.46$ ), and among families whose telling of the story of the death was separate rather than shared ( $B = -0.26$ ).

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Insert Table 29 about here  
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Criterion-related validity: Relationships between measures of cohesion and expressiveness and behavioral indices of distress

Another series of regression analyses was performed to address Hypothesis 11 (see Table 30). Six behavioral indices of distress (taking prescribed or nonprescribed medications, number of alcoholic drinks consumed, frequency of trouble sleeping, days unable to work due to illness, and visits to a physician) were used to predict each of eight deductively-derived and eight inductively-derived observed behaviors, as well as two FES subscale scores for parents. For children, seven behavioral indices of distress (taking prescribed or nonprescribed medications, instances of parental discipline, frequency of trouble sleeping, days sick from school, visits to a physician, and academic or behavioral difficulties) were used to predict each observed behavior, along with parental FES scores.

Among the deductive variables (agreeing, describing one's own or the deceased's behavior alone, describing the behavior of family members together, describing one's own or another's or shared feelings, and encouraging others to express feelings or memories), significant results were obtained for both fathers and children, but not for mothers. Fathers' difficulty sleeping was positively associated with describing their own feelings ( $t = 2.15, p < .04$ ) and with encouraging others to express their emotions ( $t = 2.03, p < .05$ ).

For children, frequency of parental discipline as well as taking medications and missing days of school were associated with several interpersonal behaviors. Describing shared feelings was more common among children who took fewer nonprescribed medicines ( $t = -4.16, p < .001$ ) and who missed fewer days of school ( $t = -3.60, p < .002$ ). Encouraging another person to describe their feelings occurred more often among

children who had difficulty sleeping ( $t = 4.91, p < .001$ ). Children's agreeing with another family member was positively associated with frequency of parental discipline ( $t = 3.04, p < .007$ ) and with taking prescribed medications ( $t = 2.11, p < .05$ ).

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 Insert Table 30 about here  
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Among the inductively-derived behaviors (interactive versus parallel storytelling and the tone of this interaction, turn taking and the tone of this interaction, presenting a united front versus isolation, and displays of anger, crying, and touching), turn-taking during the session was positively related to fathers taking nonprescribed medications ( $t = 2.30, p < .03$ ), while both touching during the session and parallel (highly separate) storytelling were related to their taking more prescribed medications ( $t = 2.46, p < .02$  and  $t = -2.63, p < .01$ , respectively; see Table 31). For mothers, a more critical or disagreeing tone in the sharing of the storytelling was associated with more use of nonprescribed medications ( $t = -2.72, p < .01$ ). Among children, more frequent visits to a physician were associated with less frequent turn-taking by parents, as well as more frequent touching, ( $t = -2.07, p < .05$  and  $t = 2.93, p < .006$ , respectively).

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 Insert Table 31 about here  
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Finally, among the self-report measures, family cohesion scores were negatively related to fathers' frequency of difficulty sleeping ( $t = -2.67, p < .01$ ). When fathers perceived less cohesion within their families, they also reported more nights of trouble falling or staying asleep ( $B = -0.41$ ; see

Table 32). Mothers' self-report scores were not related to their reports of distress-related behaviors. Moreover, mothers' reported cohesion and expressiveness scores were not significantly related to any of these indicants of child distress, but fathers' FES Cohesion scores were highly associated with instances of parental discipline ( $t = -4.62, p < .001$ ). The negative relationship here suggests that in families where fathers perceive more cohesion, there are fewer occasions of parental discipline ( $B = -0.60$ ).

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 Insert Table 32 about here  
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Predictive validity: Relationships between measures of expressiveness and cohesion and measures of adjustment at follow-up

Hypothesis 12 was addressed using a series of multiple linear regression equations. First, four deductively-derived behaviors indicative of cohesion (agreeing, describing one's own or the deceased's behavior alone, and describing the behavior of family members together) were entered into an equation along with FES Cohesion scores, BDI at entry, and elapsed time since the death in order to predict fathers' and mothers' BDI scores at the six-month follow-up (see Table 33). No behavioral variables were excluded because no preliminary analyses had yet been performed. For fathers, the best predictor was BDI score at entry, which accounted for sixty-five percent of the variance ( $t = 8.82, p < .001$ ). Also added to the final model was fathers' rate of describing their own behavior alone ( $t = -2.22, p < .03$ ), to account for a total of seventy percent of the variance. For mothers, BDI at entry was again the best predictor ( $t = 7.80, p < .001; R^2 = .52$ ), along with their describing family members together ( $t = 2.74, p < .01$ ). The two

variables together were able to account for sixty-seven percent of the variance.

In order to predict child behavior problems at follow-up (Pediatric Symptom Checklist scores), the same five behaviors described above, as well as both parents' FES Cohesion scores, PSC at entry, and elapsed time since the death were entered into another regression equation. Here, fathers' FES Cohesion scores were the best predictor of PSC scores at follow-up ( $t = -4.86, p < .001$ ), while children's describing their own behavior alone ( $t = 3.36, p < .001$ ) was also related, to account for a total of sixty-seven percent of the variance.

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 Insert Table 33 about here  
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When the inductive variables related to cohesion (interactive versus parallel storytelling, presenting a united front versus isolation, and turn taking) were entered into a similar equation (along with FES Cohesion score, BDI at entry, and elapsed time since the death), only their initial BDI score was a useful predictor of this measure at follow-up for both fathers ( $t = 8.49, p < .001$ ; see Table 34) and mothers ( $t = 5.64, p < .001$ ). For children, PSC score at entry ( $t = 4.13, p < .001$ ) and fathers' reported cohesion scores ( $t = -3.55, p < .001$ ) combined to account for fifty-six percent of the variance.

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 Insert Table 34 about here  
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Next, four deductively-derived behaviors indicative of expressiveness (describing one's own or another's or shared feelings, or encouraging another

to express feelings or memories) were entered into a regression equation along with FES Expressiveness scores, BDI at entry, and elapsed time since the death, in order to predict parental depression and child behavior problem scores. For fathers, only their initial BDI score was a useful predictor here ( $t = 8.09, p < .001$ ), accounting for fully sixty-five percent of the variance (see Table 35). For mothers, BDI at entry was again the only significant predictor ( $t = 6.28, p < .001$ ), accounting for a total of fifty-two percent of the variance here. For children, no significant findings were obtained.

Finally, when five inductively-derived variables (touching, anger, crying, and the tone of shared storytelling and of turn taking) were entered in place of the deductively-derived ones, touching during the session contributed to prediction of fathers' BDI at follow-up ( $t = 2.02, p < .05$ ), along with the BDI score at entry ( $t = 8.01, p < .001$ ). For mothers only the initial BDI score was useful in predicting the follow-up score ( $t = 5.64, p < .001$ ; see Table 36). For children, only PSC score at entry was significant ( $t = 3.56, p < .002$ ), accounting for thirty-four percent of the variance.

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 Insert Tables 35-36 about here  
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Internal validity: Relationship of clinician behaviors to participant behaviors

Hypothesis 13 was addressed using variables only from the transcripts, as clinician behaviors were excluded from the rating of the videotapes. Three clinician behaviors (describing normal grief reactions, requesting factual information, and acknowledging or showing listening)

were entered into Pearson correlation matrices with four behaviors indicative of cohesion (agreeing, describing one's own or the deceased's behavior alone, and describing the behavior of family members together) and four behaviors indicative of expressiveness (describing one's own or another's or shared feelings, and encouraging another to express feelings or memories), for fathers, mothers, and children (see Table 37).

For fathers, the clinician's acknowledging was positively related to describing their shared feelings ( $r = .40, p < .01$ ). The clinician's describing normal grief was positively associated with the fathers' rate of describing family members together ( $r = .32, p < .05$ ). For mothers, the clinician's describing normal grief was negatively associated with their describing the deceased alone ( $r = -.32, p < .05$ ), while acknowledging or showing listening was marginally negatively related to mothers' describing another's feelings ( $r = -.31, p < .06$ ). No significant findings were obtained for children.

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Insert Table 37 about here

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## Discussion

The primary purpose of the present study was to investigate the utility of two family-level concepts--cohesion and expressiveness--in predicting family adaptation following a child's death. Both cohesion and expressiveness were measured in two ways, through self-report and behavioral methods. Thus, an additional purpose became to explore the relationship and differences between these two assessment methods. In general, the extant literature has shown only limited convergence between self-report and behavioral measures, raising the question of whether the same underlying concepts are in fact being tapped by each (Filsinger, 1983; Hannum & Mayer, 1984; Oliveri & Reiss, 1984). However, the present study went beyond the majority of previous work by investigating both criterion-related and predictive validity, in addition to convergent and discriminant validity. Several of the hypothesized relationships were not supported, particularly in terms of failing to establish discriminant validity, and finding relatively limited evidence for the association between self-reported cohesion and observable behavior. Some significant and meaningful findings did emerge, however, contributing to understanding of the validity of these systems-level variables, and their role in family adaptation.

At the outset, a direct look at the convergence of self-report and behavioral measures of the two concepts did reveal some association (Hypotheses 1 and 2). Fathers' describing shared feelings was positively related to their self-reports of both expressiveness and cohesion, showing that this behavior, which directly reflects expression of emotion and also

indicates shared family experience, is a useful, observable representation of the constructs being tapped by the FES subscales.

The observed behaviors of children, who did not fill out their own FES, were less easily interpreted. Their describing shared feelings was positively associated with mothers' Cohesion scores, yet negatively related to their Expressiveness scores. The former finding may pertain to a perception of support within the family, rather than a situation in which mothers reflected on their children's openness of expression when they responded to the FES. Similarly, the latter, unexpected finding may be attributable to the parents referring to the marital relationship, rather than the entire family, in responding to the FES. Indeed, most families in the study had young children, and the items pertain to a fairly sophisticated level of interaction; a methodological shortcoming lies in not having asked the participants to whom they were referring when responding to the FES.

Children's agreeing was positively associated with mothers' reported Expressiveness, yet negatively related to fathers' reported Cohesion. This behavior during the session often occurred in the context of parents prompting children to answer specific questions; this parental encouragement of and interest in children's participation may account for the relationship to mothers' perceived expressiveness. Again, fathers may not have been referring to the children's pattern of communication when responding to the FES.

Many of the other deductively-derived behaviors were not significantly associated with these two FES subscales. These behavioral items were defined a priori based on the observable actions the FES seems

to reflect, such as doing things together rather than alone being indicative of cohesion. Further, the inductively-derived items were defined based on actual observation of high- and low-cohesion families, yet still did not converge with this subscale. The overall lack of convergence here draws attention to the inherently vague quality of the FES items; they actually appear to be based on perceptions and beliefs about the tone of family life more than on behavior, especially in the case of Cohesion. Examples from this scale include "we often seem to be killing time at home," "there is a feeling of togetherness in our family," and "there is very little group spirit in our family." The lack of a clear relationship to observable behavior suggests that the referents for each of the items on this scale may be somewhat confusing to the respondents as well, and raises questions as to what specific aspects of their family life they are representing in their answers.

At the same time, while the Expressiveness items also pertain to perceptions and beliefs, they may be more linked to actual behaviors than are the Cohesion items. This finding was also presented by Hannum and Mayer (1984). Some of the inductively-derived behavioral items examined in the present study were related to the FES Expressiveness scale, while none were related to the Cohesion scale. In particular, fathers described their families as more expressive when they showed more disagreeing and disruptive interrupting during the storytelling of the loss, while mothers described their families as more expressive when they showed more affectionate touching. The subscale items do pertain to openness of expression (e.g. "we say anything we want to around home" and "there are a

lot of spontaneous discussions in our family"); mothers may also link this expressiveness to a sense of support and security when revealing one's feelings. This is reflected on the FES as an atmosphere of being able to express one's feelings without upsetting others (e.g., "It's hard to 'blow off steam' at home without upsetting somebody" and "Someone usually gets upset if you complain in our family"). Fathers' similar view of this aspect of the family environment is also reflected in their behavior, as indicated by the positive correlation between their rate of agreeing and their FES Expressiveness scores. The apparent contradiction between both fathers' disagreeing and their agreeing being associated with FES Expressiveness will be discussed at length below.

Taken together, these results shed some light on the extent to which these two FES subscales are linked to behavior, and on what underlying constructs they may be representing. The Cohesion scale is not well-associated with the obvious, theoretically-similar behaviors explored here, other than the description of shared feelings between family members. Rather, it appears to indicate a perception of or a desire to portray a sense of support, togetherness, and group spirit within the family. The Expressiveness scale is more readily associated with observable behaviors related to the concepts represented in the individual items; that is, openly expressing feelings and opinions without others becoming upset. A profile of an "expressive" family as identified by the FES emerges, in which family members describe shared feelings, freely disagree with and interrupt one another and/or frequently agree, and are physically affectionate. Thus,

some evidence for convergent validity, particularly for the Expressiveness scale, was established.

However, discriminant validity was considerably more difficult to demonstrate (Hypotheses 3 through 6). This is largely due to the fact that in order to establish discriminant validity, one has to overcome the power of method variance. In numerous studies, the tendency of scores obtained through the same method of measurement to correlate highly with one another has been an obstacle, and discriminant validity has not been established. Authors have proposed a variety of explanations for this, and essentially suggest that different methods of assessment necessarily measure different constructs (Kog, Vertommen, & Vandereycken, 1987; Oliveri & Reiss, 1984; Olson, 1969).

Similar results were obtained here. In fact, measures obtained within a method of measurement and across constructs were at times more highly intercorrelated than measures obtained across methods and within a construct. This was largely due to the fact that the two FES subscales were highly intercorrelated, while some of the correlations between these scores and individual behaviors were very low. In a sense, the attributes inherent in the self-report method appear to overshadow the construct itself. These attributes have been described as an "insider perspective" (in contrast to the outsider perspective necessarily assumed by a behavioral observer) (Olson, 1985), global rather than specific points of reference (Kog, Vertommen, & Vandereycken, 1987), social desirability, and clear demand characteristics in which it is relatively obvious what the researcher is investigating (Oliveri & Reiss, 1984).

The insider-versus-outsider-perspective difference inherent in these types of measurement may be additionally clarified to mean having access to members' attitudes, perceptions, and beliefs regarding the family, rather than their behavior alone. An effort was made to tap such qualitative aspects of the family's interaction using some of the inductively-derived items, yet these were also the ones where it was most difficult to achieve adequate reliability (i.e., interactive versus parallel storytelling, and presenting a united front versus isolation).

The issue of a relatively global versus specific level of analysis is also relevant; several of the items from the FES subscales have been described above. These relatively global measures contrast strikingly to the definitions of the observed behaviors, and this contrast again pertains to the issue of interrater reliability. Specific, well-defined behaviors with clear exclusionary criteria are the ones that observers can most accurately and consistently identify. On the other hand, the items that the family members are responding to on the FES require them to reflect on the patterns of behavior occurring throughout their interactions, and derive an overall perception. Reliability for this instrument depends on family members' views being adequately similar and stable; that this is frequently the case is not surprising given the development of shared outlooks and experience as a function of living together as a family. Independent observers neither possess such shared values and views, nor have great familiarity with the people they are observing.

Finally, the last two attributes of the self-report method relate to one another and are important issues in this particular study: social

desirability and clear demand characteristics. The sample of families who participated in the FBP had, to a large extent, enough intrapsychic and interpersonal resources available to them that they were willing to meet with an unknown professional for three sessions, and process the experience of their child's death. That is, the sample as a whole was probably more psychologically stable than the overall population of bereaved families; indeed only ten percent of the families screened met selection criteria and agreed to participate. In addition, many of the families described their reasons for participating as being to contribute to research, and in this way to help other families in the future. As such, they may have been motivated to present themselves as a "non-clinical" group, who were basically healthy families dealing with a non-normative event. The best, and most obvious, opportunity to portray themselves favorably would be on the FES. The less-structured, more spontaneous context of the initial session with the clinician would likely reveal different, less censored performance. This pattern of responding to such different sets of demands has also been discussed by other authors (Oliveri & Reiss, 1984; Sigafos *et al.*, 1985).

Finding some evidence for convergent validity, especially for the Expressiveness subscale, and yet failing to establish discriminant validity is consistent with findings from previous studies. However, an important way in which the present research went beyond the majority of previous work was by looking at criterion-related validity. Other studies have tended to estimate family cohesion and expressiveness from interviews, in the absence of standardized instruments, reliability checks, or behavioral referents (Balk, 1983; Davies, Spinetta, Martinson, McClowry, & Kulenkamp,

1986; Partridge & Kotler, 1987); or to use both family environment and behavior problems as dependent variables associated with an additional, independent variable such as home care (Mulhern, Lauer, & Hoffman, 1983)--although one may find exceptions (e.g. Spinetta, Swarner, & Sheposh, 1981). In the present study, the relationship of self-report and behavioral measures of expressiveness and cohesion to the Beck Depression Inventory and Pediatric Symptom Checklist provides a good example of the difference between what the two methods are assessing, and of the utility of looking at both in combination (Hypotheses 7 through 10).

The perception (i.e., self-report) of the family as not expressive was associated with higher BDI scores; these two reports together indicate a depiction of general distress, in which one has a lot of negative affect but does not feel free to express it without upsetting other family members. However, in terms of the behavioral measures, fathers' describing shared feelings was associated with a lower score on the BDI, while describing their own feelings alone was correlated with higher depression. That is, it is not simply expressing one's feelings that is pertinent, but whether the individual relates--or perceives--either having been alone in feeling these emotions, or having shared them with others. The observational measures described both assess expressed feelings, yet an important difference lies between those perceived as shared and those perceived as unique. This may help to clarify further what the FES is measuring: high reported Expressiveness reflects a sense of not only being supported in expressing one's feelings, but also sharing those emotions with others.

In terms of children verbalizing their own feelings during the session, those who describe their feelings alone also tend to be identified by their parents as showing greater distress, as reflected in higher PSC scores (similar to the obtained relationship to fathers' BDI scores). Either these children may be exhibiting and verbalizing more difficulties, or, again, these families may be more attuned to recognizing children's distress, in terms of parents asking children about their feelings.

The inductive items revealed a positive relationship between parental anger and fathers' BDI scores. Parents' feelings of anger associated with the death likely pertain to a sense of helplessness and a lack of control, which may be especially distressing for men since they are socialized to value power and efficacy. In addition, a number of items on the BDI refer to self-esteem, optimism, and feelings of failure, which may especially be endorsed by men who feel angry at their own inability to protect their child from death. These findings illustrate the value of measures of expressiveness in predicting depression, especially for fathers; the traditionally-employed variables of elapsed time since the loss and whether the death was acute or chronic were not useful.

Mothers and children were more sensitive to the passage of time. However, parental anger was also predictive of children's PSC scores, and less reported expressiveness on the FES and an agreeing tone during the storytelling interaction were associated with maternal depression. At the same time that mothers perceive an inability to express themselves at home without upsetting someone, the couple also presents a pattern of frequently agreeing with one another during the account of the loss. These two

qualities together may combine to create a situation in which mothers feel constrained, and required to maintain a sense of support within the couple, regardless of whether this support is sincere. A pattern of reciprocal influence may develop here, in which mothers feel increasingly--or continually--depressed in an environment where they cannot freely express their depressed affect.

The clinical implications of these findings, taken together, suggest a need to watch for describing feelings of one's own in isolation, as well as anger, particularly when working with bereaved fathers and children. The FES Expressiveness scale, and supplementary clinical questioning of a sense of genuine support for one's freedom to describe a range of feelings at home, as well as sensitivity to the temporal proximity of the death, will be especially useful in therapy with bereaved mothers.

In summary, investigation of criterion-related validity of self-report and behavioral measures of expressiveness revealed that a perception of the family as not free to express negative affect, but rather maintaining an appearance of support is predictive of higher reported depression following the death of a child. This is especially true when parents feel alone in their experience of strong emotions--particularly anger and depression--and may wish they could express these feelings.

In terms of the relationship of measures of cohesion to the BDI and PSC, a curvilinear relationship was hypothesized based on the theoretical assumption of high distress among both high- and low-cohesion families. Some evidence for this pattern did emerge: mothers' BDI scores were curvilinearly distributed in relation to interactive versus parallel

storytelling. However, this observed storytelling was not correlated with the FES Cohesion scale, suggesting it may reflect another aspect of family interaction that is associated with maternal depression. Highly shared or highly separate experience may function in a similar fashion to self-reported cohesion, yet be manifest in a well-defined task context, such as telling the story of the child's death, rather than a self-report. Because these different aspects of family environment and experience are both related to depression but not to each other, the two used together may be informative and complementary.

A similar relationship was found between this inductively-derived, observed behavior and children's PSC scores. Again, in families where the storytelling was characterized by either a highly shared or a highly separate experience, children were described as having more behavior problems--i.e., as exhibiting greater distress following the death. These demonstrated associations between personal distress and an observable pattern of interaction that reflects family unity contribute to the validation of a family-level concept such as shared experience, which may be an observable complement to the internally-perceived construct of family cohesion.

Further evidence for the notion that these self-report and behavioral measures may be assessing different yet complementary attributes of family life comes from the finding that children's describing their own behavior alone was also positively correlated with PSC scores, but was not related to the FES Cohesion subscale. Indeed, this behavior was hypothesized to reflect low cohesion, in the sense of portraying oneself as functioning independently rather than together with other family members,

and the result was in the predicted direction. Yet the Cohesion subscale is not well-linked to observable patterns of behavior, as discussed, although it is related to self-reports of distress. Once again, perceptions of family cohesion and actions indicative of shared experiences may both be associated with reports of distress, and yet not be related to one another; the two may be largely complementary rather than overlapping.

This point is once again well-illustrated in the findings from regression analyses predicting parental depression and child behavior problems from "cohesion" reports and behaviors, as well as traditionally-employed variables. Scores on the FES Cohesion scale contributed significantly, while observed behaviors also added to prediction above and beyond this variable. For fathers, describing their own behavior alone and affectionate touching, and for children interactive versus parallel storytelling, were also significant, providing further evidence that the FES scales in conjunction with observed behaviors are more valuable than either one alone.

A general profile of the distressed family emerges, in which individuals describe their own actions as independent, yet convey a sense of either highly separate or highly shared experience, and are not physically affectionate. In addition to watching for such specific, observable behaviors when working with bereaved families, clinicians may also find it useful to administer at least the FES Cohesion scale, as this is also associated with distress, and seems to measure perceptions of one's family that may be difficult to capture in clinical interviewing. Elapsed time since

was also a factor accounting for mothers' and children's distress, and this variable will always be important to consider in clinical work.

Other indicators of distress--such as taking medications, consuming alcohol, and going to a doctor--were also examined for their relationship to observable behaviors (Hypothesis 11). Based on the present findings, a profile of family interaction emerges to predict fathers in distress: the parents take turns and are physically affectionate, yet their descriptions of the loss experience are highly separate and disconnected. The fathers describe their own feelings and encourage others to do the same, yet perceive a low level of family cohesion, as assessed by the FES. These fathers will have difficulty sleeping and take more medications, both prescribed and over-the-counter. For mothers, only a critical or disagreeing tone during the storytelling was associated with one of these behaviors: more frequent use of nonprescribed medications.

Children's verbal behaviors are also important here. When children are observed to agree with other family members and to encourage their parents' expression of emotion--perhaps in place of spontaneously expressing their own feelings--while not talking much about shared feelings, they are likely to experience more parental discipline and difficulty sleeping, as well as missing days of school and taking medications (especially non-prescribed). Again, these are interpersonal behaviors that clinicians would want to keep in mind when working with bereaved families, especially in the context of defining and achieving treatment goals. Conversely, if family members describe these sorts of behavioral symptoms of distress, an intervention directed at facilitating

family members' self-expression and understanding of each other's feelings, as well as developing a greater sense of shared experience, may be helpful in their remediation.

Another way in which this study extended beyond previous construct validation studies was by looking at predictive validity, especially in the context of a repeated, follow-up assessment (Hypotheses 12). Observable behaviors at entry contributed to prediction of BDI and PSC scores obtained 6 months later, even above and beyond scores on the same self-report measure at entry, which consistently accounted for a significant portion of the variance. Some behaviors that were not related to shorter-term adjustment were related to longer-term adjustment, and in other cases the direction of the relationship changed over time.

For fathers, talking about their own behavior alone at entry was associated with lower BDI scores at follow-up: this is the opposite of the relationship between these variables at entry. Short term, thinking and talking about oneself alone is not adaptive, when the family needs to pull together to support one another. Over a longer period of time, separating oneself may be adaptive for men. Moreover, this behavior has been hypothesized to reflect low cohesion or shared experience. In the short term this sense of disconnectedness may be stressful for fathers, while in the long term it allows for distancing that may be helpful for them. Similarly, touching during the initial session was positively associated with fathers' depression at follow-up, although it was unrelated at entry. Family closeness may have a buffering or neutral effect on men relatively close to the death, and be associated with sustained depression later on.

For mothers, talking about family members together was unrelated to BDI at entry, while at follow-up that earlier behavior was associated with higher depression. In contrast to fathers, this sense of shared experience may persist with mothers; they may not tend to distance themselves from such intimacy. Yet remaining connected does not have a buffering effect for mothers; instead they remain depressed. This relationship either was not present at entry, and only became salient over time, or did not emerge from the cluster of other factors associated with maternal depression short-term. For children, a behavior that was predictive of PSC score at entry was also predictive at follow-up: describing one's own behavior alone. This finding was interpreted above; what is pertinent here is that the effect is maintained over a 6-month period, indicating the potential long-term meaningfulness of observing this behavior in bereaved children.

Of interest, at the follow-up the elapsed time since the death was no longer useful in any prediction of distress. At entry, families were either 3- or 9-months post-loss, and this variable was highly significant in predicting both mothers' BDI and children's PSC scores. At follow-up, however, the difference between families 9- and 15-months post-loss was no longer useful. This finding suggests that more severe distress is present 3 months after the death, and a critical amount of recovery begins to occur between that time and the 9-month mark.

Also of interest, the traditionally-employed variable of an acute versus chronic cause of death was unrelated to any measures of adjustment, at either entry or follow-up. This finding indicates the utility of

considering family interaction and environment variables, over this static, historical predictor.

One methodological issue that was directly investigated was internal validity, in terms of whether the clinicians were prompting family members to produce or inhibit certain behaviors (Hypothesis 13). Results indicated that clinician behavior did influence the adults, but not the children. Two behaviors by fathers were associated with clinician prompting, but only one of these was relevant to any other findings: fathers' describing shared feelings was correlated with clinicians' making acknowledging comments such as "yes" or "I see." These comments were not direct requests for fathers to provide such content, yet constituted a reinforcing response.

However, the direction of the relationship here is not clear: either the fathers spontaneously emitted a high level of such self-expression and the clinicians felt compelled to reinforce them, or the clinicians' additional encouragement prompted fathers to engage in more of this type of self-disclosure. No evidence exists to indicate that clinicians were more reinforcing toward fathers who described their families as less expressive, suggesting that the latter explanation, which implies differential encouragement, is less likely.

Two behaviors by mothers were also correlated with clinician feedback, yet neither of these were associated with any other results. As such, this pattern of reciprocal influence between the clinician and the parents seems to have had a minimal effect on the behaviors of primary interest to the present study.

A summary of the present findings indicates those interpersonal behaviors that clinicians should watch for when working with bereaved families. The behaviors that are most related to self-reports of family environment include describing shared feelings, the tone of interactions (agreeing versus contradicting), and affectionate touching. The behaviors that are most related to self-reports of adjustment include describing one's own and shared feelings, describing one's own behavior alone, expressing anger, and either interactive or parallel storytelling. The fact that there is little overlap in terms of behaviors that are associated with both of these types of self-report instruments suggests that consideration of the interpersonal behaviors described here, in conjunction with self-reports of family environment, would be most helpful in predicting adjustment.

However, the question then arises as to what purpose will be most readily addressed using each type of measurement, given realistic constraints and a desire for parsimonious assessment. If a family or individual presents with symptoms such as the behavioral indicators of distress assessed here (e.g., taking medications, having difficulty sleeping, and missing days of school or work), attention to behavioral interaction patterns will be more efficient than the FES. If the clients' primary concerns include depressive symptoms as assessed by the BDI, the FES would be highly correlated, yet does not implicate specific treatment targets. In this case, attention should be given primarily to behavioral targets, while keeping in mind the affective environment of the family as reflected in perceptions of having to keep one's feelings inside, and low family cohesion.

One of the interesting--and unanticipated--findings to emerge from this study was that fathers' behaviors and views of their families were related to a large number of other variables; more than mothers'. This is especially important because women are more frequent utilizers of mental health care; the present findings highlight the importance of encouraging fathers to participate in family interventions, and of paying close attention to their contributions when they do.

Some clarification of the concepts being measured is also possible at this point. The FES Cohesion scale is particularly sensitive to "insiders'" perceptions of family unity and support; in responding to the items here participants likely refer to a wide range of experiences and attitudes, rather than specific interpersonal events. As such, this scale is not well-linked to theoretically-similar, observable behaviors. Rather, the behaviors that were deduced to represent "cohesion" instead appear to reflect "shared experiences," including both actions and emotions. The representation of such shared experiences are often observable to "outsiders," and may be specific (e.g., "describes own behavior alone") or relatively global, while referring to a single, well-defined task context (e.g., "interactive storytelling").

Based on the present study, the area of overlap between this "cohesion" as identified by "insiders" and "shared experience" as identified by "outsiders" primarily pertains to family members' descriptions of shared feelings, and perhaps to their agreeing with one another as well. Indeed, these are examples of readily observable measures that family members themselves might also refer to when considering their answers to items on

the FES subscale (e.g., "There is a feeling of togetherness in our family" and "Family members really back each other up").

The FES Expressiveness subscale generally measures not only family members' actual expression of their feelings, but also their belief that they can do this without upsetting someone. As such this subscale is similar to the Cohesion one in its reference to family members' perceptions of and attitudes toward the concept of interest. However, the individual items on this scale are more readily linked to observable behaviors, and as such comprise more overlap with the behavioral items included in the present study. In terms of this overlap, disagreeing and interrupting to contradict are positively associated with FES Expressiveness, yet so are agreeing and expressing shared feelings.

This is where the difficulty arises with this subscale: it does not indicate whether family members actually express their feelings even when they expect someone to become upset, or whether this belief motivates them to inhibit such expression. Freedom to disagree may mean one does it because one knows no one will become upset, while frequently describing shared affect and expressing agreement may mean one does not express dissent because one wants to avoid upsetting someone. In this way, families who frequently disagree and those who rarely do might both have high scores on the FES Expressiveness subscale. Behavioral observation allows for the supplementary question--"Which one is it?"--to be answered. The current findings indicate that while there is some overlap between the two methods of assessment, behavioral observation is essential for interpreting the functional meaning of an FES score.

Despite some significant and meaningful findings, the present study is limited by several factors. Although observations did include all of the family members who were present, many of the behaviors focused largely on individuals, especially in the case of the deductively-derived items. The observed behavior of individuals is of course occurring within the context of a dynamic interpersonal process, yet the final frequency count does not reflect this reciprocal and conditional exchange. This issue has been described as characteristic of the difference between family systems and behavioral theories and assessment (Foster & Hoier, 1982). In terms of the integration of these two approaches, it speaks to the difficulty of reliably assessing "family-level" concepts using observational methods. The assumption tends to be that the sum of individual behaviors will at least represent the overall attributes of the group as a whole, yet this approach violates the systems theory tenet that the whole is necessarily greater than the sum of its parts.

Among the inductively-derived items, more global observations of the whole family during the entire thirty-minute segment presented a challenge in terms of achieving adequate reliability. The hope of Foster and Hoier (1982) that behavioral assessment methods might be applied to family process, in order to demonstrate systems constructs empirically and define them operationally, has been achieved only in part. To some extent, the problem remains, how do we accurately measure qualities of family interaction that invoke perceptions, attitudes and beliefs? Are there clearly-observable behaviors that are correlated with these perceptions?

The goal of obtaining clear, reliable observations of truly "family level" attributes remains a challenge for future research.

Several other measurement issues were discussed above, in the context of differences inherent in self-report and behavioral methods. One of these, the issue of a global versus specific level of analysis, can be further elaborated. The situations to which the two types of assessment refer are also quite different, and may invoke different interpersonal attributes of the family: the FES encourages consideration of one's family life as a whole, while the task of the initial session is to focus on the specific time of the child's death. In describing the events and circumstances of that extraordinarily stressful time, family members may portray a different set of attributes and view of themselves than they had in mind when responding to the FES. As such, comparison across these two measurement contexts may further account for the relatively little convergence observed between the two types of assessment.

Of course, a larger sample size would have allowed for more robust findings. As discussed above, however, it was quite difficult to recruit subjects for this study, even with the considerable resources of a large, urban medical center. The number of analyses required to address the proposed hypotheses and the available data is also a methodological shortcoming, in terms of the risk of Type I error.

Finally, the behavior of children is generally less interpretable than their parents', as they did not fill out their own FES, and were largely reacting to a situation and atmosphere created by their parents and the clinician, rather than initiating interactions tailored to their own interests.

Directions for future work might begin with improving on some of the shortcomings of the present study. For instance, a close look at the sequence of behaviors as well as their total frequency would allow for greater consideration of the family's ongoing process rather than only the product; this methodology was attempted to some extent in the inductive portion of this work.

Alternative ways of investigating similar data would also be a valuable contribution to the literature. First, an item analysis of the FES, using a larger sample, would allow for identification of which items are most associated with behavior, and most useful in predicting adjustment. Second, asking the clinicians to rate the families on the overarching concepts of interest (in the absence of standardized assessment results) would provide insight into the focus of these experts' observations and assumptions using only clinical material. These data could then be correlated with other measures of cohesion, expressiveness, and adjustment, giving an indication of clinicians' accuracy in and additions to the identification of symptoms and treatment targets.

Finally, another subscale of the FES that would be of interest is the Family Incongruence scale, which measures whether family members tend to agree with one another in their portrayals of the family environment. Especially for distressed families, differences in their perceptions may in part account for miscommunication and lack of awareness of each other's needs and feelings; such incongruence may be an antecedent to distress, or a symptom itself.

The present research is important in two ways. First, it has extended our understanding of family adaptation to bereavement, by examining the role of cohesion and expressiveness in families' presentation of distress, both in close temporal proximity to the death, and after the passage of an additional 6 months. In general, it has been demonstrated that in families with low perceived cohesion, little sense of shared experience, and a belief that one cannot express negative affect without upsetting someone, there is a higher incidence of parental depression, child behavior problems, and behavioral indicators of distress such as taking medication and having difficulty sleeping. These family-level concepts have previously been investigated in bereaved families, but not in terms of their relationship to these measures of adjustment.

Second, the present study also contributed to the construct validation of both cohesion and expressiveness, by exploring the relationship between, and the utility of, self-report and behavioral measures. Some evidence for convergent validity emerged, and areas of overlap and divergence were specified. Although discriminant validity was not established, the current investigation of criterion-related and predictive validity was unprecedented. In this way, the essential link between the study's two major purposes can be identified: not only have the concepts of cohesion and expressiveness been somewhat further clarified, but also their utility in predicting family adaptation following the death of a child has been demonstrated. Incorporating the two measurement methods described here, clinicians can efficiently and reliably identify areas of concern for bereaved families, and begin the process of intervening to alleviate their distress.

## Summary

Among families who had lost a child through death either 3- or 9-months previously, observable interpersonal behaviors and self-reports of family cohesion and expressiveness were associated with parental depression, child behavior problems, and behavioral indicators of distress such as taking medication and having difficulty sleeping. In general, these measures of difficulty adjusting were elevated in families with low perceived cohesion, little sense of shared experience, and a belief that one cannot express negative affect without upsetting someone. Self-report and behavioral measures examined here were convergent to some extent, yet discriminant validity was not established. Cohesion as measured by the Family Environment Scale appears to reflect members' perception of or desire to portray a sense of support and group spirit within the family, while observed behaviors hypothesized to represent this construct appear to reflect shared experience. Expressiveness as measured by this self-report scale is more readily associated with observable behaviors related to the concepts represented in the individual items; that is, openly expressing feelings and opinions without others becoming upset. As such, a combination of self-report and behavioral data was recommended for clinical work with bereaved families, as the two sources appear to tap complementary and only somewhat overlapping aspects of family functioning.

Table 1

Derivation and conceptual bases of deductively-derived observational measures

Cohesion	Expressiveness
Agree	Agree
Disagree**	Disagree**
Describe behavior alone	Describe own feelings
Describe behavior with others***	Describe another's feelings
Describe deceased alone	Describe shared feelings
Describe deceased with others***	Encourage expression
Describe another's feelings	Reject topic*
Describe shared feelings	Discourage expression*
Describe similarities between members*	
Describe differences between members*	

\* These items were excluded from the analyses due to very low rates of occurrence.

\*\* This item was excluded from the analyses based on unacceptable reliability.

\*\*\* These items were combined for the purpose of analyses, due to overlap in coding and conceptual similarity.

Table 2

Derivation and conceptual bases of inductively-derived observational measures

Cohesion	Expressiveness
Interactive vs. Parallel storytelling	Interactive vs. Parallel storytelling
Turn taking	Turn taking tone
United front vs. Isolation	Tone of shared storytelling
Touching	Anger
Showing support*	Crying
	Touching
	Showing support*

\* This item was excluded from the analyses based on inability to discriminate families on relevant dimensions.

Table 3

Interrater reliability for inductively-derived family behaviors

---

Behavior	Percent Agreement
Interactive vs. Parallel storytelling	50
Tone of shared storytelling	50
Turn-taking	80
Tone of turn-taking	100
United front vs. Isolation	70
Support	71
Anger	90
Crying	70
Laughing	78
Touching	100

---

Table 4

Interrater reliability for deductively-derived family behaviors

---

Behavior	Percent Agreement
Agree	71
Disagree	50*
Describe behavior alone	77
Describe deceased alone	75
Describe family together	64
Describe own feelings	88
Describe another's feelings	61
Describe shared feelings	70
Encourage expression	95

---

\* This item was excluded from the analyses based on unacceptable reliability.

Table 5

Interrater reliability for clinician behaviors

---

Behavior	Percent Agreement
Describes normal grief	69
Requests information	78
Acknowledges	88
Encourages emotion	20*

---

\* This item was excluded from the analyses based on unacceptable reliability.

Table 6

Significant correlations between deductive behaviors and FES Cohesion subscale scores

Variable	Pearson's $r$	p-value
<b>Fathers</b>		
Describing shared feelings	.34	.04
<b>Children</b>		
Agreeing x Fathers' FES-C	-.72	.001
Describing shared feelings x Mothers' FES-C	.45	.05

Note. No significant results were obtained for mothers.

Table 7

Significant correlations between deductive behaviors and FES Expressiveness subscale scores

Variable	Pearson's $r$	p-value
<b>Fathers</b>		
Describing shared feelings	.34	.04
Agreeing	.30	.07
<b>Children</b>		
Describing shared feelings		
x Mothers' FES-E	-.50	.02
Agreeing x Mothers' FES-E	.41	.07

Note. No significant results were obtained for mothers.

Table 8

Marginally significant correlations between tone of shared storytelling and FES Expressiveness subscale scores

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Variable	Pearson's $r$	p-value
Fathers' FES-E scores	-.32	.07
Mothers' FES-E scores	-.30	.09

---

Table 9

Group means and t-test findings for predicting FES Expressiveness scores from inductively-derived behavioral measures of open communication

Variable	mean	t	p-value
Turn-taking tone		-2.27	.03
Smooth	47.67		
Dissynchronous	69.50		
Touching		-2.57	.02
No	46.17		
Yes	56.39		

Table 10

Correlations between mothers' FES subscales scores and deductively-derived behavioral measures of cohesion and expressiveness

	Self-report		Behavioral Measures-Cohesion				Behavioral Measures-Expressiveness			
	FES-C	FESE	Agree	Bhr-alone	Deceased-alone	Family-together	Own-feelings	Other-feelings	Shared-feelings	Enc. Express.
<u>Self-report</u>										
FES-C										
FESE	.46***									
<u>Behavioral</u>										
Agree	.13	.25								
Bhr-alone	-.10	-.07	-.18							
D-alone	-.10	.09	.26	-.37**						
Fam. together	-.16	-.15	-.03	.01	.27					
Own-feelings	-.01	.03	-.09	-.06	.15	.02				
Other-feelings	-.03	.17	-.06	-.27	.24	.21	.27			
Shared-feelings	.20	-.24	.10	-.31*	.24	.25	.45***	.22		
Enc. Express.	.06	.23	-.01	-.38**	.29*	.18	.11	.12	.04	

\* p < .10      \*\*\* p < .01

\*\* p < .05

Table 11

Correlations between fathers' FES subscales scores and deductively-derived behavioral measures of cohesion and expressiveness

	Self-report		Behavioral Measures-Cohesion				Behavioral Measures-Expressiveness			
	FES-C	FES-E	Agree	Bhr-alone	Deceased-alone	Family-together	Own-feelings	Other-feelings	Shared-feelings	Enc. Express.
<u>Self-report</u>										
FES-C										
FES-E	.62***									
<u>Behavioral</u>										
Agree	.10	.31#								
Bhr-alone	-.09	-.03	-.18							
D-alone	.05	.08	.30#	-.01						
Family-together	.17	.23	.23	.20	.72***					
Own-feelings	.03	-.01	-.21	.37*	-.06	.21				
Other-feelings	.24	.11	.14	-.01	.45**	.35*	.01			
Shared-feelings	.34*	.34*	.03	-.13	.17	.22	.18	.05		
Enc. Express.	.04	-.11	-.06	-.04	.61***	.29*	-.03	.66***	-.02	

# p < .10      \*\* p < .01

\* p < .05      \*\*\* p < .001

Table 12

Correlations between fathers' FES subscales scores and children's deductively-derived behavioral measures of cohesion and expressiveness

	Self-report		Behavioral Measures-Cohesion				Behavioral Measures-Expressiveness			
	FES-C	FESE	Agree	Bhr-alone	Deceased-alone	Family-together	Own-feelings	Other-feelings	Shared-feelings	Enc. Express.
<u>Self-report</u>										
FES-C										
FESE	.62***									
<u>Behavioral</u>										
Agree	-.72***	.07								
Bhr-alone	-.09	-.24	.05							
D-alone	.04	-.18	.15	-.17						
Fam.together	.07	-.43*	.15	.41#	.60**					
Own-feelings	.27	-.13	-.42#	.76***	-.23	.22				
Other-feelings	.18	-.25	-.22	-.13	.74***	.49*	.20			
Shared-feelings	.21	-.33	-.42#	-.19	.30	.25	.24	.62***		
Enc. Express.	.22	.04	-.29	-.11	.04	-.16	.03	-.05	.05	

# p < .10                      \*\* p < .01

\* p < .05                      \*\*\* p < .001

Table 13

Correlations between mothers' FES subscales scores and children's deductively-derived behavioral measures of cohesion and expressiveness

	Self-report		Behavioral Measures-Cohesion					Behavioral Measures-Expressiveness				
	FES-C	FES-E	Agree	Bhr-alone	Deceased-alone	Family-together	Own-feelings	Other-feelings	Shared-feelings	Enc. Express.		
<u>Self-report</u>												
FES-C												
FES-E	.46**											
<u>Behavioral</u>												
Agree	-.07	.40#										
B-alone	-.24	-.18	.05									
D-alone	.24	.06	.15	-.17								
Fam.together	-.19	.05	.15	.41#	.60**							
Own-feelings	-.36	-.28	-.42#	.76***	-.23	.22						
Other-feelings	-.04	-.03	-.22	-.13	.74***	.49*	.20					
Shared-feelings	-.43	-.50	-.42#	-.19	.30	.25	.24	.62**				
Enc. Express.	-.13	-.01	-.29	-.11	.04	-.16	.03	-.05	.05			

# p < .10      \*\* p < .01  
 \* p < .05      \*\*\* p < .001

Table 14

Correlations between FES subscales scores and inductively-derived behavioral measures of cohesion and expressiveness

	Fathers' Self-report		Behavioral Measures-Cohesion		Behavioral Measures-Expressiveness	
	FES-C	FES-E	Turn-taking	United front	Interactive versus Parallel	Tone of storytelling
<u>Fathers' Self-report</u>						
FES-C						
FES-E	.62***					
<u>Behavioral</u>						
Turn-taking	-.01	.09				
United Front	.09	.17	.36*			
Interactive vs. Parallel	-.09	-.13	.52**	.34*		
Tone of Storytelling	-.26	-.32#	.48**	.42**	.59***	
<u>Mothers' Self-report</u>						
FES-C	.54***	.42**	.22	.18	-.12	-.20
FES-E	.35*	.37*	.17	-.10	.17	-.30

# p < .10      \*\* p < .01

\* p < .05      \*\*\* p < .001

Table 15

Significant comparisons of correlations within- and across-constructs and within- and across-methods of measurement (deductively-derived measures of cohesion)

---

Within-method / Across-construct vs:

Across-method / Within-construct	t	p-value
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---

FES-C x FES-E vs:

FES-C x Behavior alone	3.30	.01
FES-C x Deceased alone	2.98	.01

---

Note. Findings are for fathers. No significant results were obtained for mothers.

Table 16

Significant comparisons of correlations within- and across-constructs and within- and across-methods of measurement (inductively-derived measures of cohesion)

---

Within-method / Across-construct vs:

Across-method / Within-construct	t	p-value
FES-C x FES-E vs:		
FES-C x Turn-taking	-2.83	.01
FES-C x United Front	-2.56	.02
Turn-taking x Interactive v. Parallel vs:		
FES-C x Turn-taking	-2.99	.01

---

Note. FES scores are fathers'. No significant results were obtained using mothers' FES scores.

Table 17

Significant comparisons of correlations within- and across-constructs and within- and across-methods of measurement (deductively-derived measures of expressiveness)

---

Within-method / Across-construct vs:

Across-method / Within-construct	<u>t</u>	<u>p-value</u>
----------------------------------	----------	----------------

---

Fathers

FES-C x FES-E vs:

FES-E x Other's feelings	2.17	.05
FES-E x Own feelings	4.41	.001
FES-E x Encourage expression	3.25	.01

Encourage expression x Deceased alone vs:

FES-E x Other's feelings	4.20	.001
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Mothers

FES-C x FES-E vs:

FES-E x Own feelings	2.15	.05
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---

Table 18

Significant comparisons of correlations within- and across-constructs and within- and across-methods of measurement (inductively-derived measures of expressiveness)

---

Within-method / Across-construct vs:

Across-method / Within-construct	t	p-value
FES-C x FES-E vs:		
FES-E x Interactive v. Parallel	3.01	.01
Interactive v. Parallel x Turn-taking vs:		
FES-E x Interactive v. Parallel	2.26	.05

---

Note. FES scores are fathers'. No significant results were obtained using mothers' FES scores.

Table 19

Marginally significant correlations between deductively-derived behavioral measures of expressiveness and self-report measures of adjustment

	Pearson's $r$	p-value
Fathers' Depression		
Own feelings	.30	.07
Shared Feelings	-.30	.07
Children's Behavior Problems		
Own feelings	.42	.06

Note. No significant results were obtained for mothers' depression scores.

Table 20

Significant correlations between inductively-derived behavioral measures of expressiveness and self-report measures of adjustment

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	Pearson's $r$	p-value
Children's Behavior Problems		
Interactive v. Parallel	-.32	.07

---

Table 21

Group means and t-test findings for predicting measures of adjustment from ratings of anger displayed during the session

Variable	Mean	t	p-value
<b>Fathers' Depression</b>			
Anger Displayed		-2.51	.02
No	7.00		
Yes	14.64		
<b>Child Behavior Problems</b>			
Anger Displayed		1.75	.09
No	15.83		
Yes	21.33		

Table 22

Significant correlations between self-report measures of expressiveness and adjustment

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	Pearson's $r$	p-value
Fathers' Depression		
FES-Expressiveness scores	-.54	.001
Mothers' Depression		
FES-Expressiveness scores	-.35	.05

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Table 23

Results of stepwise multiple regression analyses predicting adjustment from deductively-derived measures of expressiveness and traditionally-employed variables

Independent Variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores					
FES-E	-2.81	-0.41	.24	.008	.24
Describes own feelings	2.37	0.33	.09	.03	.33
Mothers' Depression Scores					
Months post-loss	-2.06	-0.32	.08	.05	.08
FES-E	-2.13	-0.34	.08	.04	.16
Child Behavior Problems					
Months post-loss	-4.17	-0.60	.36	.001	.36

Table 24

Results of stepwise multiple regression analyses predicting adjustment from inductively-derived measures of expressiveness and traditionally-employed variables

Independent Variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores					
FES-E	-3.29	-0.46	.24	.002	.24
Anger	2.59	0.36	.13	.01	.37
Mothers' Depression Scores					
Months post-loss	-2.24	-0.40	.09	.03	.09
Tone of storytelling	2.22	0.40	.10	.03	.19
Child Behavior Problems					
Months post-loss	-4.10	-0.58	.36	.001	.36
Anger	1.82	0.26	.07	.08	.43

Table 25

Significant results of regression analyses predicting child behavior problems (PSC score) from deductively-derived measures of cohesion

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Independent Variable	t	beta	p-level
Child describes own behavior alone	2.37	0.29	.03

---

Table 26

Results of regression analyses predicting measures of adjustment from ratings of interactive versus parallel storytelling (inductive)

Dependent Variable	t	beta	p-level
	For quadratic term		
Mothers' depression	2.30	2.18	.03
	For linear term		
	-2.22	-2.10	.03
	For quadratic term		
Child behavior problems	1.70	1.62	.10
	For linear term		
	-2.05	-1.96	.05

Table 27

Significant correlations between self-report measures of cohesion and adjustment

	t	p-value
<b>Fathers' Depression</b>		
FES-Cohesion scores	-4.74	.001
<b>Mothers' Depression</b>		
FES-Cohesion scores	-2.63	.01
<b>Child Behavior Problems</b>		
Mothers' FES-Cohesion scores	-3.00	.005

Table 28

Results of stepwise multiple regression analyses predicting adjustment from deductively-derived measures of cohesion and traditionally-employed variables

Independent Variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores					
FES-C	-5.00	-0.66	.39	.001	.39
Own behavior alone	1.85	0.24	.06	.07	.45
Mothers' Depression Scores					
FES-C	-2.71	-0.40	.16	.01	.16
Months post-loss	-1.98	-0.30	.09	.05	.25
Child Behavior Problems					
Months post-loss	-4.83	-0.65	.36	.001	.36
Fathers' FES-C	-2.41	-0.33	.10	.02	.46

Table 29

Results of stepwise multiple regression analyses predicting adjustment from inductively-derived measures of cohesion and traditionally-employed variables

Independent Variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores					
FES-C	-5.72	-0.77	.39	.001	.39
Touching	-1.99	-0.26	.11	.06	.50
Mothers' Depression Scores					
FES-C	-2.71	-0.40	.16	.01	.16
Months post-loss	-1.98	-0.30	.09	.05	.25
Child Behavior Problems					
Months post-loss	-3.90	-0.49	.36	.001	.36
Mothers' FES-C	-3.82	-0.46	.18	.001	.54
Interactive vs. Parallel	-2.02	-0.26	.06	.05	.60

Table 30

Results of stepwise multiple regression analyses predicting deductively-derived measures of cohesion and expressiveness from behavioral indicants of distress

Dependent variable	t-value of	beta	increment	p-level of	multiple
Independent variable	increment		in R <sup>2</sup>	increment	R <sup>2</sup>
<b>Fathers</b>					
Describes own feelings					
Difficulty sleeping	2.15	0.34	.12	.04	.12
Encourages expression					
Difficulty sleeping	2.03	0.33	.11	.05	.11
<b>Siblings</b>					
Describes shared feelings					
Non-prescribed meds	-4.16	-0.66	.26	.001	.26
School days missed	-3.60	-0.57	.30	.002	.56
Encourages expression					
Difficulty sleeping	4.91	0.74	.55	.001	.55
Agrees					
Parental discipline	3.04	0.52	.47	.007	.47
Prescribed meds	2.11	0.36	.10	.05	.57

Note. No significant results were obtained for mothers.

Table 31

Results of stepwise multiple regression analyses predicting inductively-derived measures of cohesion and expressiveness from behavioral indicants of distress

Dependent variable	t-value of Independent variable	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers					
Turn taking					
Non-prescribed meds	2.30	0.37	.14	.03	.14
Touching					
Prescribed meds	2.46	0.39	.15	.02	.15
Interactive vs. Parallel					
Prescribed meds	-2.63	-0.50	.15	.01	.15
Mothers					
Tone of shared storytelling					
Non-prescribed meds	-2.72	-0.43	.19	.01	.19
Siblings					
Turn taking					
Visits to physician	-2.07	-0.32	.15	.05	.15
Touching					
Visits to physician	2.93	0.46	.15	.006	.15

Table 32

Results of stepwise multiple regression analyses predicting self-report cohesion subscale scores from behavioral indicants of distress

Dependent variable	t-value of	beta	increment	p-level of	multiple
Independent variable	increment		in R <sup>2</sup>	increment	R <sup>2</sup>
<b>Fathers</b>					
FES-C					
Difficulty sleeping	-2.67	-0.41	.17	.01	.17
<b>Siblings</b>					
Fathers' FES-C					
Parental discipline	-4.62	-0.60	.36	.001	.36

Note. No significant results were obtained for mothers.

Table 33

Results of stepwise multiple regression analyses predicting adjustment at follow-up from deductively-derived measures of cohesion and traditionally-employed variables

Independent variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores at Follow-up					
BDI at entry	8.82	0.87	.65	.001	.65
Own behavior alone	-2.22	-0.22	.05	.03	.70
Mothers' Depression Scores at Follow-up					
BDI at entry	7.80	0.77	.52	.001	.52
Family Together	2.74	0.28	.16	.01	.68
Child Behavior Problem Scores at Follow-up					
Fathers' FES-C	-4.86	-0.64	.18	.001	.18
Own behavior alone	3.36	0.44	.49	.001	.67

Table 34

Results of stepwise multiple regression analyses predicting adjustment at follow-up from inductively-derived measures of cohesion and traditionally-employed variables

Independent variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores at Follow-up					
BDI at entry	8.49	0.83	.69	.001	.69
Mothers' Depression Scores at Follow-up					
BDI at entry	5.64	0.69	.47	.001	.47
Child Behavior Problem Scores at Follow-up					
PSC score at entry	4.13	0.51	.34	.001	.34
Fathers' FES-C	-3.55	-0.44	.22	.001	.56

Table 34

Results of stepwise multiple regression analyses predicting adjustment at follow-up from inductively-derived measures of cohesion and traditionally-employed variables

Independent variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores at Follow-up					
BDI at entry	8.49	0.83	.69	.001	.69
Mothers' Depression Scores at Follow-up					
BDI at entry	5.64	0.69	.47	.001	.47
Child Behavior Problem Scores at Follow-up					
PSC score at entry	4.13	0.51	.34	.001	.34
Fathers' FES-C	-3.55	-0.44	.22	.001	.56

Table 35

Results of stepwise multiple regression analyses predicting adjustment at follow-up from deductively-derived measures of expressiveness and traditionally-employed variables

Independent variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores at Follow-up					
BDI at entry	8.09	0.81	.65	.001	.65
Mothers' Depression Scores at Follow-up					
BDI at entry	6.28	0.72	.52	.001	.52

Note. No significant results were obtained for children.

Table 36

Results of stepwise multiple regression analyses predicting adjustment at follow-up from inductively-derived measures of expressiveness and traditionally-employed variables

Independent variable	t-value of increment	beta	increment in R <sup>2</sup>	p-level of increment	multiple R <sup>2</sup>
Fathers' Depression Scores at Follow-up					
BDI at entry	8.01	0.82	.66	.001	.66
Touching	2.02	0.21	.06	.05	.72
Mothers' Depression Scores at Follow-up					
BDI at entry	5.64	0.69	.47	.001	.47
Child Behavior Problem Scores at Follow-up					
PSC at entry	3.56	0.69	.34	.002	.34

Note. No significant results were obtained for children.

Table 37

Significant correlations between clinician behaviors and family members' behaviors

Variable	Pearson's $r$	p-value
<b>Clinician describes normal grief</b>		
Father describes family together	.32	.05
Mother describes deceased alone	-.32	.05
<b>Clinician acknowledges or shows listening</b>		
Father describes shared feelings	.40	.01
Mother describes another's feelings	-.31	.06

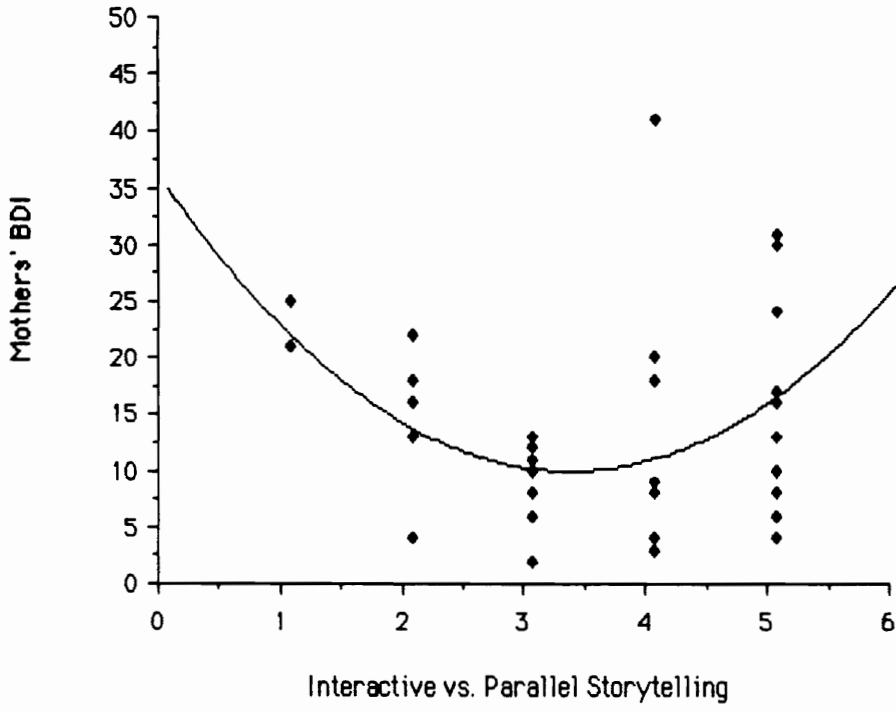


Figure 1. Relationship of mothers' depression to storytelling style.

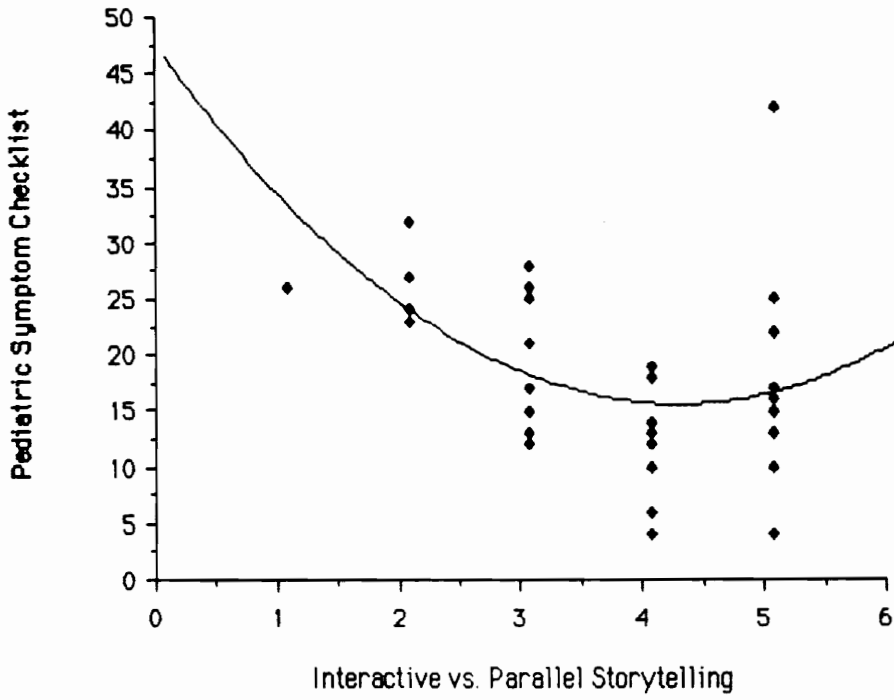


Figure 2. Relationship of child behavior problems to storytelling style.

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## Appendix A Guidelines for Session 1

The goal of the three-session intervention is to enhance family members' ability to open channels of emotional communication with each other, so that they may support each other and carry on the work of mourning. The intervention is taking place at a time when there is a tendency for communication to diminish because of the amount of emotional pain involved.

The clinician's role is to provide a safe, non-judgmental setting in which each family member has an opportunity to share his/her reactions. The first session begins with the telling of the story of the child's death. The purposes here include giving each person a chance to express his own ideas, reactions and feelings; permitting others to hear different perspectives; and highlighting differences in coping styles.

To assist the telling of the story, the intervenor asks specific questions pertaining to the time of the diagnosis or accident, the funeral, and the period following the funeral. Families will vary significantly in terms of their need for specificity of questions to encourage storytelling.

Clinicians will model a stance toward bereavement through their openness in talking about death, acceptance and respect for differences in coping and for expressing strong emotions, and a sense of future perspective.

Children may be included as active participants as much as possible, and in keeping with the individual family's preferences. The clinician can explain the relevance and functions of children's play during the session, when relevant to the discussion.

For most families who are quiet, the non-responsiveness will be a result of discomfort. The clinician should comment that the family seems uncomfortable in talking and ask if they can explain why that is. On the other hand, at times the clinician may need to sensitively but firmly set limits on a family member's contributions in order to make certain that all members have an opportunity to participate, or to contain the amount or intensity of emotion expressed.

The notion of blame or guilt should be addressed when it is manifest, including the consequences of continuing to blame. Issues around protection of the surviving children will also be common, and the clinician should

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Note: From Treatment Manual for the Family Bereavement Project by B. Kemler and G. P. Koocher, 1988.

attempt to get a sense of how separation issues are being handled. In general, this material should be addressed briefly as it comes up throughout the interview, and then again in summary at the conclusion of the session.

The format for the first session, then, is as follows: 1. Clinician's introductory comments, describing the intervention; 2. Family storytelling; 3. Exploration of coping around death; 4. Education about the grief of adults and children; 5. Feedback about family's coping; and 6. Suggested literature and assignment to bring a remembrance to the next session.

The present study will obtain behavioral observations during the first thirty minutes of the session. This time consists primarily of family storytelling. At the outset, the clinician explains the task of talking about what it was like when the child died and how the family managed at that time, and the intended benefit of this sharing. During the remainder of this segment, the clinician's primary goals are to make certain each family member has the opportunity to convey his/her ideas, and to listen carefully to the story, eliciting specific information pertaining to the time of diagnosis and each person's understanding at that point, the time of death and who was present, the funeral, and children's understanding of death.

## Appendix B

### Pediatric Symptom Checklist

Parent's Name:

Child's Name:

Date:

Please mark under the heading that best fits your child:

	Never	Sometimes	Often
1. Complains of aches or pains	_____	_____	_____
2. Spends more time alone	_____	_____	_____
3. Tires easily, little energy	_____	_____	_____
4. Fidgety, unable to sit still	_____	_____	_____
5. Has trouble with teacher	_____	_____	_____
6. Less interested in school	_____	_____	_____
7. Acts as if driven by a motor	_____	_____	_____
8. Daydreams too much	_____	_____	_____
9. Distracted easily	_____	_____	_____
10. Is afraid of new situations	_____	_____	_____
11. Feels sad, unhappy	_____	_____	_____
12. Is irritable, angry	_____	_____	_____
13. Feels hopeless	_____	_____	_____
14. Has trouble concentrating	_____	_____	_____
15. Less interested in friends	_____	_____	_____

- |  |       |       |       |
|--|-------|-------|-------|
| 16. Fights with other children                         | _____ | _____ | _____ |
| 17. Absent from school                                 | _____ | _____ | _____ |
| 18. School grades dropping                             | _____ | _____ | _____ |
| 19. Is down on him or herself                          | _____ | _____ | _____ |
| 20. Visits doctor with doctor<br>finding nothing wrong | _____ | _____ | _____ |
| 21. Has trouble with sleeping                          | _____ | _____ | _____ |
| 22. Worries a lot                                      | _____ | _____ | _____ |
| 23. Wants to be with you more<br>than before           | _____ | _____ | _____ |
| 24. Feels he or she is bad                             | _____ | _____ | _____ |
| 25. Takes unnecessary risks                            | _____ | _____ | _____ |
| 26. Gets hurt frequently                               | _____ | _____ | _____ |
| 27. Seems to be having less fun                        | _____ | _____ | _____ |
| 28. Acts younger than children<br>his or her age       | _____ | _____ | _____ |
| 29. Does not listen to rules                           | _____ | _____ | _____ |
| 30. Does not show feelings                             | _____ | _____ | _____ |
| 31. Does not understand other<br>people's feelings     | _____ | _____ | _____ |
| 32. Teases others                                      | _____ | _____ | _____ |

33. Blames others for his  
or her troubles

\_\_\_\_\_

34. Takes things that do not  
belong to him or her

\_\_\_\_\_

35. Refuses to share

\_\_\_\_\_

## Appendix C

### Behavioral Indices

Please be sure to use exact numbers. If you are unsure, please estimate a numerical answer. Thank you!

#### IN THE PAST WEEK:

1. How many times has your family eaten a meal together?
2. How many times have you taken a medication prescribed by a physician?  
(Please list medications and frequency.)
3. How many times have you taken a non-prescription medication  
(e.g. aspirin, antacid, cold capsules, etc.)?  
(Please list products and frequency.)
4. How many times have you participated in a social or recreational activity  
outside of the home either alone or as a couple?  
(Please list examples and frequency.)
5. How many drinks of alcoholic beverages have you had?  
(Please list type and frequency.)
6. How many nights have you had difficulty falling asleep or staying asleep  
throughout the night?
7. Have you smoked?  
(If so, please estimate in number of packs.)

#### IN THE PAST MONTH:

1. How many days have you been sick enough to stay home from work?  
(If you work in the home, how many days have you missed out on your  
daily routine?)
2. How many times have you been seen by a physician for a medical visit?
3. How many times have you talked with a psychotherapist or counselor?

3A: How many times have you sought counseling or advice from others (e.g. clergy, or close friend)?

4. How many times have you attended a religious (worship) service?

5. How many times have you gone on a family outing?

(Outing is defined for purposes of this question as a social or recreational activity involving at least one parent and one child together.)

6. How much do you weigh now?

7. How much did you weigh a year ago?

## Behavioral Indices, continued

## QUESTIONS REGARDING:

PARENT NAME:

IN THE PAST WEEK:

1. How many times has your child taken a medication prescribed by a physician? (List...)
2. How many times has your child taken a non-prescription medication (e.g. aspirin, cold capsules, etc.)? (List....)
3. How many times has your child participated in a social or recreational activity outside of the home? (List....)
4. How many times have you had to discipline your child?  
(For our purposes discipline will mean imposing a punishment or restriction on the child in response to perceived inappropriate behavior.)
5. How many times has your child had difficulty falling asleep or staying asleep through the night?

IN THE PAST MONTH:

1. How many days has your child been sick enough to stay home from school?  
(If child is not yet in school, how many days has he/she not been able to participate in a regular day of activities?)
2. How many times has your child been seen by a physician for a medical visit?
3. How many times has your child talked with a psychotherapist or counselor?

4. How many times has your child had an academic or behavior problem at school (e.g., been tardy, sent to the principal's office, failed a test, etc.)  
(List....)

5. What are the height and weight of your child?  
(Can be obtained in office.)

Appendix D  
Behavior Rating Scale

Family Name \_\_\_\_\_ Start Time \_\_\_\_\_ End Time \_\_\_\_\_

1. "Interactive" storytelling or talking means parents share a lot of the work of describing events. They may elaborate on and add to each other's statements, perhaps agreeing with them, finishing each other's sentences, and/or generally building on each other's statements.

"Parallel" storytelling means parents tell parts of the story very separately. They may describe only their responses, behaviors, and feelings, and then the other person does the same. The observer does not perceive a lot of exchange and overlap between the parents, or between their experiences as they have described them. They do not necessarily have to disagree, or to tell the same story from different points of view.

Rate the degree to which these parents described events in an interactive or a parallel manner:

1	2	3	4	5
Parallel speaking, Highly separate	Primarily parallel with only occasional examples of interactive speaking	Roughly equivalent between some parallel (separate) and some interactive (overlapping, shared) communication	Primarily interactive with only occasional examples of parallel speaking	Inter-active speaking, Highly shared

1a. If you rated these parents with a 2 or higher, what was the general, overall tone of this interactive storytelling?

1	2	3	4	5
Critical and conflictual	Disagreeing but in a non-critical manner	A balance of agreeing and disagreeing	Adding to and elaborating; implicitly agreeing	Also adding and elaborating, but with a tone that is overtly positive & supportive; explicitly agreeing

2. Turn taking has to do with how often parents take turns speaking. Many, frequent turns occur when one parent speaks for a short time, followed by the other parent speaking for roughly the same length of time. Few, infrequent turns occur when one parent speaks for a long time, followed by the other parent speaking for a long time, OR when one parent does the vast majority of the speaking.

Rate the degree to which these parents take turns speaking:

1	2	3	4	5
One person does the vast majority of the speaking	One person dominates the conversation for a while, then the other person dominates	Each person speaks for a long time, but still take turns	Frequent, short turns occur roughly half the time	Many frequent turns occur during most of the conversation

2a. If one person talked noticeably more than the other, who was it?

Mom

Dad

2b. If you rated these parents with a 3 or higher, was this turn-taking cooperative, smooth, and synchronized (in general) or was it contradictory and disruptive, based mainly on interruptions that break the flow of what the other is saying?

Cooperative

Disruptive

3. Parents present a "united front" when they describe their responses, ways of coping, and/OR lifestyle as being similar and congruent, and/OR as fitting together well and working as a team. This may also include descriptions of being together or working out a routine, and being supported by each other during the child's terminal phase or following the death.

Parents convey a sense of isolation and distance when they describe their responses as very different and these differences as difficult to tolerate or accept. They may also describe often being alone, or not knowing what the other was doing or feeling. They may describe major or important differences in their outlook or philosophy, as well as in their ways of coping. Or, there may be almost no talk about working as a team either during the child's life or following the death. This separateness may pertain to the actual events surrounding the loss (e.g. being physically apart), as well as to the way in which they describe these events.

Although examples of both unity and isolation may be heard during the 30-minute segment, this item pertains to the predominant way that the parents present themselves, the way that seems to characterize the segment overall.

Rate the degree to which these parents conveys a sense of unity vs. isolation:

1	2	3	4	5
Sense of isolation-- very separate outlooks, beliefs, ways of coping, with little understanding or acceptance of these differences, or little discussion of them	Generally separate and distant, with only occasional examples of working together or accepting differences	Some important differences, yet with a sense of being able to tolerate these and still usually work together	Generally united and congruent, and/OR differences are not described as problematic	United front. Similar and congruent ways of coping, sense of support and working as a team

4. Parents may show support by agreeing with each other, backing each other up, or showing sensitivity to each other's feelings or positions. Support is also evident when each parent responds directly to what the other has said, rather than making a statement that is not immediately relevant. Or, they may make eye contact and refer to each other for information, so as to draw the other person into the conversation, rather than directing all of their speech to the clinician. The observer may perceive a sense of warmth, patience, tolerance, and understanding between the parents.

Rate the extent of support shown by these parents toward each other:

Absent	Seldom/infrequent	Frequent/characteristic
--------	-------------------	-------------------------

Who showed it (most often or in general, unless pretty equal)?

Mom	Dad	Both	Neither
-----	-----	------	---------

5. Based on the tone, rate the extent of anger shown by these parents during this segment:

Absent	Seldom (1-3 instances)	Frequent/characteristic (4 or more instances)
--------	---------------------------	--

Who showed it?

Mom	Dad	Both	Neither
-----	-----	------	---------

6. Rate the extent of crying shown by these parents:

Absent	Seldom (1-3 instances) (or briefly)	Frequent/characteristic (4 or more instances) (or for a long time)
--------	---	--

Who showed it?

Mom	Dad	Both	Neither
-----	-----	------	---------

7. Did these parents laugh together during the session--at their own jokes, humor or behavior? (This is defined as both parents laughing or one smiling while the other laughs) (Do not include laughing at a joke made by a clinician or child).

Yes \_\_\_\_\_ No \_\_\_\_\_

8. Did these parents touch each other in a gentle, affectionate, and/or supportive way during the session (as opposed to inadvertently) ?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, did this occur only when one or both were crying?

Only when crying \_\_\_\_\_

Also when not crying \_\_\_\_\_

Only when not crying \_\_\_\_\_

## Appendix E

### Precedence Rules for Coding Behaviors

For behaviors indicative of cohesion, the following rules will apply in cases where a single utterance might be dually coded:

States similarities between members OR States differences between members > Agrees with another's statement OR Disagrees with another's statement > Describes behavior together with other survivors OR Describes own behavior alone OR Describes behavior of deceased with others OR describes behavior of deceased alone

For behaviors indicative of expressiveness, the following rules will apply:

Encourages expression of feelings by another > Expresses own feelings OR Describes another's feelings OR Describes feelings together with another

Rejects topic > Discourages expression of feelings by another > Expresses own feelings OR Describes another's feelings OR Describes feelings together with another

For clinician behaviors, the following rules will apply:

Encourages expression of emotion OR discourages expression of emotion > Verbally summarizes a family member's affect > Describes normal grief reactions > Recapitulates information to provide integration

Each coding sheet will reflect these rules by arranging the behaviors in sequence, such that if two categories are possible, the coder will select the behavior to the left (i.e., the "code left" convention).

## Appendix F

### Observer Training Protocols

#### Orientation to the Family Bereavement Project

The participants in this project are all families who have lost a child. The circumstances of the deaths vary greatly, but many of them are newborns. All of the families include two parents, most of whom are married. Most of the families have at least one surviving child, but the children do not always come in with the parents for the sessions.

#### Orientation to Session One

In the first session, the clinician nearly always begins by thanking the family for coming, and explaining to them how the project in general works. For instance, there are 3 sessions, and we believe that families who are able to talk together do better, so that's why we're doing this program, etc. Then, the clinician will explain that in this first session, she would like to begin by finding out about the story of the loss. She will probably say something like, "Because I have very little information about your situation, I'd like to begin by having you tell me about what happened to Johnny, his life and his death." It is at this point that your work begins.

#### Tape Reviewing and Behavior Rating

Before you start reviewing the tapes, you need to familiarize yourself with the behaviors that you will be watching for. After you have watched 30 minutes of the tape, you will rate the extent to which these behaviors occur.

Read over the items on the rating sheets, and see if you have any questions.

Next, you can watch 5 to 10 minutes of a tape, and then rate the items based on what you have seen so far. Any questions?

On Thursday, you can come in and watch 30 minutes of 2 or 3 more tapes, beginning when the clinician invites the family to tell their story. Before you actually begin, read through the items that you will be rating, once or twice. Keep these behaviors in mind as you are watching the tape. After each 30 minute segment, rate the behaviors on the sheets.

## Reviewing and Rating Family Interaction

You will be watching 30 minutes of family interaction--beginning when the clinician asks the family to tell the story of their loss--and then rating the family on 8 behaviors. This protocol describes this task:

1. Refer to your list of tapes to review and rate, and select from your assigned tapes the next one on the list.
2. Review the rating sheets to familiarize yourself with the behaviors you are going to be watching for and later rating.
3. Rewind the tape to the beginning, and begin watching the tape. Do not fast-forward at all at this time, even if it seems that a lot of "fluff" is going on.
4. Be sure to notice when the clinician asks the family to tell the story of the death and what happened. Most of the time, this will begin with the clinician saying something like, "What I'd like to do now in this part of the session is find out more about the story of Johnny's death, because I have very little information in this chart. . . ." Regardless of whether the clinician adds more information about the program at this point, or whether anyone strays from this topic, this is the beginning of the segment you will be rating.
5. Write down on the coding sheet the exact time as shown on the wall clock. Add 30 minutes to this, and write down the "end time" in the space provided.
6. Watch the tape continuously for exactly 30 minutes, keeping in mind the items you will be rating at the end. Do not stop watching during this period of time. Concentrate on what the parents are saying, and disregard the children if they are noisy or disruptive. When the time is up, turn off the tape.
7. Rate the family on the items on the rating sheets, in order, based on the sequence you just watched. Take your time and reflect on your answers.
8. Provide an answer to every item. If a question is not applicable, write "N/A" so that it is clear that you did not overlook it.
9. If you have any additional comments you would like to make regarding any questions, write these in at the bottom of the page.

10. Similarly, if you have any doubts or questions about how to rate something, circle the item and make a note of your question in the margin, and bring it up with Bonnie as soon as possible.

11. Put the completed rating sheets in Bonnie's mailbox when you are finished for the day.

12. Determine your schedule so that you can complete 6 to 8 tapes each week. That way, we will have all of them done by Friday, February 22.

## Transcribing Family Sessions

We are transcribing 30 minutes of conversation, beginning when the clinician asks the family to tell the story of their loss. It is very important that you record everything that everybody says, word for word. This protocol describes this task:

1. Refer to your list of tapes to transcribe, and select from your assigned tapes the next one on the list.
2. Rewind the tape to the beginning, and begin watching the tape. Do not fast-forward at all at this time, even if it seems that a lot of "fluff" is going on.
3. The sessions typically begin with the clinician thanking the family for coming, and explaining how the session and the program works. Clinicians vary in how long they take for this portion. Continue watching, but not yet transcribing.
4. Begin transcribing when the clinician asks a family member to tell something about what they remember from the death, or to tell the story of what happened. Most of the time, this will begin with the clinician saying something like, "What I'd like to do now in this part of the session is find out more about the story of Johnny's death, because I have very little information in this chart. . . ." Regardless of whether the clinician adds more information about the program at this point, or whether anyone strays from this topic, this is where you begin transcribing.
5. Record what each individual says VERBATIM. This means you write down sentences that start and are never finished, "fillers" such as "you know" and "I mean," and all "ums," "wells," and other quirky sounds. Coughs, noseblowing, and other sounds need not be transcribed. However, make parenthetical notes of crying and laughing as they occur, as well as other elements that may help to convey the flavor of the conversation, such as sighs and shrugs. In other words, include this as--for example: (laughs). As much as possible, include all of the "hmm" and "mhm" sounds made by others to indicate they are listening and following along.
6. Include all of the speeches, however incomplete, of each person. Label the mother as "M," the father as "F," any and all children as "C," and the clinician as "T" (for therapist).

7. Include statements between the children and the parents, which may have nothing to do with the conversation.

8. If two people are speaking at the same time, start with the person whose voice you heard first, and write down all that they say while the other person is still speaking. Then write down what the other person was saying simultaneously. If one person continues speaking, add this speech next. In other words, do not write down a person's whole speech until they finish speaking and then what someone else said toward the beginning of that whole speech. TRY AND CAPTURE THE ORDER OF SPEECHES AS ACCURATELY AS POSSIBLE.

9. If one person interrupts another person, transcribe the conversation as close to the way it occurs as possible. Go to the next speaker as soon as they start speaking, and then go back to the original speaker, picking up in midsentence where they were interrupted.

10. When several people are speaking at once it can be difficult to hear. Concentrate on only one voice at a time, beginning with the one who starts speaking first, and transcribing this speaker for as long as their speeches overlap (see number 8). Then rewind the tape and concentrate on the next voice, etc.

11. If at any time you are not sure what someone said, draw a line to signify a blank that can be filled in later if possible. Include this right in the sentence; do not put it on a different line.

12. In general, let the tape run for as many words as you can remember. Then press pause and write down what you just heard. Press play and then immediately press rewind, to go back and hear what you missed because of having the tape on pause. This rewinding typically takes only a few seconds. Then press play again, and listen to as much as you can remember, and so on.

13. At first this may take you quite a while--up to 5 hours to get 1/2 hour of conversation. After you have transcribed a few tapes, you will begin to get a sense of when a half hour of conversation has taken place.

14. After you have transcribed what you guess might be nearly or roughly a half hour, rewind the tape, and watch it to check over your transcribing, and to see if you have indeed got one half hour (as described below in \*15).

15. When the clinician begins the first line that you transcribed, immediately look at the clock and write in the margin the exact time, next to that first line.

16. Read over your transcript while listening to the tape--correcting any mistakes, adding in anything you missed, and filling in anything you couldn't hear correctly the first time. If you have to leave some blanks, that's o.k., but if you can make a good guess at what was said, write in this guess in parentheses.

17. If you have to stop the tape at all during this phase, immediately write down the exact time in the margin next to where you stop the conversation. Otherwise, continue watching until 30 minutes have passed. Write the exact time and "30 minutes" in the margin at this point.

18. If you do not have 30 minutes transcribed yet, write down the time and the number of minutes you have so far in the margin. Resume transcribing, and then rewind to check the elapsed time beginning at this point. Repeat until you have transcribed 30 minutes.

Spelling. Do the best you can to be consistent in how you write such things as "uh," "oh," etc. Exact pronunciations are not as important as exact wording. Words like "wanna" and "gonna" can be included, but in most cases spelling should be normalized to standard spelling, as if pronunciation had been standard (i.e., "want to"). The positive particle is spelled "uh-huh" and the negative particle is spelled "uh-uh." "Mmmm" or "Hmmm" can be simplified to "Mm;" "Mmhmm" can be simplified to "mhm."

Breaking speeches into sentences. Since we do not change any wording in this transcription, long, run-on sentences must show all of the "ands" that connect them. At the same time, independent clauses should be separated, and new sentences may begin with "and." Indicate the beginnings of new sentences through your use of capitalization whenever possible.

Punctuation. Three periods ( . . . ) are used when speech trails off or when a long pause occurs within sentences. For false starts and interruptions, two dashes (--) are used. Question intonation is transcribed with a question mark. Otherwise, periods are used.

Quotations. If someone quotes himself or another person, show this using quotation marks (just like in a newspaper article). For example, M: And then they told us, "Well, even if we did operate, he still might not make it." So we just said, "What else can we do?"

## Coding Transcripts

We are identifying specific categories of behavior exhibited by the families and reflected in the verbatim transcripts. These categories are defined in your "Behavioral Definitions," and appear on the coding sheets provided for this purpose. This protocol describes this task:

1. Review behavioral definitions.
2. The code is organized into three sections: Family-member Behaviors Related to Togetherness, Family-member Behaviors Related to Expressiveness, and Clinician Behaviors. Coding proceeds by going through the entire 30-minute transcript twice, coding the Family-member Behaviors first, and then coding the Clinician Behaviors.
3. Chunks (or "utterances") are identified on the coding sheet by entering the number of the chunk and the letter which represents the speaker of the chunk in the left-most column on the appropriate coding sheet. Next, the person spoken to is entered in the next column. When this is unclear, the default is "T," indicating conversation generally directed at the therapist.
4. Just about every utterance will conform to the definition of one of the behaviors listed across the top of the remaining columns. When this is the case, place a check or slash in the appropriate column, below the name of the behavior. If you believe an utterance fits NONE of the categories, write its number on the back of the first coding sheet (so it is clear that you did not overlook it).
5. Each chunk can be assigned to only one code category. When a chunk may possibly conform to more than one definition, the coder must refer to the precedence rules or hierarchy for making coding decisions (see "Precedence Rules for Coding Behaviors"). That is, the most precedent Family Behavior Related to Togetherness is either "states similarities between members" or "states differences between members," while the most precedent Family Behavior Related to Expressiveness is "rejects topic" or "encourages expression of feelings by another." It should be clear whether one is stating a similarity or a difference; these categories are mutually exclusive and do not need precedence rules.
6. Some incomplete fragments will be numbered as constituting a chunk, because they have some meaning in the discussion. (For example, a parent may respond to their spouse with "But you only . . ." and this can be coded as

a disagreement). Do not make assumptions about how a fragment would have been completed.

7. Be aware of how each utterance fits into and is part of the conversation. You are not expected to code each chunk as if it were standing alone. Always consider the meaning of the statement IN CONTEXT.

8. At the same time, always remember that you cannot determine what is going on in the participants' minds, and you are not supposed to even consider what a speaker might "really mean" or "really intend" by some remark. Instead, you must rely on your understanding of verbal interaction to make use of the clues available to you as an observer when you determine the appropriate category for each utterance. Remain vigilant against over-interpreting!

9. On the item "describes behavior of deceased alone," put an "M" in the column to denote any description of medical status and facts. (This is the category you will use whenever the utterance refers to the deceased along with medical staff; this is not considered behavior together with survivors, because "survivors" refers only to family and friends). A check or slash mark in this column denotes the behaviors, qualities, or attributes of the deceased. (For example, "he was hooked up to all the tubes and machines" would be coded with an "M," while "he looked perfectly healthy" would be coded with a check mark.)

10. If you are not satisfied with your coding decision, mark the item so that you can reconsider it after you have been through the transcript once. You can also bring up these questions with Bonnie.

11. Take a break before you go back to any questionable codes.

12. Be sure to keep the coding sheets and transcript for one family together, with a paper clip or in an envelope or folder.

### Additional Guidelines for Coding Transcripts

1. If a family member says to another "Go ahead," code this as Encourages Another's Memories. Also code "I don't know if you remember," and similar cues for memories. Also, any questions seeking verification such as "And you waited outside? / And we came and got you later?"

2. If a family member is quoting  
     a medical person saying something about the deceased's condition, diagnosis, etc. code as Describes behavior of Deceased, with an "M" for medical status or facts. For example, "They said they couldn't get her heart going again." or "he said, 'she's a fighter.'"

    something another family member said to them, code as Describes own Behavior Together with other Survivors. This shows that a conversation represents an interaction between people.

    something the deceased said, or something a family member said to the deceased, code as Describes Behavior of Deceased Together with Others.

3. If the subject of the sentence is a medical person, and the deceased is mentioned (e.g. "he said Janie was very sick"), code as Describes behavior of Deceased alone, with an "M" for medical facts.

    If the sentence describes a medical person without mention of the deceased or person speaking, this is uncodable. e.g. "he said this doesn't look good," or "they had a better success rate when the kids were older."

4. If a family member agrees with the therapist using a simple word such as "yeah," or "right," this is uncodable. If they answer with more information or a complete sentence, code as usual (whichever category is appropriate).

5. If someone starts a sentence with a verb and the subject is implied, code based on implied subject. e.g. "I said he would have to wait. Saide we would be back in an hour."

    Similarly, assume a complete sentence when necessary. For example, if the therapist asks how old was he, and the mom says "5", code as Describes Deceased Alone. Look for the implied subject only in cases of incomplete sentences. Otherwise, look at the sentence alone without any additional assumptions.

6. If a statement might fit the definition of a category on the Togetherness page as well as one on the Expressiveness page, go with the one on Expressiveness.

7. If unsure whether to code expressing feelings as own or with another, code as Own Feelings. Do not assume someone is speaking for someone else; they have to make this explicit. For example, code "There was a foreboding right from the start" as Describes own Feelings and Reactions.

8. Include as feelings and reactions any descriptions of what the speaker felt, sensed, or believed, if it has to do with the emotional quality of the experience. Similarly, include philosophical views and opinions, as well as interest, wonder, doubt, etc. e.g. "It's something you have to go through alone." or "It's just one of those things that happened. / It isn't fair. / There's no real explanation."

## Curriculum Vita

Bonnie Louise MacDonald

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Date of Birth: March 20, 1964

### Education

Ph.D. in Clinical Psychology expected May, 1992  
Virginia Polytechnic Institute and State University  
Blacksburg, Virginia

December 1989 M.S. in Clinical Psychology  
Specialization in Child Clinical Psychology  
Virginia Polytechnic Institute and State University  
Blacksburg, Virginia

June 1986 A.B. Magna Cum Laude in English and American Literature  
Harvard College  
Cambridge, Massachusetts

### Professional Associations

American Psychological Association  
Division 12 of APA (Clinical)  
Association for the Advancement of Behavior Therapy

### Thesis Title

The Role of Teacher Interaction in Preschool Children's Dramatic Play

### Work in Progress

Dissertation title: The role of systems level variables in family adaptation to bereavement: A concept validation study of cohesion and expressiveness.

Publication

Koocher, G. P. & MacDonald, B. L. (1992). Preventive intervention and family coping with a child's life-threatening or terminal illness. In Akamatsu, T. J., Stephens, M. A. P., Hobfoll, S. E., & Krowther, J. H. (Eds.), Family Health Psychology. New York: Hemisphere.

Presentation

MacDonald, B. L. & Finney, J. W. The role of teacher interaction in preschool children's dramatic play. Poster presented at the Annual Meeting of the Association for the Advancement of Behavior Therapy. Washington, D. C. November, 1989.

Manuscript under Revision

MacDonald, B. L. & Finney, J. W. The role of behavior problem scores and teacher interaction in preschool children's dramatic play.

Manuscript in Preparation

MacDonald, B. L. Childhood bereavement: A family systems view of adaptation.

Other Research Experience

- |           |  |
|-----------|--|
| 1990-1991 | Research Assistant<br>Family Bereavement Project, Boston Children's Hospital<br>Principal Investigator: Gerald P. Koocher, Ph.D. |
| 1984-1985 | Research Assistant<br>Daycare and Families Project, Harvard University<br>Principal Investigator: Dante Cicchetti, Ph.D.         |

Clinical Experience

- |           |  |
|-----------|--|
| Present   | Predocctoral Intern<br>Children's Hospital Medical Center<br>Boston, Massachusetts   |
| 1987-1990 | Practicum Student<br>Psychological Services Center and Child Study Center<br>Virginia Polytechnic Institute and State University<br>Blacksburg, Virginia |

- Summer 1989      Practicum Student  
Children's Hospital Medical Center  
Boston, Massachusetts
- Summer 1985      Therapeutic Counselor  
Summer 1984      Wediko Children's Services  
Hillsboro, New Hampshire
- 1985-1986        Peer Counselor on Women's Hotline  
Harvard University  
Cambridge, Massachusetts

### Teaching Experience

- Spring 1990        Instructor in Personality Research  
Department of Psychology  
Virginia Polytechnic Institute and State University
- 1987-1989        Graduate Teaching Assistant  
Department of Psychology  
Virginia Polytechnic Institute and State University
- 1986                Teaching Assistant  
Phillips Academy Summer Session
- 1985-1986        Substitute Teacher  
Soldier's Field Park Child Care Center  
Harvard Yard Child Care Center  
Children's Cooperative Preschool  
Cambridge, Massachusetts
- 1983-1985        Volunteer Teacher  
Children's Cooperative Preschool  
Cambridge, Massachusetts