Parental grief reactions and marital intimacy following infant death

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Abstract

The grief reactions of bereaved mothers and fathers and their perception of their marital relationship following the death of their infant were examined and compared with nonbereaved couples. The correlation between bereaved parents' grief reactions and their marital intimacy was also explored.

A total of 114 couples participated in the study, 57 bereaved couples and 57 nonbereaved. Bereaved couples had lost an infant (>20 weeks gestation and <1 year of age) within 24 months of the home visit. Bereaved women rated their grief reactions higher than their spouse. Bereaved women also differed in their perceptions of their marital intimacy compared to their husbands.

Although no differences were found between bereaved and nonbereaved couples' ratings of their marital intimacy, aspects of the marital relationship emerged as predictors of mothers' and fathers' grief reactions. Thus, it would appear that the expressions of grief of bereaved parents and their relationship with each other are closely linked following the death of their infant.

Sommaire

Les réactions de douleur vécues par les mères et pères en deuil et leur perception de leur relation conjugale, suivant la mort de leur nourrisson, ont été étudiées et comparées à celles des couples qui n'étaient pas en deuil. La correlation entre les réactions de douleur et l'intimité conjugale des couples en deuil a été étudiée.

Un total de 114 couples ont participé à l'étude, soit 57 couples en deuil et 57 non en deuil. Les couples en deuil avaient perdu leur nourrisson (>20 semaine de gestation et <1 an d'âge) dans les 24 mois précédant notre visite. Les mères en deuil ont évalué plus grande leur réaction de douleur et n'ont pas eu la même perception de leur intimité conjugale que leurs époux.

Même si aucune différence n'a été trouvé dans l'évaluation de l'intimité conjugale entre les couples en deuil et les couples non en deuil, des aspects de leur relation conjugale se sont révélés signes avant-coureurs de la réaction de douleur des mères et pères en deuil. Ainsi, il semble que les manifestations de douleur des parents en deuil et leur relation commune soient en étroite relation suivant la mort de leur nourrissons.

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Review of the Literature

Infant mortality has declined dramatically in the last 60 years. Nonetheless, in Canada 8 out of every 1,000 infants die during the first year of life following a live birth, with 8.7 per 1,000 dying during the perinatal period (Statistics Canada, 1986). The death of a child can have a devastating effect on parents. Following the death of a child, the grief of parents is particularly severe, long lasting, and complicated with symptoms that fluctuate over time (Rando, 1986; Sanders, 1980). Sanders (1980) compared the intensity of bereavement reactions across three types of death experiences (i.e., spouse, child, and parental) and found that bereaved parents experience more somatization, depression, anger, guilt, and despair than bereaved persons who have lost either a spouse or parent.

Although there is agreement that the death of a child of any age generally is a loss so profound and unsettling that parents react in similar distraught fashion, there is disagreement about the most critical age of a child who dies in terms of the parents' grief reactions. Some believe that an older child's death is the most difficult grief experience (Gorer, 1965; Kalish, 1977; Schwartz, 1977; Shneidman, 1977), while others consider the loss of a fetus or an infant to have a profound effect on all who are touched by it (Davidson, 1977; De Frain & Ernst, 1978;

Furman, 1978; Helmrath & Steinitz, 1978; Nichols, 1986).

Bereaved parents may have widely divergent styles of grief expression or avoidance that fluctuate over time which may bring them together or push them apart. Differences may cause spouses to erroneously conclude that their mate has rejected them, especially when depression and lack of communication are manifested (Rando, 1986). At present, it is unclear how concordant and/or discordant grief reactions are related to the couples' intimate relationship.

The reality of the infant's life and death is hard for parents to confirm, and society often sees the loss of such a young child as less important than other losses (Pine & Brauer, 1986). As well, our society is peculiarly "death shy". Neighbors, friends, health care professionals, and even other family members often react inappropriately to the baby's death by either avoiding the parents or the subject or by misplaced cheer, "you're young, you can have other children" (Nichols, 1986).

The literature related to loss during the perinatal period [i.e., spontaneous abortion, stillbirth, neonatal death, and Sudden Infant Death Syndrome (S.I.D.S.)] suggests that regardless of the cause or the child's age at the time of death, parents experience similar grief reactions. Several studies on maternal bereavement have included both mothers who have suffered a spontaneous

abortion or stillbirth and those who have had a neonatal death (Giles, 1970; Laroche et al., 1984; Rowe et al., 1978). Maternal response to these losses, regardless of the cause of death or the age of the infant at the time of death, has been found to be qualitatively similar (Giles, 1970; Laroche et al., 1984; Rowe et al., 1978). However, with the exception of one study by sociologists Peppers and Knapp (1980), there has not been any systematic research done on the gestational age of the infant as a factor in perinatal grieving. Peppers and Knapp (1980) compared maternal grief reactions to different types of loss (spontaneous abortion, stillbirth, and neonatal death) and found no difference in terms of the quality of grief. However, it has been argued that the lack of difference in the self-reported measures of grief symptomatology may not reflect a true lack of difference among the groups but rather may be a result of memory, because the sample included women who varied greatly in the length of time since the death (six months to 36 years) (Kirkley-Best & Kellner, 1982). As well, it is unclear whether the cause of death or the age of the child is the issue, given that these two variables may be confounded.

This study will address three main issues. The first, will be to examine similarities and differences between bereaved parents' grief reactions following the death of their infant who was older than 20 weeks gestation and less

than one year of age. Secondly, the marital relationship of bereaved parents following the death of their infant will also be examined. Finally, the relationship between bereaved parents' grief reactions and their marital relationship will be explored.

Parental Grief Reactions

Following a perinatal or infant death parents embark on a difficult grieving process. Bowlby's (1961, 1982), theory of attachment and loss proposes that the emotional distress of grief is the result of breaking the bonds of attachment. Through extensive research, Parkes and his colleagues (Glick, Weiss, & Parkes, 1974; Parkes, 1972, 1976; Parkes & Weiss, 1983) developed an empirically based theory of grief. Besides describing the emotional, behavioral, and physical manifestations of grief, these studies identified variables such as guilt, anger, and stigma which were related to poor bereavement outcome in the widowed. Building on the theories of Bowlby (1961) and Parkes (1972), Miles (1984) developed a descriptive conceptual model for understanding the grief responses of parents based on clinical case studies primarily with mothers.

Several assumptions underlie Miles' (1984) model of parental grief: (1) the grief experiences and coping behaviours of bereaved parents are too individualized and

unique to fit into a predictable, orderly pattern of responses labeled "stages" as described by Kubler-Ross (1969); (2) the transition from one stage to another is seldom a distinct process because symptoms from one stage may persist into the next (Parkes, 1972); (3) bereaved parents' feelings, symptoms and behaviours may occur at any time, may occur simultaneously, and may reoccur many times during this period. Grief reactions can be viewed as a "wheel of reactions" which may be continually experienced during the period of grief as well as resurge throughout the parents' lifetime; (4) there are three phases of parental grief namely: a period of numbness and shock, a period of intense grief, and a period of reorganization or recovery.

The first phase, during which time parents experience feelings of shock, numbness, and disbelief (Benfield, Lieb, & Vollman, 1978; Cornwell, Nurcombe, & Stevens, 1977) can continue for weeks and months following the death. Parents often describe the initial period as a time when they were in a fog or as a period that they can hardly remember. Others have described this period as a feeling of unreality or a feeling of denial that the child really died. Miles (1984) hypothesized that this "shock" reaction serves to cushion the initial impact of the loss and gives parents time for the reality to permeate gently into their awareness.

As reality begins to set in, bereaved parents encounter a phase of intense grief. During the second phase, parents experience a wide range of emotions, symptoms, and behaviors (Miles, 1984). During this second phase grief reactions may include: (a) yearning, (b) physical symptoms, (c) behavioral disturbances, (d) helplessness resulting in feelings of anger, guilt, and fear, and (e) a need to search for meaning (Miles, 1984).

Yearning as a symptom, was first identified as an important component of the grief process by Bowlby (1961). Yearning refers to parents' need to relive and rediscuss their baby's short life (Kennell, Slyter, & Klaus, 1970). They may become acutely aware of stimuli that remind them of their baby and may actually search or hallucinate seeing, smelling, and hearing their infant. Such reactions contribute to parents' fears and anxieties, a sense of "going crazy", helplessness, and a loss of control (Benfield et al., 1978; Miles, 1985; Rando, 1986). These reactions are so different, uncontrollable, unexpected, and severe that a majority of parents believe that they have actually lost touch with reality (Rando, 1986).

Bereaved parents may experience physical symptoms such as fatigue, insomnia, anorexia, irritability, aches, and pains, just to name a few (Benfield et al., 1978; De Frain & Ernst, 1978; Laroche et al., 1984; Miles, 1985). Changes in behaviour may include inability to concentrate,

disorganization, disorientation, confusion of thought processes, and a tendency to either withdraw or to become hyperactive (Miles, 1984).

The death of a child, regardless of the cause, leaves parents with a deep sense of helplessness and responsibility for the death (Miles & Demi, 1986). These feelings come primarily from the parents' perception that as protector of the child, they could do nothing to prevent the death. In turn, these feelings may provoke anger and guilt (Benfield et al., 1978; Bergman, Pomeroy, & Beckwith 1969; De Frain & Ernst, 1978; Miles, 1985). Anger is a natural reaction to being deprived of something valued, a child. Anger may be directed outwardly at health professionals, God, others who have sustained the loss and inwardly in the form of self-blame (Benfield et al., 1978; De Frain, & Ernst, 1978; Miles, 1983; Rando, 1986).

Guilt is the single most pervasive parental response to the death of a child (Rando, 1986). It is defined as feelings of accountability for having violated a societal standard for failing to live up to one's own expectation (Miles & Demi, 1986). A number of clinical articles and research papers provide evidence that guilt is a rather common and frequently occurring reaction in bereaved parents particularly in those who have suffered a perinatal or Sudden Infant Death Syndrome (S.I.D.S.) death (Benfield et al., 1978; Bergman et al., 1969; De Frain & Ernst, 1978;

Helmrath & Steinitz, 1978; Johnson-Soderberg, 1983; Miles, 1985; Miles & Demi, 1986). During the second phase of grief, parents reported that their guilt feelings mostly concerned their relationships with significant others (Miles & Demi, 1986). A number of parents felt guilty for the way they had treated their spouse or the remaining siblings in the family. Feelings of anger vented toward family members for failure to meet the emotional and physical needs of other family members contributed to their sense of guilt. Consequently, feelings of incompetence may develop in the marital role, as well as in the parental role. This generalized feeling of incompetence can overwhelm the parent and make him/her doubt his/her capacity to recover (Rando, 1986). Such severe grief may interfere with maintaining a good relationship between the marital couple.

Finally, the period of reorganization is depicted as the phase when the symptoms of active grief subside and bereaved parents begin to reenter their usual life activities and patterns. Parents begin to recognize changes in themselves and to learn to live with the loss as their emotional energy is reinvested in new relationships, objects, activities, ideas, and goals (Rando, 1986). This third phase, the timing of which varies with each individual, does not arrive all at once and for some time it coexists with many of the previous reactions. Guilt

often accompanies the beginning efforts at reorganization as the parent copes with the fact that she/he continues to live and experience life despite the death of the child.

The intensity and duration of the various emotional, behavioral, and physical grief reactions vary from parent-to-parent depending on an array of variables. Of particular interest is how the effects can be different for the mother and the father who lose the same infant.

Differences Between Mothers' and Fathers' Grief Reactions Following the Death of their Infant

Researchers are beginning to examine fathers' grief responses rather than focusing exclusively on mothers' reactions. Some have found that mothers and fathers may differ in their grief reactions, the strategies used to deal with the loss, and the length of time taken to resolve their grief (Benfield et al. 1978; Helmrath & Steinitz, 1978; Johnson-Soderberg, 1982), while others have observed concordance between mothers and fathers (Feeley, 1986; Williams & Nikolaisen, 1982).

Mandell, McNaulty, and Reece (1980) examined the reactions of bereaved fathers who lost a child to S.I.D.S. and found that, in general, men seemed more angry and aggressive, while women were more depressed and withdrawn. As a group, fathers indicated that men also have the need to grieve but require different kinds of outlets. Fathers

exerted control over their emotional expression and intellectualized their distress, whereas mothers were more expressive in their grief. The majority of fathers assumed the role of manager and preoccupied themselves with supporting their wives and engaging in outside activities (Helmrath & Steinitz, 1978; Mandell et al., 1980).

Researchers generally agree that mothers experience more of the feelings and reactions commonly described in the grief literature (e.g., sadness, loss of appetite, inability to sleep, increase in irritability, preoccupation with the lost infant, inability to return to normal activities, guilt feelings etc.) than do fathers (Helmrath, & Steinitz, 1978; Williams & Nikolaisen, 1982). This is not surprising given that the description of the grief process has been derived from women's descriptions of their experience. Nonetheless, grief scores, based on criteria such as physical disturbances, sadness, guilt, and anger, have been reported to be significantly higher for mothers than for fathers following a neonatal death (Benfield et al.,1978). Johnson-Soderberg (1982), who looked specifically at parental bereavement and guilt, found that women reported more guilt than men and that both parents, who lost a child to S.I.D.S., reported more guilt than did the parents who knew in advance that their child would die.

Feeley and Gottlieb (1988) studied the differences between mothers' and fathers' coping strategies 6-to 24-

months following their infant's death and found that there were no differences in parents' use of self-blame. Mothers and fathers differed in their use of only three of fourteen coping strategies namely, seeking social support, preoccupation with the dead infant, and escape-avoidance from thinking about the child. Mothers were found to use these strategies to a greater extent than did fathers. This suggests that the coping of bereaved parents is more concordant than discordant which contrasts with earlier reports that differences may exist between mothers and fathers. However, these findings must be regarded with caution since the use of a systematic sample precludes their generalizability to the general perinatal loss population. Moreover, only 50% of eligible parents who were located agreed to participate in this study, and thus the final sample may very well have been atypical of the population. As well, the 50% refusal rate which is comporable to other studies, poses a threat to the external validity of the results (Feeley, 1986).

Some studies report that mothers and fathers feel equally able to express their feelings (Feeley & Gottlieb, 1988; Williams & Nikolaisen, 1982). In contrast, other researchers (Bergman et al., 1969; Mandell et al., 1980) report that fathers generally have greater difficulty in the expression of feelings and may have different outlets to express their feelings other than verbalizing them. A

possible explanation for the inconsistency is that Williams and Nikolaisen's (1982) study was retrospective (parents whose infant had died between 2 and 8-years previously) and these fathers may have had the time to learn to express their feelings sufficiently. This finding may also reflect North American society's changing norms regarding the expression of feelings among men which encourages men to be more open.

Several researchers have delineated differences in the pace of resolution for mothers as compared to fathers following the death of an infant. There is an array of opinions in the literature on how long the grieving process lasts. In general, the grief of bereaved parents is particularly intense and long-lasting (Rando, 1986; Sanders, 1980). The grief of fathers is usually less intense and resolves sooner than that of mothers (Cornwell et al., 1977; Helmrath & Steinitz, 1978). However, De Frain and his colleagues found no differences between mothers' and fathers' length of recovery time (De Frain, Taylor, & Ernst, 1982).

One of the most difficult aspects of parental bereavement is that the death of the child strikes both partners in the marital dyad simultaneously and confronts each partner with an overwhelming feeling of loss. There is indication that fathers and mothers experience this loss differently. This difference may result in the spouses

complementing each others' reactions during this difficult time. On the other hand, the differences between mother and father may result in each partner being less available to the other (Rando, 1986).

Marital Intimacy Following Infant Death

There have been contradictory reports concerning the impact of a perinatal or S.I.D.S. death on the marital relationship. It has been suggested that there is a high incidence of marital breakdown following infant death (Bergman et al., 1969; Halpern, 1972). However, there is little empirical evidence to support this claim. One study found that one-third of mothers reported increased marital conflict 13 to 15 months following their infant's death (Cornwell et al., 1977). In contrast, other research has shown that some couples feel that their marriage improved and even strengthened by this experience (De Frain & Ernst, 1978; Giles, 1970; Helmrath & Steinitz, 1978).

The hypothesis that a close confiding relationship may serve as a buffer against the effects of life stress and have a positive effect on emotional health by reducing the deleterious effects of adverse life events (Brown & Harris, 1978; Cobb, 1976) has generated considerable research on the relationship between support and psychological well-being (Hames & Waring, 1980; Waring, 1980; Waring, McElrath, Lefcoe, & Weiss, 1981). A confiding

relationship, in which people can talk intimately about themselves or their problems has been shown to be crucial for good psychological health status in several studies (Brown, Bhrolchain, & Harris, 1975; Costello, 1982; Hames & Waring, 1980; Lowenthal & Haven, 1968; Miller & Ingham, 1976; Roy, 1978, 1981; Solomon & Bromet, 1982). Whereas prior to the infant's death parents may have had the time, energy, ability, and interest to relate to and take care of each other, now these resources are in short supply, if they are there at all. In addition, parents must deal with the grief of their spouse as well as themselves. Because of the tight bond there is little opportunity to get away from the grief psychologically or physically.

Grief Reactions and Marital Intimacy Following Infant Death

Difficulties between marital partners following a child's death is a recurrent theme in the literature. One of the major causes of stress between parents may develop because the partners are experiencing grief at different times, expressing their grief in different ways, and/or coping with their grief differently (Miles, 1984).

Evidence to link grief reactions to the couple's relationship has been based on case study reports. For example, Videka-Sherman and Lieberman's (1985) study of the psychosocial adjustment of parents following the death of their child asked parents to describe the three most

pressing problems after their child's death. Nearly half the parents mentioned marital problems including concern for the well-being of their spouse and worries about the effects of the loss on family relationships.

Guilt experienced by bereaved parents regarding their marital relationship following the death of their infant seems to be prominent throughout the grief process. Johnson-Soderberg (1982) reported that parents had many torturing secrets, which were difficult to cope with and which contributed to feelings of going "crazy". These secrets had not been shared with anyone including their spouses. "Guilt movies", which were flashbacks of the dying or death scenes, were common secrets. Flashbacks were always connected to the parent's most frequent guilt feeling.

Sexual difficulties may also be related to parental grief reactions. Fish (1986) reported that 60% of the wives were aware of serious sexual distress mainly in their loss of interest and inability to find pleasure in such activity. Nearly 40% of husbands complained about the change in the sexual part of their marriage. Some claimed it had become nonexistent since the death of their child. Fish (1986) suggested that guilt may lead wives to deny any right to physical pleasure as a form of self-inflicted punishment. Moreover, women's awareness of their failure to meet their husbands' sexual needs may further contribute

to the sense of guilt.

Kennell et al. (1970), examined the grief reactions of mothers and the factors that may put parents at risk for pathological grief reactions. They divided the group of eighteen mothers, based on a median split on mourning scores, into a high and a low mourning group. Seven of the mothers in the low mourning group said that they had talked with their husbands about their feelings and reactions to the loss while only three of the nine mothers in the high mourning group reported that they had been able to do so. As with most grief research, there are some methodological limitations in this study, including the convenience sample of eighteen. As well, the interviews were conducted between 3-weeks and 22-weeks subsequent to the infant's death. Since grieving is time-related and this study did not control for time in the two groups, it is possible that the mothers who were interviewed at 3-weeks had not experienced the same process as those who were interviewed at 5 1/2 months.

Cornwell et al. (1977) found that the difference in the length and the intensity between the mother's and father's grief led to misunderstandings. Husbands accused their wives of unnecessarily prolonging the mourning when they wanted to forget about it. Women feared their husbands blamed them for the death and were afraid to verify this. Marital fights were common. Over one-third

of marriages encountered serious trouble after the death, ranging from permanent breakdown to defined need for marital therapy. Similarly, Feeley (1986) demonstrated that for couples whose coping was discordant, mothers perceived higher levels of conflict in their communication with their spouse following the death as compared to couples whose coping was concordant.

Laroche et al. (1984), in their follow-up study of thirty women's grief reactions, found that perinatal death is a life crisis which can lead to either an improvement or deterioration in a couple's relationship. Women also reported an improvement in marital communication and sexual relations with lower mourning scores (based on somatic distress, feelings of guilt and the breakdown of normal patterns of behaviour). Depressed mothers reported a decrease in the closeness and communication of the couple and an impairment in their sex life. Although several researchers have argued that the sharing of feelings may help bring the mourning process to a more rapid and positive conclusion (Helmrath & Steinitz, 1978; Kennell et al., 1970, Laroch et al., 1984) it is unclear what direction the association between close supportive relationships and grief reactions takes. In other words, does a supportive relationship mitigate grief and/or does a parent, experiencing guilt and depression, alienate his/her spouse, thus decreasing the level of intimacy between the

couple?

The impact of perinatal loss or S.I.D.S. on the marital relationship is not prominent in the literature. It has been suggested that there is a high incidence of marital breakdown following infant death (Bergman et al., 1969; Cornwell et al., 1977; Fish, 1986; Halpern, 1972), even though there is little empirical evidence to support this claim.

In summary, two major themes emerge from the literature. The first, is inconsistency regarding the concordance or discordance of the characteristics of mothers' and fathers' grief reactions, the strategies used to deal with the loss, and the length of time required to resolve their grief. The second major theme is that the grief reactions of bereaved parents are related to the couple's marital intimacy. Intimacy between marital partners may have an important influence on how bereaved couples deal with their grief. However, it is unclear what the relationship is between the parents' grief reactions and their marital relationship. Further study and clarification are required to examine the association between these two constructs.

Extraneous Variables

There are a number of characterisitics of bereaved parents and the infant who died which can influence

parents' expressions of grief. The characteristics of bereaved parents most cited in the literature include their age, the number of years they have been living together, and their socio-economic status. Although traditionally the parents of infants tend to be in their late teens or in their twenties, it seems that in this day and age many couples are starting their families in their late twenties and well into their thirties. This change results in a greater range of parental age and thus different levels of maturity and life experiences which may affect expressions of grief following the death of an infant. Although, previous studies that have examined the effect of parental age on grief reactions did not find it to be a significant correlate of the health outcome of women (Nicol, M.T., Tompkins, J.R., Campbell, N.A., & Syme, G.J., 1986) or women's level of grief reaction (Benfield et al., 1978), no study has yet systematically examined the effect of a father's age on his expression of grief.

The number of years that the couple has been living together may also influence couples' reaction to the death of their infant, as well as to each other. Intimacy is the dimension that most determines marital adjustment (Hames & Waring, 1980; Waring, McElrath, Mitchell, & Derry, 1981). Besides a crisis, such as the death of a child, other variables that may influence marital intimacy include the couple's socio-economic status (Brown et al., 1975; Derlega

& Chaikin, 1975; Jourard, 1971), the number of years they have been living together, and the number and developmental age group of their children (Hobbs, & Cole, 1976; Rossi, 1968; Satir, 1967).

The couple's socio-economic status is a reflection of their level of education, occupation, and their socio-economic class in general, which may influence their grief reactions as well as the way in which they relate to each other, particularly during this difficult time. It is not clear and would be of interest to know, what effect socio-economic status has on bereaved parents' expressions of grief.

Factors associated with the infant that may influence the bereaved parents' expression of grief include the baby's age, the cause of death, whether the death was sudden or anticipated, and the length of time since the loss. To date there have not been any systematic studies on how these variables relate to parents' grief reactions. Research studies that have included one or more of these variables have yielded conflicting results. For example, whereas some researchers have found parents who lost an older child suddenly (Gorer, 1965; Kalish, 1977; Kirkley-Best & Kellner, 1982; Schwartz, 1977; Shneidman, 1977; Theut et al., 1989) and most recently experienced more intense grief reactions, others reported that the loss of younger children, particularly infants, can cause parents

more intense grief. The latter perspective is attributed primarily to the lack of confirmation of the existence of the infant by other family members, friends, and society in general (Davidson, 1977; De Frain & Ernst, 1978; Furman, 1978; Helmrath & Steinitz, 1978; Nichols, 1986; Peppers & Knapp, 1980). With respect to the time since the loss, some researchers have not found a difference in parents' grief reactions in relation to the time span (Smith and Borgers, 1989), while others have found a resurgence of grief reactions at the three-year mark (Rando, 1983).

Summary. There is some evidence to suggest that bereaved mothers and bereaved fathers experience the loss of their infant differently. This difference may result in the spouses complementing each others' reactions following their devastating loss. However, reports of difficulties between marital partners following the death of a child are pervasive in the literature though controversy persists as to whether the death of an infant brings the marital partners closer together or pushes them apart. To date, no study has included a comparative group of nonbereaved couples, making it difficult to evaluate either the relationship between bereaved parents' grief reactions and their marital intimacy or the extent to which a couple's marital relationship is affected by the death of their infant. Thus, this study will address five major questions:

(1) How do mothers' and fathers' grief reactions compare following the death of their infant?

(2) How do mothers' and fathers' perceptions of their marital intimacy compare following the death of their infant?

(3) How do bereaved couples' perceptions of their marital relationship compare to nonbereaved couples' perceptions?

(4) What is the relationship between bereaved couples' grief reactions and their marital intimacy following the death of their infant?

(5) For each parent, what are the personal and situational predictors of their grief reactions?

Methods

Design

A comparative correlational design was used to explore the relationship between grief reactions and marital intimacy following infant death. A particular methodological concern in bereavement research is that the majority of studies have failed to include a comparative nonbereaved group. This has made it difficult to assess the extent to which parents' grief reactions and the couple's marital relationship are related following the death of their infant. Due to lack of normative data on marital intimacy, a comparison group was also used to evaluate the extent to which the couple's marital intimacy is affected by their infant's death.

This study comprised two groups of couples, bereaved and nonbereaved. Each couple was visited once in their home. The bereaved group was visited within 24 months of the death of their infant since this period is when the loss is most acutely felt (DeFrain et. al., 1982).

The aims of this study were fivefold: (1) to compare mothers' and fathers' grief reactions following the death of their infant; (2) to compare mothers' and fathers' perceptions of their marital intimacy following the death of their infant; (3) to compare the ratings of marital intimacy in bereaved couples with the ratings of

nonbereaved couples; (4) to examine the relationship between bereaved couples' grief reactions and their marital intimacy following infant death; and (5) to identify personal and situational predictors of mothers' and fathers' grief reactions.

Respondents

Recruitment of bereaved couples. One hundred and fourteen couples participated in the study; 57 were bereaved couples (mothers and fathers) and 57 were nonbereaved couples.

Bereaved couples who met the following criteria were asked to participate: (1) couples were living together within 100 kilometers of Montreal; (2) both husband and wife could read and comprehend English; (3) couples had lost an infant (>20-weeks gestation and under one year of age) within 24-months of the home visit.

Bereaved couples were recruited from five Montreal area teaching hospitals with obstetrical and/or neonatal intensive care units. After the study received scientific and ethical approval from each institution, nurses from each hospital, selected for their experience and comfort in speaking with bereaved parents, were asked to contact potential subjects to obtain their consent to have their names released to the researcher. Bereaved couples who consented were then contacted, the study was described, and

if they were interested in learning more about the study, a letter of introduction describing the nature of the study was mailed. A return telephone call was made several days following the mailing to obtain the couple's decision concerning their participation in the study. Once verbal consent was obtained, an appointment was made to visit the couple in their home.

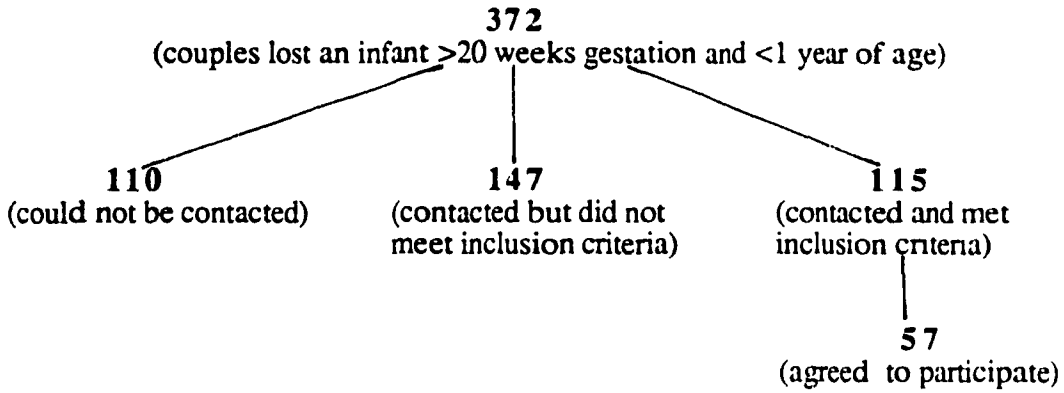
In the Montreal teaching hospitals involved in the study, 372 couples had lost an infant (>20 weeks gestation and under one year of age), during the previous 24-month period (Table 1a). Of the 372 couples, 110 were never contacted because the telephone numbers in the hospital records were no longer valid and 147 couples were contacted but were ineligible because either they were not living together (n = 25), lived too far (n = 37), or did not read or comprehend English (n = 85). Of the remaining 115 eligible couples, 57 agreed to participate, resulting in an acceptance rate of 50%. The main reasons that eligible couples gave for not participating were that they found the experience too painful to discuss or felt too anxious about a subsequent pregnancy.

Recruitment of nonbereaved couples. In order to be approached to participate in the study, couples in the comparison group had to: (1) be living together within a 100 kilometer radius of Montreal; (2) read and comprehend English; (3) be between 18 and 50 years of age; (4) be in

Table 1

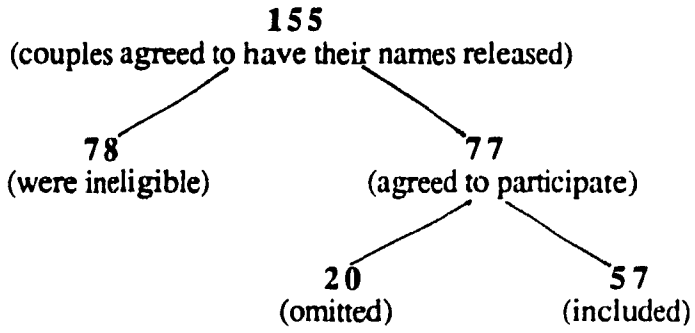
Recruitment of Sample Size

(a) Bereaved Group



Final sample = 57 couples

(b) Nonbereaved Group



Final sample = 57 couples

their childbearing years (Range: 20 - 50 years). Both couples with or without children were approached. Exclusion criteria for the comparison group were couples who had lost a child to abortion, stillbirth, neonatal, or infant death or who had lost a family member or close friend in the past 24 months.

Nonbereaved couples were primarily recruited through the practices of pediatricians, nursery schools, and referrals from this researcher's colleagues. One hundred and fifty-five couples were approached and agreed to have their names released (Table 1b). These couples were then contacted, the study described, and the couples screened for eligibility. Of the 155 couples, 78 were ineligible because the could not be reached, 30 were too busy or refused to participate, and 47 couples reported having experienced the death of a child, a family member or friend within the past 24 months. Seventy-seven nonbereaved couples met the inclusion criteria and were visited in their homes. However, after completion of the homevisit, it was discovered that 20 of the selected couples remembered a significant loss which then resulted in their disqualification from the study, leaving a final sample of 57 couples.

Selected characteristics of bereaved couples. The bereaved sample consisted of 57 bereaved couples who had experienced the loss of an infant (>20 weeks gestation and

less than one year of age) within the past 24 months. Mothers' ages ranged from 20 to 44 years (M = 30.7 years) and fathers' also ranged from 24 to 45 years (M = 33.4 years). Bereaved couples had been married or living together from 2 to 19 years (M = 7.7 years). Table 2 summarizes the main background characteristics of the mothers and fathers in this group.

The bereaved parents were predominantly Caucasian (n = 51 couples). Nearly half the mothers were homemakers (n = 26). Half the fathers were employed in professional or managerial positions (n = 29), nearly a third were skilled workers (n =18), and the rest were either salesmen, technicians, or had clerical jobs (n = 10). The sample was predominantly middle class as reflected by their family income and their socio-economic index (Blishen & Mc Roberts, 1976).

Three quarters of the bereaved couples (n = 43) had other children at the time of the home visit. Their developmental stages ranged from infancy to early adolescence. Only eight couples (14%) reported difficulty in conceiving a child. Twelve mothers (21.1%) were pregnant again and fifteen couples (26.3%) already had a subsequent child.

Selected characteristics of the infant. Bereaved parents had lost their infant approximately 12 months prior to the home visit (range 1-24) (Table 3). Fourteen couples

Table 2

Bereaved Couples' Characteristics (N = 57)

Variable	Range	Mean	SD	Median
Mothers' Age	20-44	30.7	5.0	30
Fathers' Age	24-45	33.4	5.1	34
Years Living Together	2-19	7.7	3.5	7
Mother's Education (yrs)	8-26	14.1	3.4	14
Father's Education (yrs)	9-24	14.9	3.7	14
SES[1,2]	20-72	52.4	16.5	58

Variable	n	%
Race		
Caucasian	51	89.5
Other	6	10.5
Mother's Place of Birth		
Canada/USA	43	75.4
Europe	7	12.3
Caribbean	3	5.3
Other	4	7.0
Father's Place of Birth		
Canada/USA	46	80.7
Europe	5	8.8
Caribbean	4	7.0
Other	2	3.5
Mother's Religion		
Protestant	12	21.1
Catholic	23	40.4
Jewish	7	12.3
Other	7	12.3
None	8	14.0
Father's Religion		
Protestant	10	17.5
Catholic	25	43.9
Jewish	9	15.8
Other	5	8.8
None	8	14.0

Table 2 (cont'd)

Variable	n	%
Mother's Occupation		
Homemaker	26	45.6
Other	31	54.4
Father's Occupation		
Skilled Worker	18	31.6
Sales/Clerical/Technician	10	17.5
Professional/Managerial	29	50.9
Family Income		
<$20,000	4	7.0
$20,000 - $39,999	18	31.6
$40,000 - $70,000	27	47.4
>$70,000	8	14.0
Siblings		
None	14	24.6
One	24	42.1
Two	12	21.1
>Two	7	12.3
Difficulty Conceiving		
No	49	86.0
Yes	8	14.0
Pregnant		
No	45	78.9
Yes	12	21.1
Subsequent Child		
No	42	73.7
Yes	15	26.3

Note: [1]Socioeconomic status was measured with the "Socioeconomic index for occupations in Canada" (Blishen & McRoberts, 1976)
[2]higher scores = higher SES

Table 3

Infant's Characteristics (N = 57)

Variable	Range	Mean	SD	Median
Time since the death (months)	1 - 24	12.4	7.1	12

Variable	n	%
Type of Loss		
Stillbirth	14	24.6
Neonatal	24	42.1
Infant	19	33.3
Cause of Death		
Complications during pregnancy	10	17.5
Complications during labor and delivery	5	8.8
Prematurity	6	10.5
Genetic	4	7.0
Congenital malformations	20	35.1
SIDS	7	12.3
Unknown	5	8.8
Sudden Death		
No	13	22.8
Yes	44	77.2

(24.6%) lost their baby prior to delivery, 24 couples (42.1%) within the neonatal period, and 19 couples (33.3%) lost their baby between one month and one year of age.

The causes of the infants' deaths varied greatly from complications during pregnancy to S.I.D.S. and thus were grouped into eight major categories. Ten infants (17.5%) died from complications during pregnancy. Five (8.8%) infants died from complications during labour and/or delivery and six (10.5%) from prematurity. There were four deaths (7.9%) due to genetic causes and twenty (35.1%) attributed to congenital malformations. S.I.D.S. accounted for seven (12.3%) of the deaths and five (8.8%) were due to unknown causes. Although the death of an infant is always a shock, nearly one quarter of the couples had no previous indication that their infant would die while 44 couples (77.2%) felt that they did have some warning.

Selected characteristics of nonbereaved couples. With the exception of men's education and socioeconomic status the non-bereaved group was similar to the bereaved group on all major background variables (i.e. age, years together, wives' education, number and developmental age of existing children) (Table 4).

Table 4

Comparison of Bereaved and Nonbereaved Couples on Background Characteristics (N = 114 Couples)

Variable		Bereaved n=57	Nonbereaved n=57	t
Woman's age (yrs)	Mean	30.7	31.4	t(112)=0.72
	SD	5.0	4.0	
	Range	20-44	22-43	
	Median	30	31	
Man's age (yrs)	Mean	33.4	33.4	t(112)=0.04
	SD	5.1	4.7	
	Range	24-45	24-47	
	Median	34	33	
Years living together (yrs)	Mean	7.7	7.8	t(96)=0.17
	SD	3.5	5.3	
	Range	2-19	1-31	
	Median	7	7	
Woman's education (yrs)	Mean	14.1	16.8	t(68)=1.81
	SD	3.4	10.6	
	Range	8-26	10-25	
	Median	14	15	
Man's education (yrs)	Mean	14.9	16.4	t(112)=2.22*
	SD	3.7	3.7	
	Range	9-24	5-24	
	Median	14	16	
SES[1,2]	Mean	52.4	62.5	t(95)=3.89***
	SD	16.5	10.5	
	Range	20-72	30-81	
	Median	58	67	

Table 4 (cont'd)

Variable		Bereaved n=57	Nonbereaved n=57	t
Siblings	n	43	44	t(112)=0.21
	%	75	77	

Note: [1]Socioeconomic status was measured with the "Socioeconomic index for occupations in Canada" (Blishen & McRoberts, 1976)
[2]higher scores = higher SES
*p<.05
***p<.001

Constructs and Measures

The constructs that were measured deal with parental grief reactions, as manifested through mental health indicators and physical symptomatology, and marital intimacy.

Parental Grief Reactions

Bereavement Experience Questionnaire (BEQ) (Demi & Schroeder, 1987). Parental grief reactions, that is the behavioral, and emotional manifestations of grief (i.e., guilt, anger, yearning, meaninglessness, depersonalization, stigma, morbid fears, and isolation) were measured by the BEQ (Demi & Schroeder, 1987). This instrument consists of 67 self-report items derived from a review of existing grief instruments (Grief Experience Questionnaire and the Texas Inventory of Grief), the literature, and from clinical practice demonstrating content validity (Demi & Schroeder, 1987). The 67 - items are divided into the following eight a priori subscales: (1) Guilt (17 items) e.g., "Felt guilty when I enjoyed myself", (2) Anger (9 items) e.g., "Felt angry at friends", (3) Meaninglessness (8 items) e.g., "Felt that life has no meaning", (4) Yearning (10 items) e.g., "Thought I saw the deceased person", (5) Depersonalization (5 items) e.g., "Thought I was losing my mind", (6) Stigma (6 items) e.g., "Felt blame by others for the death", (7) Morbid Fears (6 items) e.g.,

"Felt fearful that something else bad might happen", (8) Isolation (4 items) e.g., "Felt a need for physical intimacy". Respondents are asked to rate the frequency with which they experienced each specific behaviour within the last month (four weeks), on a 4-point Likert scale ranging from 1 (never) to 4 (almost always). The instrument takes less than 30 minutes to complete.

Psychometric studies of the instrument have been based on data gathered from a convenience sample of 66 bereaved subjects who had been bereaved from 2 to 60 months (M = 20 months). Nearly half of the subjects were bereaved parents while the other respondents were bereaved grandparents, siblings, uncles, aunts, and spouses. The alpha coefficient estimates for internal consistency were as follows: Guilt, .80 (17 items); Anger, .72 (9 items); Meaninglessness, .88 (8 items); Yearning, .82 (10 items); Depersonalization, .71 (5 items); Stigma, .65 (6 items); Morbid fears, .79 (5 items); Isolation, .78 (5 items). With the exception of the Stigma subscale all subscales met the criteria set for internal consistency reliability (> .70). Reliability was further assessed by corrected subscale-to-total scale correlation coefficients which were .77 for Guilt, .72 for Anger, .66 for Meaninglessness, .80 for Yearning, .87 for Depersonalization, .65 for Stigma, .76 for Morbid fears, and .48 for Isolation. All but one of these correlation coefficients met the established

criterion for subscale-to-total scale correlations, thus indicating satisfactory reliability for seven of the eight subscales. The Isolation subscale did not meet the criterion and, therefore, needs revision. Test-retest reliabilities have yet to be reported.

Modified Somatic Perception Questionnaire (MSPQ). The physical components of grief (i.e., dizziness, nausea) were measured by the Modified Somatic Perception Questionnaire [MSPQ (Main, 1983)]. The MSPQ is a measure of awareness of bodily functions (somatization) and consists of 13 somatic and autonomic symptoms such as nausea, dizziness, legs feeling weak. The response scale is a 4-point scale in which respondents rate the degree of distress from 0 (not at all) to 3 (a great deal). The theoretical range of the scale is 0-39. The questionnaire takes two minutes to complete.

The scale has good convergent validity (r = 0.54) when compared to the Zung Depression Inventory (1965) based on a sample of 25 patients.

Internal consistency measured with alpha coefficient for 140 male patients hospitalized for cardiac catheterization, was estimated at 0.80 using weightings of 0-3 for the response alternatives (Frasure-Smith, 1987). Reliability of the measure, as assessed by test-retest reliability on 40 patients with chronic backache, over a two day period was found to be moderate (r = 0.60) (Main,

1983).

Marital Intimacy

Personal Assessment of Intimacy in Relationships (PAIR). The PAIR was developed by Schaefer and Olson (1981) to assess the individual (intrapersonal system) and the relationship (interpersonal system) in terms of perceived and expected intimacy. Intimacy is conceptualized as a process rather than a state (Schaefer & Olson, 1981). Perceptions of shared intimate experiences are the focus of the PAIR which has been used specifically to measure marital intimacy.

The PAIR Inventory consists of 30 self-report items, equally divided among the following factor-derived five subscales: (1) Emotional Intimacy, (6 items) e.g., "My partner listens to me when I need someone to talk to", (2) Social Intimacy, (6 items) e.g., "My partner disapproves of some of my friends",(3) Sexual Intimacy, (6 items) e.g., "I am able to tell my partner when I want sexual intercourse", (4) Intellectual Intimacy, (6 items) e.g., "My partner helps me clarify my thoughts", (5) Recreational Intimacy, (6 items) e.g., " I share in few of my partner's interests". A sixth subscale, namely Conventionality (6 items) is included to measure social desirability e.g., "My partner has all the qualities I ever wanted in a mate" .

Respondents are asked to rate the 30 items on the scale in terms of their relationship with their spouse

during the past month (four weeks). The response format is a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). The theoretical score of each of the subscales ranges from 0-24. The questionnaire takes 10 minutes to complete.

Psychometric studies of the PAIR Inventory have been based on 192 nonclinical couples (Schaefer & Olson, 1981). Both item analysis and factor analysis were conducted and five intimacy subscales were derived. The separate scores from each subscale provide an "intimacy profile" of the couples' marital relationship. There is no "total" score.

Convergent validity was assessed by correlating the PAIR with the Locke-Wallace Marital Adjustment Scale (Locke-Wallace, 1959). Correlations between each of the PAIR subscales and the Marital Adjustment Scale were moderate to high and ranged from .34 to .98 (Schaefer & Olson, 1981).

Finally, the correlation between the Waring Intimacy Questionnaire and the PAIR, both of which assess the construct of intimacy, was examined. The two scales were administered to 248 married couples (Schaefer & Olson, 1981). The coefficient between the scales was moderately high ($\underline{r}$ = .77, $\underline{p}$ < .05) indicating good concurrent validity.

A further test conducted by Schaefer and Olson of convergent validity on the 192 couples involved comparing

the PAIR to the Moos' Family Environment Scale [FES (Moos & Moos, 1976)]. The FES Cohesion and Expressiveness subscales were both significantly and positively correlated with all of the PAIR subscales; the correlation coefficients ranged from .20 for Social and Sexual Intimacy to .54 for Intellectual Intimacy. As predicted, the FES Control and Conflict subscales were negatively correlated with all of the PAIR subscales, with correlations ranging between -.13 for Sexual Intimacy and -.39 for Emotional Intimacy, which was taken to support the PAIR's discriminant validity.

Internal consistency for each of the subscales, as estimated using Cronbach's alpha, was moderately high, ranging from 0.70 to 0.80. No test-retest reliability has been reported.

Background data

In addition to the marital intimacy and grief data, background data were collected. Both bereaved and nonbereaved couples were asked about their age, marital status, years married or living together, socio-economic status, educational background, whether the women was presently working outside the home, and the man's occupation.

For the bereaved group data were collected on: (a) baby's age, sex, as well as the type and cause of death;

(b) conditions and events surrounding the death of the infant (i.e, time since the loss, whether the death was sudden or anticipated, whether an significant anniversary related to the loss fell within four weeks of the home visit). As well, a short, semistructured interview was also conducted with bereaved parents to elicit information surrounding their infant's death (i.e., "Can you tell me about your baby's death?).

Procedure

Bereaved and non-bereaved couples (husbands and wives) were visited in their home. Prior to the administration of the questionnaires each spouse was informed of their right to anonymity and to confidentiality and signed a consent form. Bereaved couples were visited within 24 months of the death of their infant. Each spouse was asked to independently complete a battery of questionnaires. For the bereaved group the Personal Assessment of Intimacy in Relationships [PAIR (Schaefer & Olson, 1981)] was administered first, followed by the Modified Somatic Perception Questionnaire [MSPQ (Main, 1983)], and the Bereavement Experience Questionnaire [BEQ (Demi & Schroeder,1987)]. The BEQ was administered last so as to position the questions directly associated with the death of the infant, which were anticipated to be the most difficult for the parents to answer, at the end. Following

the completion of all measures, a short semistructured interview was conducted with the bereaved parents regarding the circumstances surrounding their infant's death.

Couples were encouraged to ask questions and discuss any feelings or thoughts that may have been evoked by the research procedure. Any parent that requested help in dealing with the loss was provided with the name and telephone number of a local nurse, specialized in the care of bereaved parents, and the local "Perinatal Loss" bereavement group.

The nonbereaved group completed the PAIR (Schaefer & Olson, 1981), the MSPQ (Main, 1983), and a modified version of the BEQ (Demi & Schroeder, 1987). The modified version of the BEQ excluded all questions specific to the death of the infant. For both the bereaved and nonbereaved groups, demographic and other background data were collected at the end of the interview.

Results

The purposes of the study were fivefold: (1) to compare mothers' and fathers' grief reactions following the death of their infant; (2) to compare mothers' and fathers' perceptions of their marital intimacy following the death of their infant; (3) to compare the ratings of marital intimacy in bereaved couples with the ratings of nonbereaved couples; (4) to examine the relationship between bereaved couples' grief reactions and their marital intimacy following infant death; and (5) to identify personal and situational predictors of mothers' and fathers' grief reactions.

To address these issues the marital intimacy and bereavement data were analyzed using multivariate analysis of variance (MANOVA) which controlled for Type I error. When the overall F of the main or interaction effect was significant ($p < .05$) using Hotelling's criterion, the subscales for each instrument were subjected to univariate analysis of variance (ANOVA). Significant effects were further explored using Multiple Range Tukey hsd Tests. All analysis were conducted using the SPSS-X statistical package (SPSS-X Inc., 1988).

Background Characteristics of the Sample

Given that the bereaved subjects were obtained from five different institutions, subjects from each setting were compared on major background characteristics such as parents' age, number of years together, level of education, socioeconomic status, and infant characteristics. Subjects were also compared on the major study variables of grief reactions and marital intimacy. The interval data were analyzed using one-way Analysis of Variance (ANOVA) with setting as the independent groups factor.

Except for fathers' education and socioeconomic status being somewhat higher at setting "D", the samples from all five settings were comparable on all major background characteristics. Fathers from setting "D" were more educated than fathers from setting "B" and "C". As well, the socio-economic status of couples was highest in setting "D" and significantly higher than setting "E" (Appendix A).

Because couples from different hospitals did not differ significantly on their ratings of their grief reactions or marital intimacy, the data for couples from the five settings were combined for all subsequent analyses (Appendix B).

Differences Between Mothers' and Fathers' Grief Reactions

Although both parents experienced the loss of the same child, the literature suggests that they don't experience

their grief in the same way. In this study, grief reactions were divided into two major dimensions. The first dimension, which consists of the emotional and behavioral reactions, was measured by the Bereavement Experience Questionnaire [BEQ (Demi & Schroeder, 1987)]. The second dimension of physical symptoms was measured by the Modified Somatic Perception Questionnaire [MSPQ (Main, 1983). The following section will explore how bereaved mothers and fathers compare in expression and intensity of their emotional, behavioral, and physical grief reactions. The grief reactions of these mothers and fathers will also be examined as a function of both cause of death and the age of the infant.

To examine this first issue of how mothers and fathers differed in their emotional and behavioral grief reactions, the BEQ was used. The BEQ consists of 67 self-report items divided among the following eight subscales: (1) Guilt; (2) Anger; (3) Meaninglessness; (4) Yearning; (5) Depersonalization; (6) Stigma; (7) Morbid Fears; (8) Isolation.

Given that the BEQ is a relatively new instrument, the internal consistency was assessed using Cronbach's alpha for the mother and father data separately (Table 5). The item-to-subscale coefficients were moderately high for both mothers and fathers (range: .43 - .90 and .40 - .89 respectively). The overall subscale-to-total coefficient

Table 5

Cronbach's Alpha Coefficient Estimates of Internal Consistency for the BEQ[1] for Bereaved Mothers and Fathers (N = 57)

BEQ	Mothers	Fathers
Subscale-to-total	.87	.92
Item-to-subscale		
Guilt	.90	.89
Anger	.73	.71
Meaninglessness	.79	.74
Yearning	.81	.81
Depersonalization	.73	.73
Stigma	.45	.40
Morbid fear	.43	.70
Isolation	.55	.65

Note: [1]Bereavement Experience Questionnaire

was high for mothers (.87) and for fathers (.92).

To address the issue of whether mothers and fathers differed in the rating of their grief reactions, the data from the eight subscales of the BEQ were subjected to a multivariate analysis of variance (MANOVA) with Parent (Mother, Father) as the repeated measure. The analysis yielded a significant effect of Parent, (F, (9,48) = 4.3, p < .001) which was attributed to all of the subscales except the subscale Stigma (Table 6). In all instances, mothers rated their grief feelings higher than fathers.

Physical symptoms are well documented as components of grief reactions (Benfield et al., 1978; De Frain & Ernst, 1972; Laroche et al., 1984; Miles, 1985) and are not included in the BEQ. Awareness of bodily function was measured by the MSPQ (Main, 1983) to provide data on the physical manifestations. Since the MSPQ measures somatization, an important manifestation of grief reactions, the data for the MSPQ were included in the MANOVA run for the BEQ subscales with Parent (Mother, Father) as the repeated measure (Table 6). Mothers experienced more physical symptoms than did fathers.

Relationship between cause of death and parental grief reactions. An important theoretical and potentially mitigating variable of parental grief reactions is the cause of death. Seven causes of death were identified, namely: (1) complications during pregnancy; (2)

Table 6

Bereaved Mothers' and Fathers' Mean Scores on the BEQ[1] and MSPQ[2] (N = 57)

	Mothers	Fathers	F(1,56)
BEQ			
Guilt	29.0	23.8	17.15***
Anger	15.4	14.1	4.01*
Meaninglessness	13.8	11.9	10.12**
Yearning	19.4	16.0	16.52***
Depersonalization	9.4	8.2	7.09**
Stigma	6.4	6.2	0.56[NS]
Morbid fear	11.2	9.4	14.87***
Isolation	10.8	9.3	12.03***
MSPQ	8.9	6.3	5.19*

Note: [1]Bereavement Experience Questionnaire
[2]Modified Somatic Perception Questionnaire
*p<.05
**p<.01
***p<.001

complications during labour and delivery; (3) complications due to prematurity; (4) genetic; (5) congenital malformations; (6) S.I.D.S.; (7) unknown. Consistent with the overall plan of analysis, the data theoretically should have been analyzed using a 7 (Cause) by 2 (Parent) MANOVA. However, given the number of causes of death (n = 7) and the number of subjects (n = 57), there were too many cells given the number of subjects. Therefore, the data for each subscale were analyzed separately.

The BEQ data were subjected to an ANOVA with Parent (Mother, Father) as a repeated measure with cause of death (viz: complications during pregnancy, complications during labour and delivery, complications due to prematurity, genetic, congenital malformations, S.I.D.S., unknown) as the independent groups factor. The analysis yielded a significant effect of cause on mothers' guilt and anger (Table 7a). Mothers who had lost their infant to S.I.D.S. rated guilt and anger higher than mothers who lost their infant to congenital malformations. [Guilt: M: 38.9 vs M: 25.8, $p < .05$; and Anger: M: 20.3 vs M: 14.2, $p < .05$]. They also rated guilt higher than mothers who had lost their infants due to complications during pregnancy M: 38.9 vs M 26.8, $p < .05$). Mothers whose infant died from S.I.D.S., also rated stigma higher than mothers who had lost their infants to complications during pregnancy and/or delivery, prematurity, and congenital malformation (SIDS

Table 7

Mean Scores of Bereaved Mothers and Fathers on the BEQ[1] and MSPQ[2] as a Function of the Cause of Death (N = 57)

(a) Mothers

	Complications During Pregnancy A n=10	Complications During Labor and Delivery B n=5	Prematurity C n=6	Genetic D n=4	Congenital Malformations E n=20	SIDS F n=7	Unknown G n=5	F(6,56)
BEQ								
Guilt	26.8*F	28.8	28.5	28.5	25.8*F	38.9*A,E	34.2	2.85*
Anger	14.2	13.4	15.3	16.3	14.2*F	20.3*E	17.6	2.52*
Meaninglessness	12.7	12.6	14.0	14.8	13.6	16.0	13.8	0.55
Yearning	17.2	15.8	22.8	22.5	19.1	24.0	15.8	2.80
Depersonalization	9.3	7.4	10.7	10.3	8.7	12.4	8.2	2.18
Stigma	5.6*F,G	5.6*F	5.7*F	5.8	6.3*F	8.1*ABCE	7.8*A	4.49***
Morbid fear	11.5	10.0	10.5	10.3	11.0	13.6	10.8	1.84
Isolation	9.6	9.8	10.8	10.8	10.9	13.1	10.0	1.65
MSPQ	6.5	5.2	9.3	10.5	9.2	12.1	10.4	0.99

Table 7 (cont'd)

(b) Fathers

	Complications During Pregnancy A n=10	Complications During Labor and Delivery B n=5	Prematurity C n=6	Genetic D n=4	Congenital Malformations E n=20	SIDS F n=7	Unknown G n=5	F(6,56)
BEQ								
Guilt	20.3	23.0	25.7	24.5	24.7	24.3	24.0	0.58[NS]
Anger	14.0	13.6	16.3	12.5	13.9	15.3	12.6	0.81[NS]
Meaninglessness	11.8	12.8	13.3	10.8	11.4	12.8	11.2	0.60[NS]
Yearning	14.6	12.8	18.5	14.3	16.9	17.9	14.8	1.20[NS]
Depersonalization	7.3	7.8	8.5	8.8	8.5	9.0	7.2	0.52[NS]
Stigma	5.5	6.4	6.8	5.3	6.1	7.1	6.0	1.13[NS]
Morbid fear	8.8	9.0	10.3	9.8	9.6	8.7	9.2	0.31[NS]
Isolation	8.6	8.8	10.0	8.5	9.9	9.3	8.4	0.75[NS]
MSPQ	6.5	8.6	5.0	5.0	6.2	5.4	8.0	0.27[NS]

Note. [1]Bereavement Experience Questionnaire

[2]Modified Somatic Perception Questionnaire

[3]The mean score of a grief subscale designated with an asterisk, under a particular cause of death, is significantly different than that of the cause of death represented by the letter(s) adjoining the asterisk.

*p< 05

***p< 001

vs Pregnancy: M: 8.1 vs 5.6 vs Delivery: M: 5.6; Prematurity: M: 5.7; Congenital Malformation: M: 6.3, $p < .05$). In addition, mothers whose infant died from an unknown cause, rated stigma higher than mothers who had lost their infant during pregnancy (Stigma: M: 7.8 vs M: 5.6, $p < .05$). However, mothers did not rate their physical symptoms any differently regardless of the cause of death. For fathers, the analysis yielded no significant effect of cause on their emotional, behavioral, and physical reactions (Table 7b).

Relationship between the infant's age and parental grief reactions. Controversy persists in the literature regarding the relationship between the age of the child at the time of death and the parents' grief reactions. Some researchers have found that the older the child the more intense the parents' grief (Gorer, 1965; Kalish, 1977; Kirkley-Best & Kellner, 1982; Schwartz, 1977; Shneidman, 1977; Theut et al., 1989) while others have concluded that the reaction to the loss was just as great in the case of a miscarriage as a neonatal death (Davidson, 1977; De Frain & Ernst, 1978; Furman, 1978; Helmrath & Steinitz, 1978; Nichols, 1986; Peppers & Knapp, 1980; Smith & Borgers, 1989). Three types of losses namely, stillbirth, neonatal, and infant deaths, were identified to reflect various age groups of the infants. Stillbirths included an intrauterine death greater than 20 weeks gestation. A

neonatal death included infants who were delivered alive and died within their first 30 days of life. Infants were babies older than 30 days and less than one year of age.

The BEQ data were subjected to an ANOVA with Parent (Mother, Father) as a repeated measure and with type of loss (viz: stillbirth, neonatal, infant) as the independent groups factor. The analysis yielded a significant effect of type of loss on both mothers' and fathers' sense of yearning and depersonalization (Table 8a,b). Mothers who lost an "infant" rated their sense of yearning higher than those who had a stillbirth or a neonatal death (Infant: M = 23.1 vs Stillbirth: M = 15.6, $p < .001$; Neonatal: M = 18.8, $p < .001$) (Table 8a). Mothers who lost an "infant" also rated their anger and sense of depersonalization higher than those who had a stillbirth (Anger: M = 17.6 vs 13.5, $p < .05$; Depersonalization: M = 10.8 vs 7.6, $p < .01$) . Fathers who lost an infant rated their sense of yearning and depersonalization higher than those whose baby died in utero (Yearning: M = 18.5 vs M = 13.6, $p < .01$; Depersonalization: M = 9.4 vs M = 6.9, $p < .01$) (Table 8b).

Differences Between Bereaved and Nonbereaved Couples' Ratings of their Emotional, Behavioral, and Physical Reactions

Before examining the differences in the ratings of emotional and behavioral reactions between the bereaved and

Table 8

Mean Scores of Bereaved Mothers and Fathers on the BEQ[1] and MSPQ[2] as a Function of the Type of Loss (N = 57)

(a) Mothers

	Stillbirth A	Neonatal B	Infant C	F(2,54)
BEQ				
Guilt	27.8	27.6	31.8	1.45
Anger	13.5*C	14.8	17.6*A	4.31*
Meaninglessness	12.6	13.5	15.0	1.52
Yearning	15.6*C	18.8*C	23.1*A,B	9.74***
Depersonalization	7.6*C	9.3	10.8*A	4.81*
Stigma	6.1	6.2	6.7	0.68
Morbid Fear	10.6	11.1	11.8	1.15
Isolation	10.1	10.6	11.5	1.39
MSPQ	7.7	8.4	10.5	0.96

Table 8 (cont'd)

(b) Fathers

	Stillbirth A	Neonatal B	Infant C	F(2,54)
BEQ				
Guilt	22.1	22.5	26.5	2.46
Anger	13.6	13.3	15.5	2.28
Meaninglessness	11.1	11.4	13.1	2.49
Yearning	13.6*C	15.5	18.5*A	4.95**
Depersonalization	6.9*C	7.9	9.4*A	4.55*
Stigma	6.0	6.0	6.5	0.73
Morbid Fear	8.7	9.0	10.3	1.98
Isolation	8.9	9.2	9.7	0.57
MSPQ	6.8	6.5	5.7	0.14

Note: [1]Bereavement Experience Questionnaire

[2]Modified Somatic Perception Questionnaire

[3]The mean score of a grief subscale designated with an asterisk, under a particular cause of death, is significantly different than that of the cause of death represented by the letter(s) adjoining the asterisk.

*p<.05

**p<.01

***p<.001

nonbereaved couples, it was of interest to examine whether nonbereaved husbands and wives differed in light of the above results.

Couples in the comparison group completed a modified version of the Bereavement Experience Questionnaire [MBEQ (36 items vs 64 items)]. By asking nonbereaved husbands and nonbereaved wives to complete the MBEQ comparisons between bereaved and nonbereaved couples' ratings of their emotional and behavioral reactions could be made on as many items as possible. Twenty-eight items dealing specifically with the death of the infant (e.g., "Felt blamed by others for the death", "Sensed the deceased person's presence") were eliminated from the Modified Bereavement Experience Questionnaire (MBEQ).

The MBEQ's internal consistencies were assessed using Cronbach's alpha separately for the nonbereaved husband data and the nonbereaved wife data (Table 9). The item-to-subscale coefficients were high for both husbands and wives (range: .82 - .86 and .74 -.81 respectively). The overall subscale-to-total coefficient was high for nonbereaved husbands (.88) and for nonbereaved wives (.81).

The data from the eight subscales of MBEQ, which measured emotional and behavioral reactions, and the MSPQ, which measured physical symptoms, were subjected to a MANOVA with Spouse (Wife, Husband) as the repeated factor. The MSPQ was administered as is because it is nonspecific

Table 9

Cronbach's Alpha Coefficient Estimates of Internal Consistency for the MBEQ[1] for Nonbereaved Wives and Husbands

MBEQ	Wives	Husbands
Subscale-to-total	.81	.88
Item-to-subscale		
Guilt	.77	.85
Anger	.74	.83
Meaninglessness	.75	.82
Yearning	.81	.86
Depersonalization	.75	.82
Stigma	.80	.86
Morbid fear	.80	.82
Isolation	.77	.85

Note: [1]Modified Bereavement Experience Questionnaire

to grief. The analysis yielded no significant effect of Spouse. Nonbereaved wives and nonbereaved husbands did not differ on their ratings of emotional, behavioral, or physical reactions.

To date, no study has yet included a comparative group of couples who have not experienced a loss thus making it difficult to assess the intensity of the emotional, behavioral, and physical grief reactions of bereaved couples.

To examine the differences between bereaved couples' and nonbereaved couples' emotional and behavioral manifestations, the data from the MBEQ and the MSPQ were subjected to a 2 x 2 MANOVA with Spouse (Wife, Husband) as the repeated measure and group (Bereaved, Nonbereaved) as the independent groups factor.

The analysis yielded a significant main effect of Group, (F, (9,104) = 7.4, $p < .001$) (Table 10). Univariate analysis revealed that bereaved couples rated emotional and behavioral reactions higher than the nonbereaved couples in the following areas: Meaninglessness: M: 12.8 vs 11.0, $p < .001$; Depersonalization: M: 7.1 vs 5.5, $p < .00$; Stigma: M: 1.5 vs 1.2, $p < .001$; Morbid Fear: M: 8.1 vs 7.2, $p < .001$. Bereaved couples also experienced more physical symptoms than nonbereaved couples (M: 7.6 vs M 6.0, $p < .05$).

Recall that with the exception of husbands' education

Table 10

Bereaved and Nonbereaved Couples' Mean Scores on the MBEQ[1] and MSPQ[2] (N = 114)

	Bereaved	Nonbereaved	F(1,112)
MBEQ			
Guilt	9.0	8.8	0.31
Anger	10.5	10.4	0.12
Meaninglessness	12.8	11.0	16.58***
Yearning	1.6	1.4	3.64
Depersonalization	7.1	5.5	31.90***
Stigma	1.5	1.2	13.21***
Morbid fear	8.1	7.2	15.02***
Isolation	11.0	10.5	2.56
MSPQ	7.6	6.0	3.98*

Note: [1]Modified Bereavement Experience Questionnaire
[2]Modified Somatic Perception Questionnaire
*p<.05
***p<.001

and socioeconomic status, the nonbereaved group was similar to the bereaved group on all major background variables (ie., age, years together, years of education, number and developmental age of existing children). To ascertain the lack of effect of socioeconomic status, which encompasses the husband's education, on the emotional, behavioral, and physical reactions the analysis was recomputed using socioeconomic status as a covariate. For the emotional and behavioral reactions (MBEQ), the analysis yielded similar results as reported above. However, when socio-economic status was controlled, the difference between bereaved and nonbereaved couples' ratings of their physical symptoms (MSPQ) disappeared (F, (9,103) = .63, $p > .05$).

Differences Between Bereaved Mothers' and Fathers' Perception of their Marital Intimacy Following the Death of their Infant

The second issue examines how an infant's death is related to the quality of the couple's marital relationship. There is suggestive evidence that a couple's marital relationship is affected by the death of their infant. However, the evidence is inconsistent as to whether the relationship deteriorates or improves.

To assess the couples' marital relationship the Personal Assessment of Intimacy in Relationships [PAIR (Schaefer & Olson, 1981)] was used. The PAIR Inventory

consists of 30 items, equally divided among the following subscales: (1) Emotional Intimacy; (2) Social Intimacy; (3) Sexual Intimacy; (4) Intellectual Intimacy; (5) Recreational Intimacy. A sixth subscale, namely Conventionality, measures social desirability. To assess the relationship between the Conventionality subscale and the other intimacy subscales, intercorrelations between the Conventionality subscale and the other subscales were computed. Conventionality subscale scores were found to moderately correlate with the other five PAIR subscales for bereaved mothers and fathers (Mothers - range: r = .47 - .80, $p < .01$, two-tailed; Fathers - range: r = .38 - .62, $p < .01$, two tailed) and for nonbereaved wives and husbands (Wives -range: .26, p .05 - .70, p .01, two tailed; Husbands - range: .41 - .70, $p < .01$, two-tailed) (Table 11). The Conventionality score was treated as a covariate in all subsequent analyses.

To address the issue of whether bereaved mothers and fathers differed in their perceptions of their marital relationship, the data from the five subscales of the marital intimacy were subjected to a multivariate analysis of covariance (MANCOVA) with Parent (Mother, Father) as the repeated measure and the Conventionality score as the covariate.

The analysis yielded a significant effect of Parent, (F (5,51) = 3.03, $p < .05$) which was attributed

Table 11

Pearson Correlations between the Conventionality Subscale and the PAIR[1] Subscales for Bereaved and Nonbereaved Couples (N = 114)

	PAIR				
Group	Emotional	Social	Sexual	Intellectual	Recreational
Bereaved					
Mothers	.80**	.47**	.60**	.72**	.57**
Fathers	.62**	.38**	.46**	.60**	.57**
Nonbereaved					
Wives	.70**	.26*	.50**	.63**	.56**
Husbands	.70**	.42**	.46**	.62**	.41**

Note: [1]Personal Assessment of Intimacy in Relationships
*p<.05, two-tailed
**p<.01, two-tailed

univariately to the subscales of Emotional Intimacy, Sexual Intimacy, and Recreational Intimacy (Table 12). Mothers rated emotional intimacy lower than fathers (M: 17.0 vs 17.9, $p < .05$). However, they rated sexual intimacy and recreational intimacy higher than did fathers (Sexual Intimacy: M: 19.0 vs 17.9, $p < .05$; Recreational Intimacy: M: 17.6 vs 16.5, $p < .05$).

Differences Between Bereaved and Nonbereaved Couples' Perceptions of their Marital Intimacy

Due to lack of normative data on the effect of the death of an infant on a couple's marital relationship, a comparison group of nonbereaved couples was used to evaluate the extent to which couples' marital intimacy is related to the death of an infant. Before examining the differences between bereaved couples' perceptions of their marital relationship compared to the perceptions of nonbereaved couples, a comparison was made between nonbereaved husbands' and nonbereaved wives' perception of their marital intimacy.

To address the issue of how nonbereaved husbands and nonbereaved wives rated their marital intimacy, the data were subjected to a MANCOVA with Spouse as the repeated measure. Once again, the Conventionality subscale (social desirability) score was treated as a covariate.

The analysis yielded a significant effect of

Table 12

Bereaved Mothers' and Fathers' Mean Scores on the PAIR[1] Subscales (N = 57)

PAIR	Mothers	Fathers	F(1,55)
Emotional	17.0	17.9	4.75*
Social	16.6	15.9	1.38
Sexual	19.0	17.9	4.14*
Intellectual	17.4	16.8	1.32
Recreational	17.6	16.5	4.56*

Note: [1]Personal Assessment of Intimacy in Relationships
*p<.05

Spouse, (F,(5,51) = 2.5, $p < .05$) which was univariately attributed to the subscale of Sexual Intimacy and only marginally to Social Intimacy (Table 13). Wives rated both Sexual and Social intimacy higher than their husbands (Sexual Intimacy: M: 19.5 vs 17.4, $p < .01$; Social Intimacy, M: 17.4 vs 16.3, $p < .06$).

To examine the differences between bereaved and nonbereaved couples' ratings of their marital relationship, the data were subjected to a 2 x 2 MANCOVA with Group (Bereaved, Nonbereaved) as the independent factor, Spouse (Wife, Husband) as the repeated measure, and the conventionality score (social desirability) treated as a covariate. The analysis yielded no significant main effect of Group (F (5,105) = .41, $p > .05$) or interaction with Group (F = (5,105) = .94, $p > .05$). Bereaved couples did not differ from nonbereaved couples in their ratings of marital intimacy (Table 14).

These findings challenge research that reported an increase in marital breakup in couples whose infant had died (Bergman et al., 1969; Cornwell et al., 1977; Fish, 1986; Halpern, 1972). Although it can not be unequivocally stated that marital intimacy was not affected by the infant's death, the data does lend support to studies (De Frain & Ernst, 1978; Giles, 1970; Helmrath & Steinitz,1978) which have reported a lack of deterioration and in some cases a strengthening in the couple's marital relationship

Table 13

Nonbereaved Wives' and Nonbereaved Husbands' Mean Scores on the PAIR[1] Subscales (N = 57)

PAIR	Wives	Husbands	F(1,55)
Emotional	18.1	18.2	0.57
Social	17.4	16.3	3.82
Sexual	19.5	17.4	9.44**
Intellectual	17.7	17.1	0.72
Recreational	17.4	16.8	0.70

Note: [1]Personal Assessment of Intimacy in Relationships
**p<.01

Table 14

Bereaved and Nonbereaved Couples' Mean Scores on the PAIR[1] Subscales (N = 114)

PAIR	Bereaved	Nonbereaved	F(1,111)
Emotional	17.4	18.2	1.44^{NS}
Social	16.3	16.8	0.42^{NS}
Sexual	18.4	18.4	0.05^{NS}
Intellectual	17.1	17.4	0.03^{NS}
Recreational	17.1	17.1	0.06^{NS}

Note: [1]Personal Assessment of Intimacy in Relationships

following the death of their infant. In fact, there may be additional factors which may have influenced these results.

Relationship between participation rate by bereaved couples, separation ideation, socioeconomic status, and marital intimacy. One possible extenuating factor that could have influenced the above results is that 49% of potential bereaved couples could not be reached. Moreover, 50% of bereaved couples who were contacted refused to participate, therefore the sample may have been very selective. Another possible factor is that all the couples in the study were asked if they had thought of separating and in 28% of bereaved couples (n = 16), at least one of the partners had some separation ideation compared to 7% of the nonbereaved group (n = 4) [chi-square= 7.3, $p < .01$ (Yates correction)].

Given the difference in the rate of separation ideation between the two groups, the analysis comparing bereaved and nonbereaved couples was repeated for the PAIR, this time using only those couples who had not considered separation (n = 94). The analysis did not yield any different results once "Considered Separation" was controlled (Table 15).

Recall that with the exception of husband's education and socioeconomic status, nonbereaved couples were similar to bereaved couples on all major background variables (i.e., age, years together, wife's years of education,

Table 15

Bereaved and Nonbereaved Couples' Mean Scores on the PAIR[1] While Controlling for "Considered Separation"[2] (N = 94)

PAIR	Bereaved	Nonbereaved	F(1,91)
Emotional	18.7	18.3	0.19^{NS}
Social	17.2	16.9	0.00^{NS}
Sexual	18.8	18.5	0.00^{NS}
Intellectual	18.5	17.2	1.89^{NS}
Recreational	18.1	17.1	1.09^{NS}

Note: [1]Personal Assessment of Intimacy in Relationships
[2]Selected couples who did not consider separation

number and developmental age of existing children). In order to ascertain whether this demographic difference between the groups confounded the study results, the PAIR was reanalyzed with socioeconomic status treated as a covariate. No differences were found between bereaved and nonbereaved couples' ratings of their marital intimacy either before or after socioeconomic status was covaryed out from the analysis (F, (5,107) = .47, $p > .05$).

Relationship Between Background Variables and Grief Reactions

A third issue which was addressed was the relationship between selected background variables and bereaved parents' grief reactions. Before examining the relationship between mothers' and fathers' ratings of their grief reactions and their marital intimacy, it was important to identify potential extraneous variables that could explain any differences. Based on theoretical considerations and clinical experience, selected background variables on the characteristics of the parents (i.e., age, SES, years together, education, whether they considered marital separation); and infant characteristics (i.e., age, sex, type of loss, cause of death, time since the loss, significant anniversary related to the loss) were assessed through correlational analysis to see if and how they related to the parents' grief reactions and their marital

relationships.

To examine the relationship between the extraneous variables and the study variables Pearson Product Moment Correlations were computed for continuous and interval data. For nominal variables such as Cause of Death, univariate analysis of variance (ANOVA) was used with Cause being treated as the independent groups factor. Separate analyses were computed for Mother and Father data.

Intercorrelations were computed between the grief reactions (BEQ and MSPQ) for mothers and fathers separately and the demographic data [parents' characteristics (Table 16a) and infant's characteristics (Table 16b). For mothers, the demographic variables found to correlate significantly with grief reactions included the mother's age, whether the couple had considered marital separation, the age of the infant, the length of time since and the suddenness of the loss. For fathers, grief reactions were significantly correlated with socioeconomic status, whether the couple had considered marital separation, the baby's age, and the time since the loss. Significant variables and theoretically relevant variables were used in a regression analysis in order to explore predictors.

Relationship Between Grief Reactions and Marital Intimacy Following Infant Death

Difficulties between the marital partners following a

Table 16

Pearson Correlations for Background Variables and the BEQ[1] and MSPQ[2] for Bereaved Mothers and Fathers (N = 57)

	(a) Couples' Characteristics						
	Father's Age	Mother's Age	Years Together	SES[3,4]	Father's Education	Mother's Education	Considered Separation[5]
BEQ							
Guilt							
Mother	-.30*	-.34*	-.23	-.21	-.11	-.24	.16
Father	-.17	-.17	-.04	-.28*	-.13	-.28*	.21
Anger							
Mother	-.16	-.29*	-.14	-.14	.04	-.15	.14
Father	-.03	-.07	-.03	-.36**	-.23	-.18	.35**
Meaninglessness							
Mother	.05	-.08	-.01	-.13	-.03	- 08	.26
Father	.15	.06	.03	-.16	.02	.10	.24
Yearning							
Mother	-.02	-.14	- 09	-.00	-.02	-.06	.04
Father	.06	-.02	- 04	-.22	-.09	-.14	.31*

Table 16 (cont'd)

(a) Couples' Characteristics

	Father's Age	Mother's Age	Years Together	SES[3,4]	Father's Education	Mother's Education	Considered Separation[5]
Depersonalization							
Mother	.08	-.05	-.04	.05	.00	-.11	.12
Father	-.09	-.16	-.09	-.19	-.15	-.24	.25
Stigma							
Mother	-.10	-.22	-.13	-.17	.10	.10	.27*
Father	.08	-.04	-.05	-.18	.05	-.15	.38**
Morbid Fear							
Mother	.10	.05	.12	.10	.15	.06	.17
Father	-.09	-.17	-.15	-.25	-.18	-.23	.12
Isolation							
Mother	.03	-.08	-.06	.00	-.07	.03	.35**
Father	.02	-.11	-.07	-.16	-.02	-.14	.26
MSPQ							
Mother	.07	-.08	.10	-.06	-.06	-.21	.20
Father	-.10	-.20	-.11	-.16	-.03	-.04	.18

Table 16 (cont'd)

	(b) Infant Characteristics				
	Time Since Loss	Age	Sex[6]	Sudden Loss[7]	Anniversary[8]
BEQ					
Guilt					
Mother	.07	.01	-.12	-.29*	.14
Father	.00	.21	.31*	.01	-.02
Anger					
Mother	-.04	.07	-.14	-.37**	.15
Father	.14	.20	.10	-.03	-.22
Meaninglessness					
Mother	-.28*	.13	.10	-.34**	.19
Father	-.15	.11	.07	-.15	-.03
Yearning					
Mother	-.22	.23	-.14	-.29*	.18
Father	-.26	.38**	.05	-.07	-.29*
Depersonalization					
Mother	-.34**	.18	-.08	- 32*	.06
Father	-.06	.20	.20	-.07	.02
Stigma					
Mother	-.07	-.03	- 15	-.21	.09
Father	- 08	.05	09	- 03	02

Table 16 (cont'd)

(b) Infant Characteristics

	Time Since Loss	Age	Sex[6]	Sudden Loss[7]	Anniversary[8]
Morbid Fear					
Mother	-.11	.33*	-.23	-.15	-.01
Father	-.17	.18	.21	-.04	-.02
Isolation					
Mother	-.10	.15	-.16	-.31*	.15
Father	.03	.09	.14	-.07	-.06
MSPQ					
Mother	-.02	.15	-.15	-.24	.32*
Father	-.11	-.05	.04	-.18	-.20

Note [1]Bereavement Experience Questionnaire

[2]Modified Somatic Perception Questionnaire

[3]Socioeconomic status was measured with the "Socioeconomic index for occupations in Canada" (Blishen and McRoberts, 1976)

[4]higher scores = higher SES

[5]couples who considered separation=1; couples who did not consider separation=0

[6]sex. male=0; female=1

[7]sudden loss: sudden=1; anticipated=2

[8]anniversary. within four weeks of interview=1; not within four weeks of interview=0

child's death is a recurrent theme in the literature. One of the major causes of stress between couples may develop because the partners are experiencing grief at different times, expressing their grief in different ways, and/or coping with their grief differently (Miles, 1984). However, it is still unclear what the relationship is between bereaved couples' grief reactions and their marital relationship. We do not know whether it is the parents' grief reactions which may undermine the marital relationship or whether the quality of the marriage may intensify the grief reactions when the marital partners feel that they can not turn to their spouse for support.

To examine the relationship between parental grief reactions and marital intimacy, correlations statistics were computed between the grief reaction data (BEQ & MSPQ) and the marital intimacy data (PAIR), separately for mothers and fathers.

For mothers, lower emotional intimacy and intellectual intimacy were related to more intense grief reactions (Table 17a). Women who rated their ability to discuss their thoughts and feelings with their spouse lower also reported more intense grief reactions. Unlike their husbands, bereaved women who experienced more somatization also rated their emotional and intellectual intimacy low. Of particular interest, is that mothers who reported an intense sense of yearning, depersonalization, and isolation

Table 17

Pearson Correlations for BEQ[1] and MSPQ[2] and the PAIR[3] Subscales for Bereaved Mothers and Fathers (N = 57)

(a) Mothers

	Emotional	Social	Sexual	Intellectual	Recreational
BEQ					
Guilt	-.25	-.08	.10	-.39**	-.08
Anger	-.21	-.15	.21	-.22	-.03
Meaninglessness	-.25	-.15	.24	-.35**	.08
Yearning	-.17	.03	.33*	-.23	.17
Depersonalization	-.26	-.15	.30*	-.15	-.01
Stigma	-.04	-.12	.05	-.26	.13
Morbid fear	-.18	.15	.07	-.33*	-.18
Isolation	-.31*	-.05	.27*	-.45***	.04
MSPQ	-.28*	-.13	.23	-.37**	-.05

Table 17 (cont'd)

(b) Fathers

	Emotional	Social	Sexual	Intellectual	Recreational
BEQ					
Guilt	-.39**	-.35**	-.32*	-.38**	-.43***
Anger	-.24	-.18	-.10	-.11	-.21
Meaninglessness	-.34**	-.21	-.33*	- 06	- 08
Yearning	-.18	-.19	-.16	-.02	-.24
Depersonalization	-.29*	-.35**	- 21	-.31*	- 30*
Stigma	-.20	-.26	-.27*	-.18	-.16
Morbid fear	-.36**	-.28*	-.20	-.13	-.21
Isolation	-.33*	-.32*	-.12	-.09	-.14
MSPQ	-.26	-.14	.06	.02	03

Note: [1]Bereavement Experience Questionnaire
[2]Modified Somatic Perception Questionnaire
[3]Personal Assessment of Intimacy in Relationships
*p<.05, two-tailed
**p<.01, two-tailed
***p<.001, two-tailed

rated their sexual intimacy high.

With the exception of physical symptoms, more intense grief reactions were related to low ratings on the different types of marital intimacies for fathers (Table 17b). Although the correlation with sexual intimacy did not reach statistical significance, fathers who experienced a strong sense of depersonalization reported lower emotional, social, intellectual, and recreational intimacy.

Predictors of Mothers' and Fathers' Grief Reactions

Research has indicated that these reactions can be different for bereaved mothers and fathers. Because these differences can be attributed to a variety of factors, it was important to explore which variables could best predict mothers' and fathers' grief reactions.

Based on theoretical considerations and clinical experience, selected parent characteristics, infant characteristics, and the circumstances surrounding the death were assessed through correlational analyses to see if and how they related to the parents' grief reactions. To examine the relationship between the extraneous variables and the study variables Pearson Product Moment Correlation Coefficients were computed for continuous and interval data.

Variables which were found to correlate significantly with the grief reactions and/or have a strong theoretical

basis were then placed in the stepwise regression equation which examined predictors of grief reactions separately for mothers and fathers. Separate regressions were computed for each grief reaction (viz., Guilt, Anger, Meaninglessness, Yearning, Depression, Stigma, Morbid fear, Isolation) and somatization as measured by the MSPQ. The following variables were used as independent variables: the five marital intimacy subscales (viz., Emotional Intimacy, Social Intimacy, Sexual Intimacy, Intellectual Intimacy, Recreational Intimacy), whether death was sudden or anticipated, time since the loss, significant anniversary related to the loss, infant's sex, infant's age, whether either partner had considered separation, mother's age, fathers's age. Criteria for acceptance of a predictor into the stepwise regression included: (1) an overall F significant at $p < .05$; (2) a test of unique variation which explained at least 5% of the variance and a partial correlation coefficient significant at $p < .05$ at the step in which the variable is included. These statistics can be found in Tables 18 and 19.

Predictors of mothers' grief reactions. Mothers' guilt and anger were associated with the age of the mother and whether the infant's death was sudden or anticipated. Mothers who experienced more guilt and anger were younger and were more likely to have lost their infant suddenly. Bereaved women also experienced more guilt when they

Table 18

Stepwise Regression of Predictor Variables for Bereaved Mothers' Grief Reactions (BEQ[1] and MSPQ[2]) (N = 57)

Predictor	r	Part r	p	R^2	F	p
(a) Guilt						
Intellectual Intimacy	-.39	-.39	.00			
Sudden Loss[3]	-.29	-.27	.04	.22	4.9	.00
(b) Anger						
Sudden Loss	-.37	-.42	.00			
Mother's Age	-.29	-.32	.02	.28	6.7	.00
(c) Meaninglessness						
Sudden Loss	-.34	-.41	.00			
Intellectual Intimacy	-.35	-.32	.02			
Time Since Loss	-.28	-.32	.02	.36	7.2	.00
(d) Yearning						
Sexual Intimacy	.33	.33	.01			
Sudden Loss	-.29	-.27	.05	.17	3.6	.05
(e) Depersonalization						
Sudden Loss	-.32	-.36	.01			
Time Since Loss	-.34	-.34	.01	.24	5.7	.00
(f) Stigma						
Sudden Loss	-.21	-.27	.04	.12	3.8	.05
(g) Morbid Fear						
Intellectual Intimacy	-.33	-.33	.01			
Infant's Sex[4]	-.23	-.32	.02			
Infant's Age	33	.29	.03	.29	5.3	.00

Table 18 (cont'd)

Predictor	r	Part r	p	R^2	F	p
(h) Isolation						
Intellectual Intimacy	-.45	-.45	.00			
Sudden Loss	-.31	-.30	.03	.27	6.6	.00
(i) MSPQ						
Intellectual Intimacy	-.37	-.37	.01			
Sudden Loss	-.24	-.31	.02			
Anniversary of Loss[5]	.32	.30	.03	.35	7.1	.00

Note: [1]Bereavement Experience Questionnaire
[2]Modified Somatic Perception Questionnaire
[3]sudden loss: 1=sudden; 2=anticipated
[4]infant's sex: 0=male; 1=female
[5]anniversary: 1=within four weeks of interview; 0=not within four weeks of interview

Table 19

Stepwise Regression of Predictor Variables for Bereaved Fathers' Grief Reactions (BEQ[1] and MSPQ[2]) (N = 57)

Predictor	r	Part r	p	R^2	F	p
(a) Guilt						
Recreation Intimacy	-.43	-.43	.00			
Emotional Intimacy	-.39	-.31	.02	.27	6.7	.00
(b) Anger						
Considered Separation	.35	.34	.01	.12	3.8	.05
(c) Meaninglessness						
Emotional Intimacy	-.34	-.34	.01			
Fathers' Age	.15	.27	.05	.18	4.0	.01
(d) Yearning						
Infant's Age	.38	.38	.00			
Considered Separation	.31	.28	.04			
Time Since Loss	-.26	-.32	.02			
Anniversary[3]	-.29	-.27	.05	.35	5.4	.00
(e) Depersonalization						
Social Intimacy	-.35	-.35	.01	.12	3.8	.05
(f) Stigma						
Considered Separation	.38	.41	.00			
Sexual Intimacy	-.27	-.30	.03	.24	5.5	.00
(g) Morbid Fear						
Emotional Intimacy	-.36	-.36	.01	.13	4.1	.05

Table 19 (cont'd)

Predictor	r	Part r	p	R^2	F	p
(h) Isolation						
Emotional Intimacy	-.33	-.33	.01	.11	3.3	.05
(i) MSPQ						
No predictors						

Note: [1]Bereavement Experience Questionnaire
[2]Modified Somatic Perception Questionnaire
[3]anniversary: 1=within four weeks of interview; 0=not within four weeks of interview

reported lower intellectual intimacy.

Mothers' sense of meaninglessness was also related to their intellectual intimacy, their infant dying suddenly, and the time since the death. Mothers who experienced a greater sense of meaninglessness were more likely to have lost their infant suddenly and more recently. They also tended to rate intellectual intimacy lower.

Mothers' sense of yearning was also associated with their sexual intimacy and whether the death was sudden. Mothers who experienced a greater sense of yearning were more likely to have lost their infant suddenly and tended to report higher sexual intimacy.

Mothers' sense of depersonalization was associated with the time since the death and the suddenness of the death. Mothers who experienced a greater sense of depersonalization were more likely to have lost their infant suddenly and more recently.

Mothers' sense of stigmatization was related to the suddenness of the infant's death. Mothers who experienced a greater sense of stigmatization were more likely to have lost their infant suddenly.

Mothers' sense of morbid fear was associated with the sex and age of the infant as well as their intellectual intimacy. Mothers who had a greater sense of morbid fear were more likely to have lost an older male infant and tended to report lower intellectual intimacy.

Mothers' sense of isolation was also related to their intellectual intimacy and whether the infant's death was sudden. Mothers who experienced a greater sense of isolation tended to report lower intellectual intimacy and werer more likely to have lost their infant suddenly.

Mothers' score on the MSPQ (somatization) was related to their intellectual intimacy, whether the death was sudden, and whether the interview occurred within four weeks of a significant anniversary. Mothers who experienced more physical symptoms tended to report lower intellectual intimacy, were more likely to have lost their infant suddenly, and were interviewed within four weeks of a significant anniversary related to the loss, which had the potential to cause a resurgence of grief.

In summary, the most outstanding predictor of mothers' grief reactions was the suddenness of the infant's death. Mothers whose infant died suddenly were more likely to rate their grief reactions higher than those whose infant's death was anticipated. Although, marital intimacy seems to be an important predictor of mothers' grief reactions, only intellectual and sexual intimacy were implicated. Finally, younger mothers who had lost an older male infant more recently and were interviewed within four weeks of an anniversary tended to rate their grief reactions more highly.

Predictors of fathers' grief reactions. Fathers' guilt was related to their recreational and emotional intimacy. Fathers who experienced more guilt tended to report less recreational and emotional intimacy.

Fathers' anger was associated with consideration of marital separation. Fathers who experienced more anger were more likely to be part of a couple who had considered separating.

Fathers' sense of meaninglessness was associated with their emotional intimacy and their age. Fathers who experienced a greater sense of meaninglessness tended to be older and report less emotional intimacy.

Fathers' sense of yearning was associated with the infant's age, whether the couple had considered marital separation, the time since the loss, and whether a significant anniversary had or would pass within four weeks of the home visit. Fathers who experienced a greater sense of yearning were more likely to be part of a couple who had considered separation. These fathers were also more likely to have recently lost an older infant and tended not to have experienced a significant anniversary within four weeks of the home visit.

Fathers' sense of depersonalization was associated with their social intimacy. Fathers who experienced a greater sense of depersonalization tended to rate their social intimacy lower.

Fathers' stigma was associated with the couples' consideration of marital separation and their sexual intimacy. Fathers who had a greater sense of stigma tended to report lower sexual intimacy and were more likely to have been part of a couple who did consider marital separation.

Fathers' sense of morbid fear and isolation were associated with their emotional intimacy. Fathers who felt isolated and experienced a greater sense of morbid fear tended to rate emotional intimacy lower.

Finally, fathers' score of somatization could not be predicted by any of the variables entered into the regression equation.

In summary, the couple's marital relationship seems to be an important predictor of fathers' grief reactions. Lower ratings on the various components of marital intimacy namely: emotional, social, sexual, and recreational intimacy, as well as separation ideation consistently result in more intense grief reactions for fathers. Finally, older men who have lost an older infant more recently and who were not interviewed within four weeks of a significant anniversary were more likely to rate their grief reactions high.

Discussion

This research had the following purposes: (1) to compare mothers' and fathers' grief reactions following the death of their infant; (2) to compare mothers' and fathers' perceptions of their marital intimacy following the death of their infant; (3) to compare the ratings of marital intimacy in bereaved couples with the ratings of nonbereaved couples; (4) to examine the relationship between bereaved couples' grief reactions and their marital intimacy following infant death; and (5) to identify personal and situational predictors of mothers' and fathers' grief reactions. Each of these issues will be examined in turn.

Differences Between Mothers' and Fathers' Grief Reactions

A major concern of this study was the difference in grief reactions between mothers and fathers. Mothers rated their emotional, behavioral, and physical reactions higher than fathers and as expected, bereaved couples rated their reactions higher than nonbereaved couples. It would appear that the more intense reactions are due to the infant's death.

The major issue raised by this finding is why is there a difference between mothers' and fathers' rating of their grief reactions? It may be that the difference between

mothers and fathers was due to the way in which grief was measured. Although, Demi and Schroeder's Bereavement Experience Questionnaire (1987) was developed using bereaved parents, it was based primarily on women's reports. It may be that the BEQ is more sensitive to women's grief reactions and thus does not tap the full range of bereaved men's grief reactions. Perhaps, men grieve just as intensely as women but their expressions of grief take different forms. Future development of a grief instrument using a larger sample of bereaved men may provide a more accurate portrait of how men grieve following the death of their child.

A second possibility is that women report more symptoms than men and women's grief is more intense than men's. Evidence from the comparison sample lends some support to both the second and third interpretations. In the nonbereaved group, women reported more intense emotional, behavioral, and physical reactions than their husbands thus reinforcing the possibility that women almost always report more symptoms than men. As well, the lack of significant difference found between nonbereaved men and women strengthens the interpretation that a true difference exists between bereaved mothers and fathers. Mothers may indeed experience more intense grief reactions than fathers.

These latter interpretations are consistent with the

literature which describe more intense grief reactions for mothers than for fathers (Smith & Borgers, 1988; Murray & Callan, 1988; Tudehope et al., 1986). Assuming that the observed mother/father difference in grief reactions is a real one, there are many reasons why the difference may exist.

Mothers' grief may be more intense due to the nature of their relationship developed with their infant. Women carry their infant through pregnancy and are most often accustomed to more intimate contact on a daily basis (Rando, 1986). The role of fathers has changed dramatically over the past several years, and they have become much more involved with their wife's pregnancy and the care of their infant. However, it may be that mothers have a different experience with their infant during the early months. They usually spend more time with their young infant. Thus, it may be the quality of the experience that each parent has with their infant which results in the different intensities of grief reactions for mothers and fathers.

Differences Between Mothers' and Fathers' Perception of their Marital Intimacy Following the Death of their Infant

A second major purpose of this study was to explore whether differences exist between mothers' and fathers' perceptions of their marital relationship following the

death of their infant. Mothers rated emotional intimacy lower than their husbands but sexual intimacy and recreational intimacy higher. However, no difference was found between bereaved and nonbereaved couples' marital relationships on any of the marital intimacy subscales.

These findings raise two major issues. The first issue is whether the death of an infant affects the couples' marital relationship and the second, is whether the death affects mothers and fathers in the same way.

There have been contradictory findings in terms of how an infant's death affects the marital relationship. Several researchers have reported that there is an increase in marital breakup following an infant's death (Bergman et al., 1969; Cornwell et al., 1977; Fish, 1986; Halpern, 1972), whereas others have found that some marriages are strengthened (De Frain & Ernst, 1978; Giles, 1970; Helmrath & Steinitz, 1978). In this study, bereaved and nonbereaved couples did not differ on their ratings of marital intimacy, thus lending support to the latter research studies. However, it can not be unequivocally stated that marital intimacy was not affected by the infant's death. Recall, that 49% of potential subjects could not be contacted and of those who were contacted, 50% refused to participate. It may be that those couples who could not be reached or who refused to participate were having marital problems. The couples who did participate may have had

stronger marriages to begin with or may have "weathered the storm" and decided to stay together. Indeed, there is some evidence that the death of an infant does put a strain on a marriage. In this study, as part of the interview schedule, couples were asked if they had thought of separating and in 28% of the bereaved couples, at least one of the partners had some separation ideation compared to only 7% of the nonbereaved group. Thus, those couples who decided to participate in this study may have been those who had had a more stable marriage and/or who had already resolved or were in the process of resolving their marital difficulties.

Perhaps there are three groups of couples. The first group may be couples whose marriage was not strong enough to survive the initial strain of the infant's death. These may be the couples who could not be reached, who refused to participate, or who were excluded because of the study's selection requirements. The second group may be the couples in this study. These couples may have been able to help each other through this very difficult time. The third and final group may also be in this study and comprise of those couples whose marriage may disintegrate further down the road.

The second issue raised by these findings relates to the difference between mothers' and fathers' perceptions of their marital relationship. Recall, that mothers rated

emotional intimacy lower than their husbands but sexual intimacy and recreational intimacy higher.

These findings are consistent with research on parental coping strategies when the aspects of marital intimacy are considered (Feeley & Gottlieb, 1988; Mandell et al., 1980; Helmrath & Steinitz, 1978). For example, emotional intimacy involves such experiences as the ability to share feelings openly; sexual intimacy includes physical closeness such as sexual activity; recreational intimacy includes sharing of mutual interests (Olson & Schaefer, 1981). Indeed, past studies have reported that following an infant's death, mothers' need to verbalize feelings may be greater than fathers'. It may be that women turn to their spouse to satisfy this need to verbalize feelings. Because men's need to verbalize feelings may be less than their spouses', it is not surprising bereaved women rated emotional intimacy lower than husbands. This is not to say that bereaved men's need for closeness may be less than their spouses' but their need for closeness may just take a different form. Fathers may express their need for closeness through sexual and recreational intimacy whereas mothers may seek to satisfy their need for closeness through emotional intimacy.

Relationship Between Bereaved Parents' Grief Reactions and their Marital Relationship

The third major issue to be addressed in this study relates to the relationship between parental grief reactions and the couple's marital relationship; whether lower ratings of marital intimacy are associated with more intense grief reactions. Various aspects of the marital relationship emerged as correlates with both mothers' and fathers' grief reactions. For fathers, each of the grief reactions could be predicted by either emotional intimacy, social intimacy, sexual intimacy, recreational intimacy, or whether the couple had considered marital separation. Fathers who reported more intense grief reactions rated the various aspects of their intimate relationship lower and were more likely to be part of a couple who had considered marital separation.

These correlational findings reinforce a link between the intensity of grief reactions and the couple's marital relationship. However, the direction of this relationship can not be determined given the design of this study. It is natural for each spouse to turn to the other for support during this difficult time. Thus, when that support is not forthcoming, as is expected, the intensity of the reactions are naturally likely to increase. Alternatively, it may be the intensity of the bereaved couples' grief reactions which leads them to perceive less intimacy in their marital

relationship.

Intellectual intimacy was related to mothers' guilt, sense of meaninglessness, morbid fear, isolation, and somatization. Mothers who rated intellectual intimacy (sharing of ideas and talking about events) low, also expressed more intense grief reactions. It may be that a mother's perception that she could not discuss her thoughts and ideas with her spouse led to feelings of guilt, meaninglessness, morbid fear, isolation, and somatization. Alternatively, experiencing intense grief reactions may result in greater difficulty in discussing their thoughts and sharing ideas with each other.

Sexual intimacy emerged as a predictor of fathers' sense of stigmatization and mothers' sense of yearning. Whereas fathers who experienced more stigmatization reported lower sexual intimacy, mothers' sense of yearning was greater when they reported more sexual intimacy. Let us first consider the relationship between bereaved husbands' perceptions of their sexual intimacy and their sense of stigmatization.

Stigmatization arises from a feeling of being discredited, ashamed, tainted or discounted. Stigma may be manifest as feeling blamed, ashamed, or rejected, and in the avoidance of other people or being avoided because others feel uncomfortable in their presence (Demi & Schroeder, 1989). Bereaved men may feel stigmatized by

their wives for desiring and initiating sexual intimacy. The loss of a child can dramatically affect a couple's sexual relationship. While the intimacy of sexual contact may be comforting to one spouse, it may be precisely what the other cannot endure at that moment (Rando, 1986). The problem may be the result of fear of having and losing other children or guilt over experiencing pleasure.

Recall, that bereaved men rated their sexual intimacy lower than their wives suggesting that perhaps men express their sense of closeness more through sexual intimacy rather than verbal forms of intimacy (i.e., emotional or intellectual intimacy) favored by their wives. Perhaps, men feel rejected by their wives who may feel unable or unwilling to meet their husband's sexual needs following the death of their infant. Alternatively, bereaved men may feel ashamed at not being able to fulfill their role as a father and protector of the family unit which may result in their feeling less able to be sexually intimate with their wives.

The second issue to be considered is the relationship between mothers' perception of their sexual intimacy and their sense of yearning. Recall, that women who experienced a greater sense of yearning rated their sexual intimacy higher. Yearning is a sense of longing for the deceased. It manifests as focusing on thoughts of the deceased, searching for the deceased, ruminative behaviors,

sense of closeness to the deceased, dreams or hallucinations about the deceased, or intense efforts to recall the deceased (Demi & Schroeder, 1989).

It may be that bereaved women who long for their dead infant seek sexual intimacy with their husband to try and fill the painful void they are experiencing. On the other hand, the mothers in this study who rated their sexual intimacy high may be triggering painful and intense feelings of yearning for their infant when they themselves experience some rare moments of pleasure or simply physical contact.

It has been assumed that differences between mothers' and fathers' reactions to the death of their infant may be problematic for the couple. However, for some couples this may not be true. A prospective longitudinal study would help to identify the relationship between parental grief reactions and marital intimacy following infant death. It would help us gain a better understanding of how parental grief reactions and marital intimacy change over time, whether the similarities and differences persist between mothers and fathers, and the effects of any of the changes that may occur.

Other predictors of grief. The age of the infant emerged as a predictor of fathers' sense of yearning and mothers' sense of morbid fear. The older the infant at the time of death the greater was the father's sense of longing

for his child and the mother's fear and anxiety related to death or threat of death.

Studies have explored differences between the type of loss (i.e, miscarriage, stillbirth, neonatal), which is also a reflection of the age of the fetus or infant. However, the results remain conflicting. Whereas some studies have found that the older the child at the time of death the more intense parents' grief (Gorer, 1965; Kalish, 1977; Kirkley-Best, & Kellner, 1982; Schwartz, 1977; Shneidman, 1977; Theut et al., 1989), others have concluded that the reaction to the loss is just as great in the case of a miscarriage as a neonatal death (Davidson, 1977; De Frain and Ernst, 1978; Furman, 1978; Helmrath & Steinitz, 1978; Nichols, 1986; Peppers & Knapp, 1980; Smith & Borgers, 1989).

The wide range of time since the loss used in the various studies may account for some of these differences. For example, both Smith and Borgers (1989) and Peppers and Knapp (1980) studied parents who had experienced a loss over a span of 7 to 36 years. In contrast, the present study used a more limited time frame and like Theut et al., (1989) and Kirkley-Best and Kellner (19821), the older the infant the more intense some of the grief reactions were for both mothers and fathers. As time passes, the pain of bereavement persists and becomes indistinguishable regardless of the infant's age.

Time since the loss, which ranged from 1-24 months (M = 12), was a predictor for both mothers' and fathers' sense of yearning. As expected, the shorter the time since the infant's death the greater the parents' sense of yearning. This finding challenges Smith and Borgers' (1989) study which did not find a difference in parents' grief reactions between infants dying between six months or seven years earlier. In contrast, Rando (1983) reported a resurgence of parents' grief reactions at the three-year mark. Keeping in mind that the time span of the present study was within 24 months of the loss, it would be interesting to explore if these results hold over a longer time span. However, a larger sample size would be required.

Another interesting predictor of parental grief reactions was whether or not a significant anniversary date, which may have caused a resurgence of grief, occurred within four weeks of the home visit interview. Miles (1984) asserted that bereaved parents' feelings, symptoms and behaviours may occur at any time, may occur simultaneously, and may reoccur many times during this period. She depicts these grief reactions as a "wheel of reactions" that resurge throughout the parents' lifetime. Certain dates (i.e., birthday of the infant, date of death, special holidays etc.) may stimulate thoughts and feeling associated with the loss to resurface bringing with them a resurgence of grief reactions.

The mothers in this study did experience more physical symptoms when the interview took place within four weeks of an important anniversary. However, the findings were the opposite for fathers. Fathers experienced a greater sense of yearning when the interview was not held within four weeks of a significant anniversary. It may be that fathers find comfort during special dates which legitimize thoughts and feelings about their dead infant and thus, yearn more for their child outside these special dates.

Although suddenness of the loss of the infant was not a predictor of fathers' grief reactions, it was related to seven of the eight types of grief reactions for mothers. Mothers whose infant died suddenly experienced more intense grief reactions than mothers whose infant's death was anticipated. These results challenge Fish's (1986) study of 77 women and 35 men who had lost a child (0->20 years of age) from one month to 16 years earlier. He found that bereaved mothers scored consistently higher on the Grief Experience Inventory (Sanders, Mauger, & Strong, 1979) when the death of the child was anticipated rather than sudden. The scores for fathers were reversed. It may be that the wide range of the age of the child in Fish's (1986) study was a critical variable.

Other researchers (Parkes, 1975; Parkes & Weiss, 1983) have also found that unexpected deaths are particularly difficult to deal with. Acute grief, which is experienced

with the loss of any child, may be compounded by parental self-accusation, guilt, and helplessness resulting from parents' perceptions that the death of their infant may have been preventable (Rando, 1986). As was discussed earlier, perhaps it is the quality of the relationship that mothers have with their infant that differentiates them from fathers. In utero, the fetus is constantly part of the mother's entire physical and emotional being. As the traditional primary caretaker, almost all of the mother's attention and energy are focused on the infant. Thus, it may be the essence of the mother-infant relationship and the belief that she should have been able to prevent the death which contribute to the intensity of the mother's grief reaction following the sudden death of the infant.

S.I.D.S. is a prime example of an unexpected death. Mothers who had lost their infant to S.I.D.S. experienced more guilt, anger, and stigma than mothers who had lost their infant to other causes. In contrast, fathers' emotional and behavioral reactions were not related to the cause of death. These findings raise two issues. The first issue relates to why S.I.D.S., as a cause of death, distinguishes grief reactions within the bereaved women. The second issue relates to why, unlike mothers, the cause of death did not have an impact on fathers' grief reactions.

Let us first address why mothers who lost an infant to

S.I.D.S. reacted differently from mothers who lost an infant to an other cause. There are a number of unique features of a S.I.D.S. death that complicate the grief process. Markusen, Owen, Fulton, and Bendiksen (1978) identified five critical features: (1) S.I.D.S. may produce a particularly traumatic grief reaction because of its suddenness. The unexpected loss tends to overwhelm and reduces functioning thereby compromising the rate of recovery; (2) The absence of a definite cause increases the likelihood of intense guilt, since parents are given no rationale to feel blameless, and others can create doubts through criticism of parental care or insinuations about their actions; (3) Moreover, because the death is sudden and of no known cause, families are forced to deal with the police, coroners, and hospital personnel. There may be insinuations that the death was caused by some act of commission or omission on the part of the family and this places undue additional burdens of guilt and pain on them; (4) S.I.D.S. abruptly severs the intense and critical mother-infant bond which is probably the first loss experience encountered by a young couple creating an extremely intense and harsh grief experience; (5) Sibling bereavement may complicate the situation. Siblings may struggle with guilt over the ambivalent feelings they had about the new baby and must cope with the disruption that their parents' grief creates for the family.

Finally, an important feature of S.I.D.S., as well as other infant losses, is that all too frequently it is not socially validated in the same way other deaths are. Parents have been told they are lucky they didn't have the baby long enough to become too attached or that they are young and can have other children (De Frain & Ernst, 1978; Nichols, 1986), both statements tend to invalidate the loss and may inhibit the necessary mourning to occur.

Since the controversy of sudden versus anticipated death is recurrent in the literature, future bereavement studies should address the issue by controlling for the type of death. Recall, that in the present study mothers who had lost an infant to S.I.D.S. experienced some of their grief reactions more intensely than mothers who had lost an infant to some other cause of death. This finding, although based on a small sample size (n = 7), suggests that there may be something unique in the S.I.D.S. loss experience. Future studies should target this group of parents.

The second issue relates to why, unlike the mothers, the cause of death did not have an impact on fathers' grief reactions. A possible interpretation may be that the age of the child may be a confounding variable. Recall, that fathers rated their sense of yearning and depersonalization higher when they lost an infant than when the death was intrauterine. If we consider the difference between the

quality of the father-infant relationship as it compares to the mother-infant relationship, and the fact that fathers may have a greater opportunity to develop their relationship with an older child, then perhaps future research which includes children who died at an older age may reflect an impact of the cause of death on fathers' grief reactions.

Summary. The predictors for mothers and fathers highlight a distinct relationship between their grief reactions and their marital relationships. With the exception of the suddenness of the loss being a major predictor exclusively for mothers, various aspects of marital intimacy emerged as dominant predictors for both mothers and fathers. Other characteristics such as the infant's age as well as the time since the loss also were related to some of the grief reactions for mothers and fathers. These variables provide clear indication of the importance of helping both members of the marital dyad deal not only with the grief associated with the loss of their infant but also with the secondary losses which result.

Clinical Implications

The clinical implications for this study emerge from the issues addressed. The first issue concernes the difference between mothers' and fathers' grief reactions following the death of their infant. Clinicians need to be

attuned to the differences and similarities of the grief reactions experienced by bereaved parents. Thus, an important aspect of grief counseling should include helping each parent to understand and respect his or her own grief reactions as well as those experienced by the spouse.

The age of the infant, cause of death, the suddenness of the loss, and the length of time since the loss were factors associated with bereaved parents' grief reactions. By including these factors in their assessment, sensitized clinicians may be able to observe how they affect bereaved parents as well as identify those who are at risk for more intense grief reactions.

The second issue relates to mothers' and fathers' perceptions of their marital intimacy. Although no differences were found between bereaved couples and nonbereaved couples, differences did exist between bereaved mothers and fathers. It seems that men's and women's need for closeness may be expressed in different ways. Clinicians should consider these differences when they assess a bereaved couple's marital relationship following the death of their infant.

Traditionally, health professionals who have been involved with families whose infant has died have concentrated on how mothers deal with the loss rarely including the fathers in their interventions. Such practices probably stem in part from the popular belief

that the impact of the death of such a young child is greater for mothers than for fathers. The findings of this study demonstrated that fathers who rate their marital intimacy lower may experience more intense grief reactions following the death of their infant. These findings also highlight the third major issue of this study namely, the relationship between bereaved parents' grief reactions and the couple's marital relationship.

Marital intimacy is a vital component related to the grieving process of both parents, even though the child that died was an infant. Indeed, separation ideation was found to be more prevalent in bereaved couples than in nonbereaved couples. Thus, particular attention should be paid to couples who consider marital separation in order to help them anticipate and deal with some of their reactions and those of their spouse. In other words, clinicians can no longer overlook fathers and/or the couple as a whole, when providing bereavement counseling following infant death. By working with both the husband and the wife, the skilled clinician can help the bereaved couple understand, anticipate, and cope with their individual reactions, as well as those of their partner, in order to facilitate the grieving process.

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A P P E N D I C E S

Appendix A

Comparison of Mean Scores on Demographics Among the Five Settings (N = 57)

Demographic Variable	A n=28	B n=15	C n=3	D n=7	E n=4	F(4,52)
Mean mother's age (yrs)	30.9	31.7	27.3	31.6	27.5	1.96
Mean father's age (yrs)	34.6	33.5	29.7	32.6	29.5	3.05
Mean time together (yrs)	8.3	7.3	6.0	7.6	6.3	1.22
Mother's education (yrs)	14.6	13.4	13.3	14.7	12.5	1.25
Father's education (yrs)	15.0	14.3*D	11.7*D	17.7*B,C	13.8	4.10**
Socio-economic status (SEI)[1,2]	53.5	51.7	49.3	59.6*E	37.0*D	2.69*

Note: [1]Socioeconomic status was measured with the "Socioeconomic index for occupations in Canada" (Blishen & McRoberts, 1976)
[2]higher scores = higher SES
*p<.05
**p<.01

Appendix B

Comparison of Bereaved Mothers' and Fathers' Mean Scores on the BEQ[1], MSPQ[2], and PAIR[3]

Subscales from Five Settings (N = 57)

(a) Mothers

	A n=28	B n=15	C n=3	D n=7	E n=4	F
						F(4,52)
BEQ						
Guilt	29.6	27.9	29.3	27.7	31.3	0.19^{NS}
Anger	16.3	14.1	13.7	15.6	15.5	0.65^{NS}
Meaninglessness	14.7	11.5	12.3	15.1	14.5	1.99^{NS}
Yearning	21.4	17.5	18.0	17.6	17.0	1.84^{NS}
Depersonalization	10.3	8.5	9.0	8.7	8.3	1.09^{NS}
Stigma	6.6	5.9	6.0	6.1	7.3	0.93^{NS}
Morbid Fear	11.9	10.2	11.0	10.1	11.8	1.94^{NS}
Isolation	11.0	10.4	11.3	9.9	11.8	0.56^{NS}
MSPQ	9.7	7.9	5.0	7.6	12.5	0.91^{NS}
						F(4,51)
PAIR						
Emotional	15.8	18.4	17.3	18.4	16.8	1.18^{NS}
Social	16.0	16.8	18.3	18.7	15.3	0.48^{NS}
Sexual	18.4	18.4	23.0	19.6	21.0	1.00^{NS}
Intellectual	15.6	18.7	20.0	20.9	16.8	1.69^{NS}
Recreational	17.1	17.3	18.3	19.6	18.8	0.43^{NS}

Appendix B (cont'd)

(b) Fathers

	A n=28	B n=15	C n=3	D n=7	E n=4	F
						F(4,52)
BEQ						
Guilt	25.1	22.6	22.0	20.9	25.0	0.79^{NS}
Anger	14.8	13.9	13.3	12.4	13.8	0.65^{NS}
Meaninglessness	12.5	11.5	10.3	11.1	11.8	0.61^{NS}
Yearning	18.0	14.7	13.0	12.6	15.8	2.90*
Depersonalization	9.2	7.4	7.0	6.9	7.3	2.40^{NS}
Stigma	6.4	5.8	6.3	5.6	6.5	0.64^{NS}
Morbid Fear	9.9	8.6	9.3	8.3	10.3	0.98^{NS}
Isolation	9.9	8.9	8.3	8.1	9.0	1.40^{NS}
MSPQ	5.3	5.5	7.3	7.4	13.8	2.00^{NS}
						F(4,51)
PAIR						
Emotional	17.0	18.7	19.7	20.0	16.5	1.70^{NS}
Social	14.9	17.3	19.3	17.0	14.3	1.70^{NS}
Sexual	17.3	17.5	17.7	20.7	18.8	0.39^{NS}
Intellectual	15.9	17.3	19.3	18.6	16.3	0.96^{NS}
Recreational	15.5	16.9	18.3	18.3	18.0	0.50^{NS}

Note: [1]Bereavement Experience Questionnaire
[2]Modified Somatic Perception Questionnaire
[3]Personal Assessment of Intimacy in Relationships
*$p<.05$

APPENDIX C

Letter of Introduction to the Bereaved Group

Dear Parents,

I am a nurse pursuing a Master's degree in nursing at McGill University. For the past several years, I have worked at the Montreal Children's Hospital, with families who have experienced the loss of an infant and know that this can be a difficult period.

This project asks you about your experiences since your loss. I am interested in finding out about how mothers and fathers react and about your relationship with each other. In order to provide the most helpful care, health professionals need to increase their understanding of the feelings and experiences of bereaved couples. It is people such as yourselves who unfortunately, can best help us to learn how we can provide the best type of care to parents who experience the loss of their child. I am asking you to help me by participating in this project.

The Montreal Children's Hospital has contacted you, as well as every family who has lost an infant in the last 24 months. During a 1 - 1 1/2 hour home visit, you will each be asked to complete three short written questionnaires which deal with how you are presently feeling, your relationship with each other, and the events surrounding the loss of your baby.

The information that you provide will be treated with the utmost confidentiality. Your names will not appear on any of the questionnaires nor will they be used in any reports. Upon completion of the project, I will send you a summary of the group results.

I will be contacting you again in the next few days to answer any questions regarding this project. At that time you can inform me of your decision.

Sincerely yours,

Ariella Lang

APPENDIX D

Letter of Introduction to the Nonbereaved Group

Dear Mr. & Mrs. Smith:

I am a nurse pursuing a Master's degree in nursing at McGill University and interested in studying family health in couples with and without children.

If you agree to participate, you would be visited in your home at a convenient time when both you and your spouse could be present. This visit would last about 30 to 45 minutes. Your participation in this project would involve BOTH husband and wife, filling out three short questionnaires, individually, regarding your health as well as some background information.

All information that you provide will be treated confidentially, and your name will not appear on any document or report. When the study is completed, you will be able to obtain a report of the group results.

I will be contacting you again in the next few days to answer any questions regarding this project. At that time you can inform me of your decision to participate.

Sincerely yours,

Ariella Lang

APPENDIX E

Consent Form for the Bereaved Group

This project examines the grief reactions of mothers and fathers following the loss of their infant as well as their relationship with each other.

The research project has been explained to me in a letter from Ariella Lang dated_____. I understand and that if I agree to participate, I will:

1) Answer a general questionnaire about my family.

2) Complete three questionnaires about how I am presently feeling, my relationship with my spouse, and events surrounding the loss of my baby.

I further understand that:

All information is confidential and my name will not appear on any of the questionnaires nor will they be used in any reports.

My participation is voluntary.

My decision to participate will not affect the care/services I receive.

I am free to withdraw my consent and to discontinue my participation in the project at any time without explanation.

Any questions I have about the project will be answered.

I understand that while I am encouraged to answer all questions, I am not obliged to do so.

On the basis of the above statements I agree to participate in this project.

_____ _____

Participant's Signature Date

_____ _____

Witness Date

APPENDIX F

Consent Form for the Nonbereaved Group

This project examines how an individual's physical and mental well being are related to their relationship with their spouse.

The research project has been explained to me in a letter from Ariella Lang dated _____. I understand, and that if I agree to participate, I will:

1) Answer a general questionnaire about my family.]

2) Complete three questionnaires about how I am presently feeling and my relationship with my spouse.

I further understand that:

All information is confidential and my name will not appear on any of the questionnaires nor will they be used in any reports.

My participation is voluntary.

My decision to participate will not affect the care/services I receive.

I am free to withdraw my consent and to discontinue my participation in the project at any time without explanation.

Any questions I have about the project will be answered.

I understand that while I am encouraged to answer all questions, I am not obliged to do so.

On the basis of the above statements I agree to participate in this project.

_____ _____

Participant's Signature Date

_____ _____

Witness Date

APPENDIX G

Bereavement Experience Questionnaire (BEQ)

On the left side of the page are thoughts and feelings that bereaved people sometimes have. Read the item on the left; then in the right column circle how often you have experienced this thought or feeling in the past month (4 weeks), including today.

Thoughts and Feelings I've Had in the Past Month (4 weeks)		Never	Sometimes	Often	Almost Always
1.	Felt angry at friends.	1	2	3	4
2.	Felt that life has no meaning.	1	2	3	4
3.	Found myself searching for the person who died.	1	2	3	4
4.	Thought I saw the deceased person.	1	2	3	4
5.	Felt guilty when I enjoyed myself.	1	2	3	4
6.	Felt I had a poor relationship with the deceased person.	1	2	3	4
7.	Felt fearful that something else bad might happen.	1	2	3	4
8.	Lost interest in people that I formerly cared about.	1	2	3	4
9.	Thought that I contributed to the death.	1	2	3	4
10.	Yearned for the deceased person.	1	2	3	4
11.	Lost my religious faith.	1	2	3	4
12.	Felt fearful that I might die.	1	2	3	4
13.	Lost interest in my work.	1	2	3	4
14.	Thought I was losing my mind.	1	2	3	4
15.	Felt a need for physical intimacy.	1	2	3	4
16.	Lost interest in activities that I formerly cared about.	1	2	3	4

	Thoughts and Feelings I've Had in the Past Month (4weeks)	Never	Sometimes	Often	Almost Always
17.	Felt blamed by others for the death.	1	2	3	4
18.	Felt fearful that another of my loved ones might die.	1	2	3	4
19.	Felt ashamed of the way he/she died.	1	2	3	4
20.	Felt like a part of me was/is dead.	1	2	3	4
21.	Felt that he/she contributed to his/her own death.	1	2	3	4
22.	Felt like I was watching myself go through the motions of living.	1	2	3	4
23.	Felt I should have done more for him/her during his/her life.	1	2	3	4
24.	Felt that the deceased person was/is guiding me.	1	2	3	4
25.	Heard the deceased person's voice, cry, cough, etc.	1	2	3	4
26.	Thought that the death was a punishment for things I did in the past.	1	2	3	4
27.	Sensed the deceased person's presence.	1	2	3	4
28.	Felt a need to be emotionally close to someone.	1	2	3	4
29.	Felt angry at strangers.	1	2	3	4
30.	Felt that some person was responsible for the death.	1	2	3	4
31.	Felt guilty about my sexual needs.	1	2	3	4
32.	Was preoccupied with thoughts of death.	1	2	3	4
33.	Felt angry over local, national or world events.	1	2	3	4
34.	Felt guilty about some things I said or did since the death.	1	2	3	4

	Thoughts and Feelings I've Had in the Past Month (4 weeks)	Never	Sometimes	Often	Almost Always
35.	Spent time looking at the deceased person's pictures, clothing, or belongings.	1	2	3	4
36.	Felt angry at relatives.	1	2	3	4
37.	Felt that I have nothing to live for.	1	2	3	4
38.	Felt that the deceased person is located within me.	1	2	3	4
39.	Felt guilty because I'm doing so well since the death.	1	2	3	4
40.	Felt compelled to change my residence because of what some people thought about the death.	1	2	3	4
41.	Felt emotionally distant from people.	1	2	3	4
42.	Thought that there are some very real reasons why I have felt guilty.	1	2	3	4
43.	Felt angry at God.	1	2	3	4
44.	Felt that I caused the death.	1	2	3	4
45.	Felt guilty about some things I said and did <u>before</u> the death.	1	2	3	4
46.	Felt angry at myself.	1	2	3	4
47.	Thought that there isn't any real reason for me to feel guilty, yet I do.	1	2	3	4
48.	Felt relieved that he/she died.	1	2	3	4
49.	Felt I could have done something to prevent the death.	1	2	3	4
50.	Felt guilty about little, unimportant things.	1	2	3	4
51.	Felt angry at the deceased person.	1	2	3	4
52.	Felt I had a very good relationship with the deceased person.	1	2	3	4

	Thoughts and Feelings I've Had in the Past Month (4 weeks)	Never	Sometimes	Often	Almost Always
53.	Felt guilty because I have lived longer than he/she did.	1	2	3	4
54.	Felt that I did not grieve correctly.	1	2	3	4
55.	Felt angry at prople who provided care to the deceased person (doctors, nurses, therapists, etc.).	1	2	3	4
56.	Was preoccupied with thoughts about the deceased person.	1	2	3	4
57.	Felt guilty about my sexual behavior.	1	2	3	4
58.	Felt afraid to be alone.	1	2	3	4
59.	Felt empty.	1	2	3	4
60.	Felt my life has no purpose.	1	2	3	4
61.	Felt a need to be touched or held.	1	2	3	4
62.	Felt that my presence makes people uncomfortable.	1	2	3	4
63.	Was unable to reach out to others for help.	1	2	3	4
64.	Could not bear to sort or part with the deceased person's belongings.	1	2	3	4
65.	Felt unable to reach out to others for help.	1	2	3	4
66.	Felt I would welcome death.	1	2	3	4
67.	Felt afraid of losing control of my emotions.	1	2	3	4

APPENDIX H

Modified Somatic Perception Questionnaire (MSPQ)

	Over the past seven days have you been bothered by: (CIRCLE ONE)	Not at all	A little	Somewhat	A great deal
1.	Your mouth becoming dry	0	1	2	3
2.	Blurring of vision	0	1	2	3
3.	Sweating all over	0	1	2	3
4.	Your stomach churning	0	1	2	3
5.	Your muscles twitching or jumping	0	1	2	3
6.	Feeling hot all over	0	1	2	3
7.	Feeling faint	0	1	2	3
8.	Muscles in your neck aching	0	1	2	3
9.	Dizziness	0	1	2	3
10.	A tense feeling across your forehead	0	1	2	3
11.	Your legs feel weak	0	1	2	3
12.	Nausea	0	1	2	3
13.	Pain or ache in your stomach	0	1	2	3

APPENDIX I

Personal Assessment of Intimacy in Relationships (PAIR)

This inventory is used to measure different kinds of "intimacy" in your relationship. Read the item on the left; then in the right column indicate your response to each statement according to how you have felt in the past month (4 weeks), including today.

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1.	My partner listens to me when I need someone to talk to.	0	1	2	3	4
2.	We enjoy spending time with other couples.	0	1	2	3	4
3.	I am satisfied with our sex life.	0	1	2	3	4
4.	My partner helps me clarify my thoughts.	0	1	2	3	4
5.	We enjoy the same recreational activities.	0	1	2	3	4
6.	My partner has all the qualities I've always wanted in a mate.	0	1	2	3	4
7.	I can state my feelings without him/her getting defensive.	0	1	2	3	4
8.	We usually "keep to ourselves."	0	1	2	3	4
9.	I feel our sexual activity is just routine.	0	1	2	3	4
10.	When it comes to having a serious discussion, it seems we have little in common.	0	1	2	3	4
11.	I share in few of my partners's interests.	0	1	2	3	4
12.	There are times when I do not feel a great deal of love and affection for my partner.	0	1	2	3	4
13.	I often feel distant from my partner.	0	1	2	3	4
14.	We have few friends in common.	0	1	2	3	4
15.	I am able to tell my partner when I want sexual intercourse.	0	1	2	3	4

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
16.	I feel "put down" in serious conversation with my partner.	0	1	2	3	4
17.	We like playing together.	0	1	2	3	4
18.	Every new thing I have learned about my partner has pleased me.	0	1	2	3	4
19.	My partner can really understand my hurts and joys.	0	1	2	3	4
20.	Having time together with friends is an important part of our shared activities.	0	1	2	3	4
21.	I "hold back" my sexual interest because my partner makes me feel uncomfortable.	0	1	2	3	4
22.	I feel it is useless to discuss some things with my partner.	0	1	2	3	4
23.	We enjoy the out-of-doors together.	0	1	2	3	4
24.	My partner and I understand each other completely.	0	1	2	3	4
25.	I feel neglected at times by my partner.	0	1	2	3	4
26.	Many of my partner's closest friends are also my closest friends.	0	1	2	3	4
27.	Sexual expression is an essential part of our relationship.	0	1	2	3	4
28.	My partner frequently tries to change my ideas.	0	1	2	3	4
29.	We seldom find time to do fun things together.	0	1	2	3	4
30.	I don't think anyone could possibly be happier than my partner and I when we are with one another.	0	1	2	3	4
31.	I sometimes feel lonely when we're together.	0	1	2	3	4

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
32.	My partner disapproves of some of my friends.	0	1	2	3	4
33.	My partner seems disinterested in sex.	0	1	2	3	4
34.	We have an endless number of things to talk about.	0	1	2	3	4
35.	I feel we share some of the same interests.	0	1	2	3	4
36.	I have some needs that are not being met by my relationship.	0	1	2	3	4

APPENDIX J

Modified Bereavement Experience Questionnaire (MBEQ)

On the left side of the page are thoughts and feelings that people sometimes have. Read the item on the left; then in the right column circle how often you have experienced this thought or feeling in the past month (4 weeks) including today.

Thoughts and feelings I've had in the past month (4weeks)	Never	Sometimes	Often	Almost Always
1. Felt angry at friends.	1	2	3	4
2. Felt that life has no meaning.	1	2	3	4
3. Felt guilty when I enjoyed myself.	1	2	3	4
4. Felt fearful that something bad might happen.	1	2	3	4
5. Lost interest in people that I formerly cared about.	1	2	3	4
6. Lost my religious faith.	1	2	3	4
7. Felt fearful that I might die.	1	2	3	4
8. Lost interest in my work.	1	2	3	4
9. Thought I was losing my mind.	1	2	3	4
10. Felt a need for physical intimacy.	1	2	3	4
11. Lost interest in activities that I formerly cared about.	1	2	3	4
12. Felt like a part of me was/is dead.	1	2	3	4
13. Felt like I was watching myself go through the motions of living.	1	2	3	4
14. Felt a need to be emotionally close to someone.	1	2	3	4
15. Felt angry at strangers.	1	2	3	4
16. Felt guilty about my sexual needs.	1	2	3	4
17. Was preoccupied with thoughts of death.	1	2	3	4
18. Felt angry over local, national, or world events.	1	2	3	4
19. Felt angry at relatives.	1	2	3	4
20. Felt I have nothing to live for.	1	2	3	4
21. Felt emotionally distant from people.	1	2	3	4
22. Thought that there are some very real reasons why I have felt guilty.	1	2	3	4

	Thoughts and feelings I've had in the past month (4 weeks)	Never	Sometimes	Often	Almost Always
23.	Felt angry at God.	1	2	3	4
24.	Felt angry at myself.	1	2	3	4
25.	Thought that there isn't any real reason for me to feel guilty, yet I do.	1	2	3	4
26.	Felt guilty about little unimportant things.	1	2	3	4
27.	Felt guilty about my sexual behavior.	1	2	3	4
28.	Felt afraid to be alone.	1	2	3	4
29.	Felt empty.	1	2	3	4
30.	Felt my life has no purpose.	1	2	3	4
31.	Felt a need to be touched or held.	1	2	3	4
32.	Felt that my presence makes people feel uncomfortable.	1	2	3	4
33.	Was unable to reach out to others for help.	1	2	3	4
34.	Felt unable to reach out to others for help.	1	2	3	4
35.	Felt I would welcome death.	1	2	3	4
36.	Felt afraid of losing control of my emotions.	1	2	3	4

APPENDIX K

Background Information for Bereaved Group

1. Mother's Birthdate _____
   D M Y

   Father's Birthdate _____
   D M Y

2. Marital Status
   1 Married
   2 Single, living with baby's father/mother

3. Years married or living together? _____

4. Mother working outside the home? Yes No
   Father working outside the home? Yes No

5. Mother's occupation? _____
   Father's occupation? _____

6. Mother's actual years of scholarity? _____
   Father's actual years of scholarity? _____

7. Mother's highest diploma or degree received?
   1 Grade school
   2 High school
   3 Technical training
   4 Cegep
   5 University
   6 Post graduate
   7 Professional education, explain _____

   Father's highest diploma or degree received?
   1 Grade school
   2 High school
   3 Technical training
   4 Cegep
   5 University
   6 Post graduate
   7 Professional education, explain _____

8. What is your family's gross income per year?

1 Under $6,000
2 6,000 - 19,999
3 20,000 - 39,999
4 40,000 - 69,999
5 70,000 - or more

9. What is mother's religious preference?

1 Protestant 2 Catholic 3 Jewish
4 None 5 Other, explain_____

What is father's religious preference?

1 Protestant 2 Catholic 3 Jewish
4 None 5 Other, explain _____

10. Wife's place of birth? _____
Number of years in Canada?_____
Husband's place of birth? _____
Number of years in Canada?_____

11. Language spoken at home? _____

12. Do you have any other children? Yes No

If yes, how many?

Birthdate	Sex
_____	_____
_____	_____
_____	_____
D M Y	

13. Are any of your children adopted? Yes No

14. Are you presently or have you ever been on a waiting list to adopt or foster a child?

Yes No

15. Are you presently expecting another child? Yes No

16. Have you in the past or are you presently experiencing difficulties conceiving?

Yes No

17. When was your baby born? (Neonatal & S.I.D.S.) _____
D M Y

18. What type of delivery did you have?

Vaginal Cesarean

19. Was the pregnancy: Single Multiple

20. When did your baby die? _____ _____
D M Y Hours

21. Was the baby born at term (40 weeks) or earlier?
Please specify _____

22. The baby's birthweight was: _____

23. What was the sex of your baby? Male Female

24. Have you had any miscarriages or stillbirths <u>since</u> the death of your baby?

Yes No

If yes, _____
D M Y

25. Did you have any miscarriages or stillbirths <u>before</u> the death of your baby?

Yes No

If yes, _____
D M Y

26. Since the death of your baby, have you experienced any other stresses in your life in addition to your painful loss?

Yes No

If yes, _____

27. Are you or any of your family members presently experiencing some form of illness?

Yes No

If yes, _____

28. Has there been anyone who has helped you since the loss?

Mother Yes No

Father Yes No

If yes, please specify _____

_____

29. Have you received any help from professionals (i.e., doctors, nurses, social workers, etc.)?

Mother Yes No

If yes, please specify _____

When did you receive this help? _____

30. Were you satisfied with the help that you received?

Yes No

Please explain _____

31. Have you ever been separated from each other?

Yes No

If yes, please specify _____

32. Have you ever considered separating from each other?

Yes No

If yes, please specify _____

APPENDIX L

Background Information for Nonbereaved Group

1. Mother's Birthdate _____ (D M Y)
   Father's Birthdate _____ (D M Y)

2. Marital Status
   1 Married
   2 Single, living with baby's father/mother

3. Years married or living together? _____

4. Mother working outside the home? Yes No
   Father working outside the home? Yes No

5. Mother's occupation? _____
   Father's occupation? _____

6. Mother's actual years of scholarity? _____
   Father's actual years of scholarity? _____

7. Mother's highest diploma or degree received?
   1 Grade school
   2 High school
   3 Technical training
   4 Cegep
   5 University
   6 Post graduate
   7 Professional education, explain _____

   Father's highest diploma or degree received?
   1 Grade school
   2 High school
   3 Technical training
   4 Cegep
   5 University
   6 Post graduate
   7 Professional education, explain _____

8. What is your family's gross income per year?

1 Under $ 6,000
2 6,000 - 19,999
3 20,000 - 39,999
4 40,000 - 69,999
5 70,000 - or more

9. What is wife's religious preference?

1 Protestant 2 Catholic 3 Jewish
4 None 5 Other, explain _____

What is husband's religious preference?

1 Protestant 2 Catholic 3 Jewish
4 None 5 Other, explain _____

10. Wife's place of birth? _____
Number of years in Canada? _____
Husband's place of birth? _____
Number of years in Canada? _____

11. Language spoken at home? _____

12. Do you have any children? Yes No
If yes, how many?

Birthdate	Sex
_____	_____
_____	_____
_____	_____
D M Y	

13. Are any of your children adopted? Yes No

14. Are you presently or have you ever been on a waiting list to adopt or foster a child? Yes No

15. Are you presently expecting a child? Yes No

16. Have you in the past or are you presently experiencing difficulties conceiving?

Yes No

17. Have you ever had a miscarriage or stillbirth?

Yes No

18. Have you experienced the loss of a family member or close friend in the past 24 months?

Yes No

19. Within the last month (4 weeks) have you experienced any important stresses?

Yes No

If yes, please specify _____

20. Are you or any of your family members presently experiencing some form of illness?

Yes No

If yes, please specify _____

21. Have you ever been separated from each other?

Yes No

If Yes, please specify _____

22. Have you ever considered separating from each other?

Yes No

If yes, please specify _____