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PARENTAL REACTIONS TO THE DEATH OF AN INFANT CHILD

BY

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PREFACE

The empirical research and the clinical experience reported here are based on work completed during a Post-graduate Clinical Research Fellowship awarded to the author by the Norwegian Research Council for Science and the Humanities (NAVF).

The work was done at the Department of Pediatrics, University Hospital of Bergen. I am deeply indebted to professor dr. med. Dagfinn Aarskog and professor dr. med. Per H. Finne for pointing out the need for research-based knowledge of the impact on the family of an infant's death and for their continuing support and help during the study. This gratitude also extends to the personnel at the Neonatal Intensive Care Unit, and other personnel at the hospital who have supported my work during these years. Terje G. Alsaker M.D. not only stimulated and supported my work, but also an example of the dedication and care that is needed from health personnel towards bereaved families.

Cand. psychol. Magne Raundalen aroused my interest in the field of death and dying. His creativity, devotion, and most of all his friendship and support during happy and sad days have helped me carry through with this work. Professor Claus Bahne Bahnson encouraged and stimulated me in understanding both clinical and research aspects of the work. The daily support of cand. psychol. Elin Hordvik and Bente Rambolt R.N. also contributed to maintaining the author's emotional balance needed for this work. By his encouragement and support, Odd H. Hellesøy M.D. helped me pull this through.

Associate professor Håkan Sundberg (Fil. Dr.) of the Department of Physiological Psychology at the University of Bergen has provided excellent supervision and assistance throughout the research process. His comments on method and

I & V were still in manuscript. Some minor changes has been made in publication nr. I, while publication nr. V has undergone more revision. Publication nr. VI has been added to provide some guidelines on clinical intervention following the loss of an infant child.

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reactions. These questions are addressed in the third paper included. From the clinical work with families, and from the literature, it was apparent that anxiety constituted a special problem among bereaved parents. Because of this clinical significance, anxiety reactions in parents were given special attention, and this forms the basis of the forth paper. The second through the fourth papers were based on a retrospective study. To validate some of the findings presented in these papers, to explore some new lines of research, and most of all to assess grief reactions prospectively over the first year of bereavement a prospective study was undertaken. This forms the basis of the fifth paper. The sixth paper describes how grief crisis intervention can be provided to families following the loss of an infant child. Both immediate, intermediate and long-term follow-up is outlined.

COMMENTS ON METHODOLOGY

Several groups of parents were either retrospectively asked to fill out questionnaires 1 to 4 years after the death of their baby, or prospectively answered questionnaires 1, 6 and 13 months following an infant loss. This approach formed the basis of four empirical articles yielding information regarding the frequency and magnitude of certain emotions and behavior, and allowing comparison between different groups.

Bereaved persons generally are in a vulnerable psychological state, making traditional scientific research difficult (Parkes, 1972). The death of a child is such an extreme stress event that it will leave few people untouched. When approaching families following the death of their baby, one must accept the possibility of a low response rate. The type of event studied sets limits on how demanding researchers can be in their efforts to secure a high response rate. The author chose to respect to failure to return the questionnaire after a second mailing, and no telephone contact was made to try to improve the response rate. When sending questionnaires to

these families the phrasing was carefully selected, and the parents were told that they in no way were obliged to fill in the questionnaire if they felt this to be an arduous task.

In certain research areas one must expect a higher attrition rate than in others. Research on bereavement is an area where strong feelings are involved. Although the attrition rate in both the retrospective and the prospective study is high, it is similar to other studies conducted 1 to 4 years following the death of a loved one (Shanfield, Benjamin & Swain, 1984), or in comparable prospective studies (Cooper, 1980; Videka-Sherman, 1982). Research on bereavement indicates that the non-responders are more emotionally affected than the responders (Clarke & Williams, 1979; Cooper, 1980).

The implications of these comments are that the results should be treated with care due to the attrition rate, and that it is reasonable to think that families who failed to respond fare worse than those who responded.

In addition to the questionnaire-data that form the main basis of the four empirical papers in this thesis, the author has followed more than 50 families in a clinical intervention program aiming at reducing their level of stress following a child's death. This clinical experience has added valuable understanding of the many cognitions, emotions and behavioral reactions the families experienced, and how they perceived and "gave meaning" to events they lived through. This clinical experience adds to the knowledge base used in this thesis. This clinical research format is believed to have added information which is difficult to obtain through formal interviews or questionnaires.

SYNOPSIS OF THE FIVE PAPERS

Paper I: Dyregrov, A: Family reactions to the loss of an

infant child: a review. Scandinavian Journal of Psychology, 1990, 31, 266-280.

In order to establish a broad overview of the parental reactions to the loss of an infant child, an extensive literature review was conducted. The first paper presents the methodological problems, and describes and evaluates commonly explored variables regarding research on the effect of an infant's death on the family. The components of parents' and siblings' grief reactions, and the similarities and differences in parental grief is reviewed.

Marked differences between mothers' and fathers' reactions with stronger and more prolonged grief reactions in mothers, is commonly reported. Different explanations for this are suggested. The effect of different types of losses, as well as the effect of the age of the child at death, is also reviewed and discussed. It is concluded that the death of an infant makes the parents prone to develop short-term and/or long-term problems in their adaption to the loss. It is also evident from the literature that several areas such as sex difference, type of death, the child's life span, support from others etc. need more formal research to provide answers to questions of clinical importance. Three of these areas were selected for the empirical part of the thesis. The empirical material from 117 parents was analyzed with regards to 1) sex difference, 2) type of death, and 3) anxiety.

Publication II: Dyregrov, A. & Berge Matthiesen, S. Similarities and differences in men's and woman's grief following the death of an infant. Scandinavian Journal of Psychology, 1987, 28, 1-15.

Paper I reveals that men and woman react differently to the loss of an infant. However, most of this research is based on mothers' reports, or on clinical impressions. In this paper

the difference between mens' and womans' grief following the death of an infant child are empirically investigated. A total of 117 parents (55 couples), 53% women and 47% men, participated in a survey of different grief reactions 1 to 4 years following the death of the child. This paper examines the 55 pairs that returned questionnaires. Included in the survey were psychometric measures relating to anxiety, depression, impact of event, bodily discomfort, and general well being.

The results demonstrate clear differences between the parents' reactions, with women typically experiencing more intense and long-lasting reactions than men. Women also perceive their family and friends as less supportive than men, while men are least satisfied with the support received from the hospital. Most parents feel the death has brought them closer together, although a considerable number report feeling more distance to their partner. Mothers score significantly higher than the fathers on experience of recovery, state anxiety (STAI), depression (Beck Depression Inventory), bodily symptoms (Bodily Symptom Scale) and intrusive images and thoughts (Impact of Event Scale, IES Intrusion). There is a positive correlation between the scores of the parents. The cause of the differences in mothers' and fathers' reactions is unclear, and several explanations are put forward; 1) they may be caused by a difference in the amount of attachment or "bonding" to the child, 2) they may reflect different reactivity to stress or different methods of coping in men and women, 3) they may arise because men underrate or fail to acknowledge emotions and reactions, or, 4) they may reflect the different social situation the two sexes experience following the loss. A combination of these causes is possible and plausible. The data did not clearly favor any of the different explanations, although qualitative data points to the third explanation i.e. that the observed sex differences are caused by men's underrating or suppression of emotions. The results could help us tailor psychoeducational and

therapeutical intervention for bereaved families, and make counsellors more aware of the different reactions in the two sexes, and help the parents anticipate the problems they may face in the post-loss period.

Paper III: Dyregrov, A. & Berge Matthiesen, S. Stillbirth, neonatal death and sudden infant death (SIDS). Parental reactions. Scandinavian Journal of Psychology, 1987, 28, 104-114.

This study examines the differences between parental grief reactions following different types of infant loss, stillbirth (N=31), neonatal death (N=57), and SIDS (N=29). The parents retrospectively filled in a questionnaire on various grief reactions following the loss of their child. The procedure and instruments were the same as for the previous study, and included measures on state anxiety (STAI), depression (Beck Depression Inventory), bodily symptoms (Bodily Symptom scale) and intrusive images and thoughts (Impact of Event Scale).

The results demonstrate that the group differ in their experience of various grief reactions. SIDS-parents report significantly stronger reactions than the other two groups in the early post-loss period, as well as on measures relating to how they feel at the time of study, and IES intrusiveness. The suddenness of the death does not show any correlation with the parents' experience of recovery or the psychometric measures. The age of the child shows a strong relationship to these variables, indicating increasing distress with increasing life span.

Paper IV: Dyregrov, A. & Berge Matthiesen, S. Anxiety and vulnerability in parents following the death of an infant. Scandinavian Journal of Psychology, 1987, 28, 16-25.

In the fourth paper empirical data on the subjectively reported anxiety reactions of the same 117 parents who lost an infant at birth or during the first year of life are presented. From a retrospective survey conducted 1 to 4 years after the death it is evident that parents experience a great deal of anxiety following the death of their child. Parents who experience a sudden death in the home report the strongest anxiety compared to stillbirth and neonatal death parents. However, parents who lose their child in hospital at birth or later also experience strong anxiety. The anxiety for surviving children and later-born children is extensive. In all areas mothers experienced more anxiety than fathers. More intense and longer grief in one's partner, the perceived lack of support from others, and being a female were the best predictors of anxiety. The results were interpreted as a confirmation of the fact that parents who lose their children experience a fundamental change in their beliefs about their family's future security.

Paper V: Parental grief following the death of an infant. A follow-up over one year. Scandinavian Journal of Psychology, 1990, 32, 193-207.

The fifth paper examines the course of parental bereavement over the first year following an infant's death. In addition the differences in mothers' and fathers' reactions, differences according to the mothers' occupational role, and the similarities of reactions within a couple, are followed prospectively over the first year of bereavement. From a total sample of 59 families, 13 families answered their questionnaires at all three points (1,6 and 13 months), 22 families responded at two time points, and 37 families responded at some point following the loss. Measures relating to anxiety, depression, bodily discomfort, general well being and impact of event were used at three time points. The results show that grief, as measured by the different

inventories, decreases over time. The decrease is most evident from 6 to 13 months, and most prominent in women. A considerable part of the parents were still actively dealing with their loss all through the first year of bereavement. In most couples the mother reports most distress, but in several of the couples the father experiences more distress than the mother. Mothers are significantly more depressed than fathers at all time points, and mothers also have significantly higher anxiety and general health scores at 1 and 13 months, and intrusive scores at 1 and 6 months. Women who stay at home following the loss evidence more grief at all three points than women employed outside the home (9 out of 18 comparisons reveal significant differences). A high score in one spouse is more strongly correlated with a high score in the other, and vice versa, at 1 and 13 months, than at 6 months. Implications of the finding for bereavement counselling programs are outlined. They have to address both the need for long-term follow-up, as well as the need to provide counselling which is sensitive to the different employment situation of the bereaved.

Paper VI: Crisis intervention following the loss of an infant child. Bereavement Care, 1990, 9, 32-35.

The sixth paper describe grief crisis intervention following the loss of an infant child. The main objectives are: a) to offer human support and comfort b) to promote the mourning process and prevent pathological grief c) to prepare the parents for expected reactions and problems d) to help mobilize social support resources, and e) to stimulate family communication and cohesion. An active outreach approach was used, where great care was taken to create a warm and supportive atmosphere around the parents. Bereaved parents and siblings were encouraged to see their baby following the loss, to go through the rituals, and in other ways confront the loss. Much emphasis was placed on helping the parents to

understand their individual reactions, and to stimulate open and direct communication within the family. Parents were helped on how to prepare for interactions with close friends and relatives. Grief groups for parents were initiated. In the long-term follow-up many parents were supported through a new pregnancy and delivery. The stressors that impinges on the helper when dealing with the death of children is emphasized, and a formal support system for caregivers strongly recommended.

CONCLUSIONS

1. The death of an infant child imposes great strain on the parents and this manifests itself in both psychic and somatic discomfort (all papers).

2. Women report more intense and lasting reactions than men. This is evident with regards to anxiety, depression, impact of event, bodily discomfort, general well being, and the experience of recovery (paper II).

3. Sudden Infant Death syndrome (SIDS) parents reported stronger reactions than both stillbirth and neonatal death parents. The longer a child had lived the more emotional upheaval the parents experienced (paper III).

4. Parents subjectively report strong anxiety following the death of an infant. The anxiety is stronger in SIDS parents, stronger in women than men, and it penetrates many aspects of life (paper IV).

5. Grief show a gradual decline over the first year of bereavement. However, a considerable part of the parents are still actively dealing with their loss after 13 months. Women report more grief than men. Housewives fare much worse than women employed outside the home (paper V).

6. A rapid outreach, flexible grief crisis intervention approach is needed to secure bereaved families a good follow-up in the year following the death. Extensive use of anticipatory guidance and active reassurance and support is recommended (paper VI).

GENERAL CONCLUSION

The results indicate a major impact on parents as a result of infant loss. The studies demonstrate more distress in mothers compared to fathers, and stronger reactions in parents following a SIDS-loss. Adjustment problems in parents are associated with their child's age. The longer a child lived, the more likely that parents indicate reactions of distress. Women employed outside the home following the loss show less distress than mothers who are at home. The loss influences many parts of family life, and although time eases the pain, it is suggested that following-up measures to help and support families in mastering the emotional experience is of utmost importance. This may prevent the development of maladaptive coping measures and posttraumatic stress disorder.

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Scandinavian Journal of Psychology, 1990, 31, 266–280

Parental reactions to the loss of an infant child: A review

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Dyregrov, A. (1990) Parental reactions to the loss of an infant child: a review. *Scandinavian Journal of Psychology*, 31, 266–280

This article examines methodological problems, and describes and evaluates commonly explored variables regarding research on the effect of an infant's death on the family. The components of parents' and siblings' grief reactions, and the similarities and differences in parental grief are reviewed. The research shows marked differences between mothers' and fathers' reactions—the grief reactions in mothers being stronger and more prolonged. Different explanations for this are put forward. The effect of different types of loss as well as the effect of the child's life span before death are also reviewed and discussed. Further knowledge is needed to single out the influence of these factors on the families' reactions. It is concluded that the death of an infant makes the family prone to develop short-term and/or long-term problems in their adaptation to the loss. An integrated effort by health professionals is needed to develop systematic ways of helping families to cope with the death of a child.

Key words: perinatal death, neonatal death, grief responses, parents, siblings

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More than 50% of all deaths occurring before the age of 20 take place during the very first year of life. Studies have shown that in comparison with other types of bereavement the grief of parents is particularly severe (Cfr. Clayton, 1980; Shanfield *et al.*, 1984; Sanders, 1979–80; Sing & Raphael, 1981). The pain and anguish experienced by the parents is reflected both in folklore as well as in fiction (Aries, 1981). When a child dies before the parent, the event seems to undermine the orderliness of the universe (Gorer, 1965).

This review will focus on the death of an infant (perinatal loss, neonatal loss, Sudden Infant Death Syndrome loss). Loss due to spontaneous and induced abortion is excluded, and the loss of children over one year of age is only commented on briefly.

Some aspects of methodology:

The bulk of the research on parental reactions to the death of an infant has been done in the last decade. Most of the studies have utilized interviews. In some studies standardized inventories and psychological tests have been used. From an examination of the studies, it seems that the questions asked in interviews and questionnaires have focused on the same themes.

Many of the assessments have been undertaken months and years after the loss, generally as part of retrospective studies. Some studies (Clarke & Williams, 1979; Dyregrov & Matthiesen, in press; Jensen & Zahourek, 1972) have been prospective, following the family at various stages in time from the loss and through the first year of bereavement. Usually, less confidence can be placed in retrospective data than prospective data. This is due to the fact that data gathered through a retrospective method not only relies on long-term memory but also draws on inference and interpretation by the respondents (cfr. Ericsson & Simon, 1980). Studies have shown that retrospective reports have more serious reliability problems (Klemetti & Saxen, 1967). One would expect this to be a methodological problem with bereaved populations, as memory distortions and attention difficulties is common to this group. One may expect an underrating of painful feelings in retrospective accounts of reactions following the

loss of a child. Unfortunately, the prospective studies in this area also have methodological flaws, i.e., high attrition rates.

Only a few of the infant bereavement studies have utilized a normal control group, and a formal psychometric approach is infrequent. This is not unexpected, as an appropriate control group is difficult to define. However, the use of parents with newly born live children as controls would be of value, as well as comparison with the scores from other populations on the same measures.

Many studies combine the loss due to stillbirth, other perinatal loss, and neonatal loss. This makes it difficult to draw conclusions regarding differential grief reactions to various types of loss.

There are differences between the studies in terms of whose reactions were studied. Most studies focus on the mother's reaction alone. In some of the studies the authors write about both spouses, when in fact most of the information has been gathered from the mothers (DeFrain & Ernst, 1978; Lowman, 1979). The attrition rate in the studies is often not reported (or it is impossible to compute from the figures given). Most studies only include limited information concerning the sampling of the families,—how many who declined to participate, and how many failed to follow up. When reported, the attrition rate varies greatly. When fathers are included, their attrition rate is higher than mothers'. In addition, many studies are based on data from parents who participate in bereavement groups, an already self-selected group of parents.

The problem of "non-responders" seems to be particularly obtrusive in bereavement research, making it difficult to generalize and draw conclusions. The relatively high attrition rate in many studies reflects how sensitive this research area is (Blueglass, 1981; Parkes, 1970). Retrospective studies conducted after the death of a loved one often have higher attrition rates than studies which take place within the context of an ongoing clinical relationship with the bereaved (Cooper, 1980; Shanfield & Swain, 1984). Non-responding parents are believed to be more emotionally affected following the loss than the responders (Clarke & Williams, 1979; Cooper, 1980).

Parental reactions to the loss of an infant

Although the studies referred to below vary in methodological quality, the same basic reactions are described in clinical reports, retrospective studies and more systematic semi-prospective and prospective studies. For this reason, parents' reactions are presented in a descriptive manner.

The first reaction is usually a *shock* state characterized by disbelief, feelings of unreality, numbness, abnormal calmness or apathy. Sometimes a cry of distress may preceed the shock reactions. In this state of shock, usual manifestations of emotion may *not* be apparent, and *denial* is often present. After a loss due to the Sudden Infant Death Syndrome (SIDS), the shock reaction is particularly pronounced (Cornwell *et al.*, 1977). In these events it is usually the parents themselves who discover their dead baby, and the dramatic and unfortunate situation add to the shock.

Parents generally suffer mood disturbances after the death of an infant. Depression and sadness is a very common reaction (Berg *et al.*, 1978; Cullberg, 1966; Giles, 1970; Siegel *et al.*, 1982; Wolff *et al.*, 1970, among others). In studies using formal depression inventories, mothers suffering the loss of an infant have been shown to have higher depression scores than mothers of living children (Clarke & Williams, 1979; Jensen & Zahourek, 1972). Several of the other difficulties reported to be experienced by bereaved parents are indicative of depression, such as; problems in getting up in the morning (DeFrain & Ernst, 1978), lack of energy and appetite, feelings of fatigue (DeFrain & Ernst, 1978; Clyman *et al.*, 1980; Cullberg, 1966;

Giles, 1970; Kennell *et al.*, 1970), and feelings of hopelessness, worthlessness and emptiness (DeFrain & Ernst, 1978).

Anger and irritability are other commonly reported symptoms (DeFrain & Ernst, 1978; Cornwell *et al.*, 1977; Kennell *et al.*, 1970). The anger is directed not only against one's spouse but against one's friends, family, other children and health professionals.

An increased sense of anxiety often prevails among parents after the loss of a child (Clyman *et al.*, 1980; Cornwell *et al.*, 1977; DeFrain & Ernst, 1978; Dyregrov & Matthiesen, 1987*b*; Rubin, 1982). This anxiety may take many forms: anxiety about being alone (DeFrain & Ernst, 1978), anxiety attacks and more free-floating anxiety (Blueglass, 1980; Drotar & Irvine, 1979), anxiety about surviving siblings (DeFrain & Ernst, 1978; Cornwell *et al.*, 1977), and anxiety about a new pregnancy and for later born children (Blueglass, 1981; Clyman *et al.*, 1980). The parents may also experience anxiety about their own reactions, and express fear of going "crazy" (DeFrain & Ernst, 1978; Clyman *et al.*, 1980; Cornwell *et al.*, 1977; Lowman, 1979). Apart from noting this increase in anxiety, few authors have discussed it at any length or depth.

Guilt is another commonly experienced feeling among bereaved parents (Clyman *et al.*, 1980; Benfield *et al.*, 1978; Helmrath & Steinitz, 1978; Wilson *et al.*, 1982). The guilt may focus on what the parents did, or did not do, during the pregnancy or around the time of death. Feelings of guilt seem particularly apparent when the pregnancy is unplanned, or when abortion has been considered (Watson, 1978). After a SIDS death, guilt is a dominating emotion which complicates the parents' work through of grief (DeFrain & Ernst, 1978; Mandell *et al.*, 1980). Network and family reactions may further add to these guilt feelings, by rumours and accusations (DeFrain & Ernst, 1978; Lowman, 1979; Watson, 1981).

Physical symptoms such as dizziness, insomnia, lack of appetite, fatigue, chest pain and "lump in the throat" are also commonly reported by parents after the loss of an infant (Cullberg, 1966; Giles, 1970). Other commonly reported problems are difficulties in concentrating (DeFrain & Ernst, 1978) and sleep disturbances (Cornwell *et al.*, 1977; Lowman 1979; Tudehope *et al.*, 1986). These reactions are indicative of heightened activity in the sympathetic nervous system, sometimes followed by a more chronically aroused state in the parents.

Traumatic dreams and intrusive recollections related to the loss are common, particularly in families experiencing sudden deaths (Cornwell *et al.*, 1977; Kennell *et al.*, 1970). Parents may also experience illusions and hallucinations of their child being alive (Cornwell *et al.*, 1977).

Among the common mechanisms used by parents for relieving pain are avoidance of stimuli reminding them of the loss (Benfield *et al.*, 1978; Cornwell *et al.*, 1977) and deliberate blocking of thoughts about the dead baby (Cornwell *et al.*, 1977).

The search for a deeper meaning and a fuller understanding of the event seems to occupy the parents in the post-loss period (Miles & Crandall, 1983; Videka-Sherman, 1982). They search for information that can bring about logical structure to what has happened. This is difficult when the death is of unknown aetiology, as with SIDS-deaths (Rubins, 1982). Many parents experience a permanent change in values. This includes coming to appreciate and love their other children more than previously (Helmrath & Steinitz, 1978), or placing more value on personal than on material values, and becoming more compassionate and caring towards others (Miles & Crandall, 1983, children that died were beyond infant age).

The degree to which parents are supported by health professionals varies. Inadequate support is reflected in lack of physical and "psychological space" for the bereaved mother at the hospital (Lovell, 1983), in informal instead of formal rituals (Lovell, 1983), and in neglect of parental aftercare (Bourne, 1968; Lovell, 1983; Laurell-Borulf, 1982; Rowe *et al.*, 1978). Physicians are perceived as insensitive, aloof, and unconcerned (Knapp & Peppers, 1979).

Other studies, however, report that parents perceive health professionals as warm and supportive (Berg *et al.*, 1978; Wolff *et al.*, 1970). Most likely the conflicting reports reflect the different amount of care and support parents receive around and after their child's death, different care levels in different countries, and the different methodologies used in evaluating support and care. None of the studies, except Knapp & Peppers (1979), had evaluation of care as a major focus.

The frame of time within which grief is resolved has been, and probably still is, underestimated. Several studies have shown that parental grief continues for as long as four years after the loss of older children, who mostly have passed the infant age (Fish, 1986; Lehman *et al.*, 1987; Rando, 1983; Rubin, 1982). Parents who lose a child are a highly distressed group, often showing few signs of recovery (Videka-Sherman & Lieberman, 1985), and from 20 to 30% of the parents have been found to exhibit pathological grief reactions (i.e., Cullberg, 1966; Nicol *et al.*, 1986; Tudehope *et al.*, 1986). In several retrospective studies, the parents' emotional symptomatology or physical health have been found to be unrelated to the time elapsed since an infant death (Dyregrov & Matthiesen, 1987*c*) or the death of an older child (Lehman *et al.*, 1987; Miles, 1985). When parents are followed prospectively during the first year of grief, some decline in grief reactions has been found (Clarke & Williams, 1979; Dyregrov & Matthiesen, in press; Lowman, 1979), but even these studies have serious methodological flaws, i.e., high drop-out rates (Dyregrov & Matthiesen, in press), mothers only (Clarke & Williams, 1979), lack of control groups (Clarke & Williams, 1979; Dyregrov & Matthiesen, in press), and lack of standardized measures (Lowman, 1979).

Lack of rigorous methodology in these studies makes it hard to evaluate how many parents who would clinically qualify for a psychiatric diagnosis, and to give a clear picture of how grief changes or remains unchanged over time. It is possible to state, however, based on the cumulative findings from multiple research reports, that parents who lose an infant child suffer a prolonged reduced quality of life, and many remain deeply impacted for years afterwards.

Similarities and differences in parental grief

Mothers are more likely to experience higher distress as well as more health complaints than fathers (Clyman *et al.*, 1980; Helmrath & Steinitz, 1978; Littlefield & Rushton, 1986; Nicholas & Lewin, 1986; Theut *et al.*, 1989; Walwork & Ellison, 1985; Wilson *et al.*, 1982). It is reported that fathers experience the situation less deeply than mothers (Cornwell *et al.*, 1977; Dyregrov & Matthiesen, 1987*a*; Smith & Borgers, 1988–89). When such reactions are psychometrically measured, fathers show significantly lower grief scores (Benfield *et al.*, 1978; Dyregrov & Matthiesen, 1987*a*; Dyregrov & Matthiesen, in press), and feel that they are "getting on with life", compared to mothers (Clyman *et al.*, 1980). Several studies have shown guilt to be especially more frequent among mothers than fathers (Benfield *et al.*, 1978; Clyman *et al.*, 1980; Wilson *et al.*, 1982). Another commonly noted phenomenon is the father's unwillingness to talk about the dead child (Tudehope *et al.*, 1986; Wilson *et al.*, 1982), and to avoid professional support (Mandell *et al.*, 1980). Fathers are reported to feel an obligation to remain "strong" at the actual time of the loss, in order to care for and support their wives (Berg *et al.*, 1978; Helmrath & Steinitz, 1978; Standish, 1982). The predominant coping mechanism seen in fathers seems to be "to keep busy", take on additional jobs or an expanded workload, and to direct their energy outwards (Mandell *et al.*, 1980). As generalizations concerning fathers' ways of coping mostly are based on clinical observations more than systematically collected data (they come from studies whose primary focus most often has been the mother) and the number of participants has been low, they should be viewed with caution.

In one study the authors note that although two fathers denied grieving, several fathers appeared to have grieved for as long as or longer than their wives (Kennell *et al.*, 1970). This

particularly happened to men involved in the transportation and care of their baby to the hospital neonatal intensive care centre. However, the study focused on mother's reactions, and the observation on father's reactions were based on eight fathers who accompanied their partners to the interview. In this author's retrospective and prospective studies (Dyregrov & Matthiesen, 1987*a*, Dyregrov & Matthiesen, in press), where both partner's reactions were investigated through the use of different psychometric measures, there were several couples where the fathers reported stronger grief reactions than their partners. However, mothers were generally more affected by the loss than fathers.

Differences in reactions are not only noted in intensity and duration, but also in the form of reactions. Berg *et al.* (1978) interviewed 34 couples 1–3 years following a perinatal death, and found mothers to be depressed and irritable after returning from the hospital following the loss of an infant, while fathers experienced emptiness and a sense of failure after their child's death. This author found that mothers reported more anxiety, self-reproach, sadness, intrusive thoughts and sleep disturbances than fathers following the death of their child (Dyregrov & Matthiesen, 1987*a*). However, no significant differences were evident in reactions such as restlessness, anger, and degree of work. The differences between mothers' and fathers' grief reactions are also present after the loss of older children (Jurk *et al.*, 1981; Nixon & Pearn, 1977; Rando, 1983).

Separation and divorce

Separation and divorce following the loss of an infant child have been noted in many studies (Berg *et al.*, 1978; Cornwell *et al.*, 1977; Forrest, 1983; Lowman, 1979; Mandell *et al.*, 1980), but few of these studies have utilized control groups (or reported the actual percentage of broken marriages), and the number of participants has generally been low. In some cases the death of an infant triggered the final breakdown of an already stressed relationship (Forrest, 1983). However, in a study that included a matched control group, no significant differences were found between a perinatal loss group and the control group (Laurell-Borulf, 1982).

Few marital relationships, however, seem unaffected by the loss. A common finding in the literature is increased marital closeness for some parents, and increased distance for others (Berg *et al.*, 1982; Dyregrov & Matthiesen, 1987*a*; Forrest, 1983; Helmrath & Steinitz, 1978; Price *et al.*, 1985). In several studies from 1/4 to 1/3 of the couples reported to experience severe marital distress after the loss of an infant (Clyman *et al.*, 1980; Cornwell *et al.*, 1977; Forrest, 1983). Difficulties in the synchrony of the spouses' grief reactions, and a lack of communication within the family are believed to play a major role in creating these marital problems (Clyman *et al.*, 1980; Cornwell *et al.*, 1977). In this author's prospective study (Dyregrov & Matthiesen, in press), a lack of synchrony between the spouses' reactions were found to be greatest at six months after the death, and less at one and 13 months. However, these results are based on a small number of parents ($N=13$), and the attrition rate was high. In all the studies cited, parents have been asked to rate their marital relationships in a broad subjective way, without the use of more formal measures of marital interaction. Further studies into the effect of a child's death on the partnership should use more advanced methodology.

Length of life. Type of death

The type of death (stillbirth, neonatal death or SIDS), and the baby's life span, are two intertwined factors in relation to the parental grief response. Consequently, it is difficult to separate their unique roles. Peppers & Knapp (1980) did not find the mean grief score of women who had experienced miscarriage to be significantly different from women who experienced stillbirth or neonatal loss. Laurell-Borulf (1982) found no differences between

mothers who had lost their child prior to, during, or after birth in terms of working through grief reactions. The results of both studies, however, must be viewed cautiously, as the period between loss and data collection was between six months and 36 years in one study (Peppers & Knapp, 1980), and between 12 and 14 years in the other (Laurell-Borulf, 1982). Other studies have also supported the view that parental grieving is not related to the duration of life (Benfield *et al.*, 1978; Kennell *et al.*, 1970; Smith & Borgers, 1988–89). However, the results of one study (reported in Kirkley-Best & Kellner, 1982) suggest that more intense grieving responses are associated with stillbirth than with a loss late in the pregnancy. The findings of Kennell *et al.* (1970) that high mouring is associated with the amount of contact one has had with the child is more in line with common sense, although they found no relation between the length of the baby's life and the mourning score. Price *et al.* (1985) found that the younger the infant was at the time of death (SIDS), the more likely the mother was to report delayed and more difficult adjustment, while other authors (Dyregrov & Matthiesen, 1987*c*; Theut *et al.*, 1989; Toedter *et al.*, 1988) have found the exact opposite, namely that parents reported more symptoms and felt less recovered if the child had lived for a longer period of time. It must be concluded that the present knowledge of the intensity and duration of grief depending on the baby's lifelength is sparse and conflicting. All studies that address the issue have methodological flaws (i.e., retrospective method, limited sample size, lack of standardized measures), and further research is needed before a more thorough understanding of the effect of lifelength on grief will be available.

For widows and widowers sudden death imposes greater health risks and adaptation problems than anticipated death (Carey, 1979–80; Lundin, 1982, 1984; Parkes, 1970, 1972; Parkes & Weiss, 1983). The unanticipated loss of a child is also believed to result in more intense, disruptive, and intolerable feelings than an anticipated loss (Woolsey *et al.*, 1978), as well as more pathological grief (Raphael, 1975). In the few studies that have addressed this aspect empirically, however, suddenness has not been found to influence parental grief reactions (Dyregrov & Matthiesen, 1987*c*; Miles, 1985). This author did find that the death of a child due to SIDS resulted in stronger grief reactions (particularly more anxiety, sleep disturbances and self-reproach) than other early infant deaths (Dyregrov & Matthiesen, 1987*b*, *c*). SIDS parents also felt less recovered and experienced more intrusive thoughts than parents who had experienced a stillbirth (Dyregrov & Matthiesen, 1987*c*). The highly traumatic circumstances surrounding the SIDS deaths may explain these differences, as the event usually takes place at home, and the parents themselves discover the dead baby.

Other factors predictive of parental grief reactions

Social support through the grief process is generally found to diminish adaptation problems after the loss of a child (Helmrath & Steinitz, 1978; Jurk *et al.*, 1981; Laurell-Borulf, 1982; Nicol *et al.*, 1986; Price *et al.*, 1985; Rowe *et al.*, 1978; Spinetta *et al.*, 1981; Tudehope *et al.*, 1986). One study however, did not find any relationship between time of recovery after a SIDS-loss, and the number of personal friendships or memberships in social organizations (DeFrain & Ernst, 1978).

It appears that social support is of great help to most bereaved parents, but the social network may also create problems for parents. Not seldomly parents complain about a sense of extreme isolation and loneliness, and they experience comments from those in their social network as more upsetting than helpful, and they feel a lack of acknowledgement by others of the infant's existence (Clyman *et al.*, 1980; Helmrath & Steinitz, 1978; Knapp & Peppers, 1979; Lovell, 1983; Mandell *et al.*, 1980). Initially supportive friends often withdraw after a month or two, adding to the parents' sense of loneliness and isolation (Forrest, 1983). Other parents or couples whose children have died are a preferred source of support (Segal *et al.*,

1986; Tudehope *et al.*, 1986). Further research is needed to explore both positive and negative aspects of the families' social surroundings.

There are many reports describing efforts and programmes which aim at helping parents through their bereavement (see Estok & Lehman, 1983; Kellner *et al.*, 1981; Kowalski, 1980; Lake *et al.*, 1983; Rappaport, 1981). More formal reports on the effect of such interventions have been equivocal. Professional grief-intervention has been found to be beneficial (Lowman, 1979; Schreiner *et al.*, 1979), as well as having no beneficial effect (Videka-Sherman & Lieberman, 1985). The kind of professional help being evaluated in the latter study was, however, far from the comprehensive efforts that aim at helping families in many hospital centres. Obviously further research using more refined methods is needed before any definite conclusions can be reached regarding the effects of intervention and support programmes. In light of the different manifestations of grief between men and women, special attention should be given to the development of appropriate intervention efforts for men and women. This author found that men were significantly less satisfied than women with the support they received from the hospital (Dyregrov & Matthiesen, 1987*a*).

Participating in formal and informal rituals are of importance for the grieving process of the parents. Viewing the lost one after death (Kennell *et al.*, 1970; LaRoche *et al.*, 1982, 1984), having opportunities to develop special memories of the child (Murray & Callan, 1988), as well as taking part in the funeral process (Clyman *et al.*, 1980; La Roche *et al.*, 1984) seem to be related to a better post-loss adjustment, a finding supported in the clinical literature (Lewis, 1979). Some studies, however, have found no association between inappropriate grief reactions and viewing the lost one after death (Laurell-Borulf, 1982), or touching or not touching the baby (LaRoche *et al.*, 1982; Tudehope *et al.*, 1986). Differences in dependent measures and differences in methodology may explain these conflicting results. No major study has so far given special attention to the effect of attending rituals on parents' adjustment to loss.

Although based on very few participants (N=20, N=30), two studies have concluded that the existence of a living sibling may lessen parental grief (Kennell *et al.*, 1970; LaRoche *et al.*, 1984), although this has not been found in all studies (Nicol *et-al.*, 1986; Wilson *et al.*, 1982). Previous losses are found to be associated with a less favorable outcome after the death of an older child (Rando, 1983).

Parent's relationship to surviving siblings

Parents experience increased anxiety, especially following a SIDS-death (Dyregrov & Matthiesen, 1987*b*), and they show increased protectiveness of their remaining children (DeFrain & Ernst, 1978; Clyman *et al.*, 1980; Cornwell *et al.*, 1977; Kennell *et al.*, 1970). Parents also feel the need to be physically closer to surviving children, apparently because of the comfort it provides (Mandell *et al.*, 1983). The tragic event may also have positive consequences, as many parents feel that they have improved as parents for their surviving children in the year following the loss of an infant (Cornwell *et al.*, 1977).

Parents struggling with the loss of a child are, at times, found to be less able to show empathy and understanding towards the surviving child or children (Halpern, 1972), and many parents also experience their surviving children as more active and demanding in the months immediately after an infant loss (Drotar & Irvin, 1979). Parents may feel overwhelmed by their children's need for comfort, and this sometimes lead the parents partially to reject the surviving child or children (Drotar & Irvin, 1979; Halpern, 1972). In the clinical literature, children are sometimes reported as experiencing a form of "parental deprivation", because the parents are preoccupied with their own loss (Blueglass, 1980, 1981). But children are also described to be of great support to the parents in their grief (Berg *et al.*, 1978). They even are reported to be actively comforting their parents (Mandell *et al.*, 1983).

Siblings reactions to the death of brother or sister

In anecdotal articles, a possible link between sibling loss in childhood and later psychopathological development is sometimes mentioned (Hilgard, 1969; Pollock, 1962, 1972; Rosenzweig & Bray, 1943). Although there have been few empirical studies undertaken, studies to date indicate that the death of an infant or older siblings has a major impact on children of all ages (Burns *et al.*, 1986; Mandell *et al.*, 1983; Mandell *et al.*, 1980; Williams, 1981). However, data have most often been collected retrospectively, and children have not been assessed directly. Parents have been the sole data source and data should be viewed with caution.

With this in mind, commonly reported sibling reactions can be summarized. Children often exhibit symptoms of anxiety. Among these anxiety reactions are increased separation anxiety, increased clinging behaviour, worries about health/safety of parents (and self), and difficulties in falling asleep. They may also react with anger, guilt, sadness, and changes in social interaction (Mandell *et al.*, 1983; Watson, 1981; Williams, 1981). Psychosomatic illnesses have been reported following the death of a sibling from cancer (Jurk *et al.*, 1981). Rejection of parents, especially mothers, by surviving siblings may also happen (Cornwell *et al.*, 1977).

The way in which the parents handle the event in relation to their surviving children is of great importance for these surviving children. Parents usually feel anxious about what to tell their surviving children and how to answer their questions (Clyman *et al.*, 1980; Forrest, 1983). The surviving children are often given confusing and inadequate explanations which may aggravate their reactions (Williams, 1981). There seems to be consensus that surviving siblings should be told promptly about the death, be given true and factual information about what happened, and be allowed to attend the funeral (Mandell *et al.*, 1983; Moriarty, 1978; Friedman, 1974).

Having a new child

Cain & Cain (1964) wrote an influential article some decades ago on the psychological difficulties of replacing a child. They stressed that "replacement children" tended to be overprotected by fearful parents, and that they were expected to emulate the idealized image of their dead sibling. Presenting case histories, some authors (Lewis, 1979; Poznanski, 1972) have postulated that parents, instead of working through their grief, simply replaced the child they had lost. In one study, early conception of a new child after the loss of an infant was shown to correlate with morbid grief reactions (Rowe *et al.*, 1978). The study was retrospective, included mothers only (N=29), and morbid grief reactions were defined in a highly questionable way. In another report (Forrest, 1983), one mother was reported to have totally rejected a later born baby, and two other mothers experienced some negative feelings toward their later born babies (N=50, no normal control group). Blueglass (1980) reported severe anxiety and over-protection in a mother, and anxiety-neurosis in a father, after having a "replacement child" following a SIDS-loss. However, Blueglass' article is based on only a few clinical cases.

Not everyone agrees that "replacing" a child shortly after a loss leads to poorer adjustment for parents and siblings. Women list the birth of a subsequent child as one of the factors that helped them most in the time following the loss (Stringham *et al.*, 1982). One study noted a less intense grief reaction among women who had given birth to a subsequent child (Peppers & Knapp, 1980), another study found parents with a replacement child less depressed than parents without such a child (Videka-Sherman, 1982). Videka-Shermans' study had a mixed loss group (SIDS, accidents, and illnesses). Two recent studies have found less depression and grief reactions in mothers (Murray & Callan, 1988) and both parents (Theut *et al.*, 1989) following the birth of a new child. Others still, have found no relationship between giving birth to a new child and the mother's grief outcome (Dyregrov & Matthiesen, 1987c, LaRoche *et al.*,

1984; Laurell-Borulf, 1982; Smith & Borgers, 1988–89). In fact, in the study by Laurell-Borulf (1984), the factor most frequently mentioned by the mothers as most beneficial in their grief work was having a new child, even though less than 2/3 experienced the birth of a new child. The studies mentioned above had relatively few mothers who had given birth to a new child (most often the number of new children were not reported), the measurement of grief varied, the number of participants were generally low, and they had mostly overlooked fathers. But with these methodological reservations in mind, it can be stated that the bulk of the evidence does not show more severe problems in those who get a new child early following an infant loss. On the contrary, the evidence tend to support this as helpful for many parents.

Having a new child shortly after losing an infant must be considered the normal response, as many studies note that more than half of the mothers are (or want to be) pregnant again within the first year after the loss (Berg *et al.*, 1978; Dyregrov & Matthiesen, 1987*b*; Forrest, 1983; LaRoche *et al.*, 1984; Stringham *et al.*, 1982).

Although the negative consequence for the parents' grief outcome are not supported by the research, many studies emphasize how a child's death influence their behaviour following the birth of a new infant. Both *during* a new pregnancy and *after the birth* of a new child, parents (especially mothers) experience a great deal of anxiety (Dyregrov & Matthiesen, 1987*b*; Phipps, 1985–86), with overprotective behaviour towards the child and an increased dependency on medical support (Phipps, 1985–86). Fears for the child's health and safety can continue over an extended period of time (Phipps, 1985–86). Generalization from Phipps study should be done with care, as the study included only 15 couples. However, other reports confirm Phipps results as they show that increased parental anxiety leads to a need for frequently checking their child when sleeping, and a constant worrying over their child's health (Cornwell *et al.*, 1977; Mandell *et al.*, 1983). Mothers interviewed 12–14 years following a perinatal loss perceive themselves significantly more over-protective towards their living children than a control group of mothers (Laurell-Borulf, 1982). Apart from this, no study has seriously looked into the consequences of sibling loss on the subsequent development of later born siblings.

Discussion

We have seen that the death of a child may lead to considerable adjustment problems for the surviving family members. The loss of a child is always untimely, and it uproots one of the strongest attachment relationships existing between human beings.

It is not easy to determine to what degree factors such as suddenness and lifespan will determine the intensity and length of the family's grief reactions. In the clinical literature sudden death, as opposed to anticipated death, is believed to have a more detrimental effect on parents' health. Based on common sense one would expect that grief reactions would be stronger when the baby has lived for some time before dying, but this is not unequivocally confirmed in the research literature.

There are apparent differences between mothers and fathers in the intensity and duration of their reactions. Usually mothers experience longer and more intense reactions than the fathers. The cause of these differential reactions remains unclear. From a theoretical point of view these are amongst the most viable explanations: (1) the differences are caused by a difference in amount of attachment or "bonding" to their child, (2) the differences reflect different methods of coping in men and women, (3) the differences are due to men not reporting or acknowledging emotions and reactions and (4) the differences reflect the different social situation the two sexes face following the loss.

If the difference is caused by different levels of bonding, one would expect the difference between men and women to level out as the child's lifespan increases. No available research

study has thoroughly addressed whether there is any difference in mothers' and fathers' reactions in relation to the age of the infant at the time of death, but as mentioned above the difference in grief reactions is present regardless of how long the child has lived. For the mother, attachment is believed to develop through pregnancy as the baby is harboured and nurtured by her body (Raphael, 1983). In this period the father's attachment is less intense, due to the baby being less real for him. One should therefore expect a father to experience lesser grief reactions than a mother after a stillbirth. When fathers have the opportunity of taking part in the care of a child, either in hospital or at home, and attachment is formed, one would expect a more equal bond formation, and thus a more similar grief reaction.

This hypothesis, however, is based on the assumption that it is time spent with the baby that determines the attachment relationship. Observational studies of infant–mother, and infant–father interactions, have demonstrated that infants form attachment to both parents by the middle of their first year, even when fathers spend relatively little time with them (for a review see Lamb, 1982). It appears that this attachment is reciprocal, as evident from increasing knowledge of father–infant attachment (Lamb, 1978; Parke *et al.*, 1979). One may therefore expect both parents who experience the death of an "older" infant to have grief reactions of a similar nature and duration. As we have seen, this is not the usual case, and it may be an indication that a "differential bonding" hypothesis is incorrect.

Another viable explanation for the observed differences in men's and women's reactions is that the difference could stem from differential reactivity to stressful life-events, or different coping methods applied by the two sexes. Such differences may have a biological, social, or cultural basis. Unfortunately, few studies have examined such sex differences. In coping with adverse life events, some studies show women relying more on intimate social relationships (i.e., seeking personal support from a close family member or friend), while men more easily utilized larger social situations involving peer groups and so forth (Funabiki *et al.*, 1980; Westbrook & Viney, 1983). Differential biological suspectibility to stress in the two sexes has not received broad interest in the literature. It is true, however, that women in general complain of more psychological, psychiatric and physical symptoms (Langner & Michael, 1963), and they utilize health services to a greater extent than men (Nathanson, 1977). For depression, several studies have reported female to male ratios in the range of 2 to 1 (Stroebe & Stroebe, 1983). Whether these differences are due to real differences in morbidity, or a difference in illness behaviour is much debated (Weissman & Klerman, 1977; Parker, 1979). The fact that this gender gap has been narrowing over the past 20 years (Kessler & McRae, 1981) may support a social/sex role explanation of the reported differences.

It is a commonly held belief that women are more "emotional" than men. They are believed to be able to express their emotions more easily than men. A plausible explanation of the differences in grief observed between men and women could be that it is due to men's underrating their emotions. Such underrating, again, could be caused by men's "socialized" image of being strong and not showing emotions, a finding supported in the literature concerning the loss of a child. Generally, men express less emotion than women (Allen & Haccoun, 1976; Dosser *et al.*, 1983; Notarius & Johnson, 1982). Through a test of emotional styles, researchers have been able to separate the overt "expressiveness" from the more covert "responsiveness" and shown that men also experience less feelings and bodily reactions than women, in addition to their lack of outward expression (Allen & Haccoun, 1976; Allen & Hamsher, 1974). The differences are greatest regarding overt expression, but are present in covert responsiveness, too. The differences vary across emotions, being greatest for fear and sadness, and least for anger. Females also report a larger proportion of interpersonal situations as stimulating emotions than men, indicating that for females emotion may have a relatively important communicative function.

The last viable explanation is that the two sexes frequently return to different social situations. The father returns to work, his thoughts are occupied, and he has people around him most of the time. The mother is frequently at home, and has more time to think about what has happened, and at the same time she may be socially isolated and overindulged in the experience. Indeed, data from this author's prospective study (Dyregrov & Matthiesen, in press) indicates that when women return to work outside the home following an infant loss, their grief reactions over the first year of bereavement are very similar to mens' reactions. Mothers who remain at home report stronger reactions on several different measures. However, the number of mothers in the two groups were small, and there were no established base levels from before the death took place.

These explanations may separately, or combined, account for the differences observed in mothers' and fathers' grief. Further research is needed to investigate the reasons for the sex differences in this area. From a clinical point of view, the presence of the differences is important in itself, as such knowledge can be utilized in follow-up programmes to help reduce interfamily difficulties, and to tailor intervention efforts to the different needs of subgroups of bereaved parents.

The reactions observed among children following the loss of a sibling are a confirmation that children do grieve. The pioneering work of John Bowlby (Bowlby, 1963, 1980) has shown us that children as young as one to two years old have the capacity for some form of grieving. The siblings' reactions to the loss of a brother or sister probably must be seen as a combination of many factors. Besides experiencing their own grief reaction, they are influenced by their parents' reactions, the information made available to them, the change in "home atmosphere" and so forth. These factors will strongly influence the long term consequence of the loss. Later-born siblings can also be affected by the loss of a child in a family. There is no easy way to reduce this complexity of factors to "rules of thumb" for handling or understanding children's reactions to sibling loss, but further guidelines can be found in Wass & Corr (1984).

A family experiencing the death of a child seems likely to develop short-term and/or long-term problems in their adaption to the loss. The integration of the family system, as well as the health of the individual family members, is threatened. Through an integrated effort by health professionals to develop systematic ways of helping families cope with such crisis events, we may succeed in reducing the high human costs resulting from such losses.

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Similarities and differences in mothers' and fathers' grief following the death of an infant

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The differences between mothers' and fathers' grief following the death of an infant child were investigated. From a total sample of 117 parents, 53% women and 47% men, answering a survey on different grief reactions 1 to 4 years following the death, 55 families where both partners responded, were selected. Measures relating to anxiety, depression, impact of event, bodily discomfort, and general well being were included. The results demonstrated fairly strong differences between the partners' reactions, with mothers typically experiencing more intense and long-lasting reactions than fathers. Mothers also tended to perceive their family and friends as less supportive than fathers, while fathers were least satisfied with the support received from the hospital. Most parents felt the death had brought them closer together, although a considerable number reported feeling more distance to their partner. Mothers scored significantly higher than the fathers on experience of recovery, state anxiety (STAI), depression (Beck Depression Inventory), bodily symptoms (Bodily Symptom Scale) and intrusive images and thoughts (Impact of Event Scale, IES Intrusion). A high score in one spouse was correlated with a high score in the other, and vice versa. It is emphasized that the results showing parental differences in grief should help us tailor psychoeducational and therapeutical intervention for bereaved families.

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The loss of a child is one of the most stressful situations a family may face. The family have to deal with a crisis situation where habitual coping mechanisms most often are inadequate. Literature concerning the impact of an infant's death on the family has to a great extent focused on the mother's reactions. When authors write about both spouses, the information seems mainly gathered from the mother (Nixon & Pearn, 1977; Lowman, 1979; DeFrain & Ernst, 1978).

In studies either specifically adressing both parents reactions, or studies offering general comments on similarities and differences in parental grief, father's are reported to feel an obligation to "stay strong" and support their wife following the loss of an infant (Berg et al., 1978; Standish, 1982; Helmrath & Steinitz, 1978). Fathers show significantly lower grief scores (Benfield et al., 1978) and fewer symptoms of depression (Wilson et al., 1982), than mothers. They are also reported to experience the situation less deeply (Berg et al., 1978; Cornwell et al., 1977), and have a shorter grief-period, than mothers (Helmrath & Steinitz, 1978; Forrest, 1983). Fathers desire to move on with life when mothers still are quite depressed (Clyman et al., 1980), and fathers tend to "keep busy", take on additional jobs and workloads (Mandell et al., 1980).

Most grief symptoms are reported to be experienced with more intensity and have a longer duration in mothers compared to fathers (Cornwell et al., 1977; Helmrath & Steinitz, 1978; Clyman et al., 1980; Wilson et al., 1982). The differences between mothers and fathers, however, have seldom been measured. The experience of guilt feelings seems especially more frequent among mothers than fathers (Clyman et al., 1980; Benfield et al., 1978; Helmrath & Steinitz, 1978; Wilson et al., 1982). The sex differences in parental

reactions are present after the loss of older children (Rando, 1983; Jurk et al., 1981) and adult children (Shanfield et al., 1984), as well as infants.

Fathers are more unwilling to talk about the dead child (Wilson et al., 1982; Nixon & Pearn, 1977), and they avoid professional support more than mothers (Mandell et al., 1980). Some controversy does exist regarding fathers' grief. Kennell et al., (1970) note that although two fathers denied that they had grieved, several husbands appeared to have grieved as long as, or longer than their wives, particularly men involved in the transportation and care of their baby to the hospital center.

Although no thorough research has been conducted, several studies conclude that social support (family & friends) is helpful following the loss of a child (Klaus & Kennell, 1970; Spinetta et al., 1981; Jurk et al., 1981; Laurell-Borulf, 1982). Some authors have commented on how the social network in many cases makes the grief process more problematic (Helmrath & Steinitz, 1978; Watson, 1981). Many feel a lack of acknowledgement of the baby's existence, especially when the loss occurs at, or close to birth (Helmrath & Steinitz, 1978; Lovell, 1983; Stringham et al., 1982). Friends initially supportive often withdraw after a month or two, adding to the parent's sense of loneliness and isolation (Forrest, 1983). Sex differences in how the two parents view their social support has been given limited attention.

Nikolaisen & Williams (1980) however, found that fathers and married parents viewed the support they received after a child's death as more positive than mothers and single parents (Nikolaisen & Williams, 1980).

Parents vary greatly in how they perceive support from health care providers in studies conducted. Inadequate support is reflected in lack of physical and psychological space for the mother in the hospital (Lovell, 1983), and in neglect of parental aftercare (Bourne, 1968; Rowe et al., 1978; Lovell, 1983; Laurell-Borulf, 1982). Health personnel are perceived as both insensitive, aloof, as well as unconcerned (Knapp & Peppers, 1979), and as warm and supportive (Wolff et al., 1970; Berg et al., 1978). The conflicting results probably reflect different amount of care an support received, together with different methodological approaches. Whether mothers and fathers view these matters in a similar or different way is not reported.

We do not have solid empirical knowledge about possible parental differences. From a theoretical perspective we need more knowledge about how the two sexes react to, and cope with unforeseen life events. From a clinical perspective increased knowledge about any differences in grief, can be of help in bereavement counselling following such events. In this study we address the following questions: Will mothers and fathers differ with regard to their emotional reactions (anxiety, anger, self-reproach, sadness, restlessness, work involvement, intrusive thoughts and sleep disturbances) in the period following the loss of an infant child (as they subjectively remembered them 1 to 4 years after the loss)? Will there be differences in how mothers and fathers perceive their partner's reactions, and the reactions and support they receive from family, friends and health care professionals? Finally, will the mother's and father's psychological health status 1–4 years following the loss be different, as measured by inventories on anxiety, depression, bodily symptoms, impact of event and general well-being?

METHODS

Subjects

The study was carried out at The University Hospital of Bergen. This hospital provides services to families living on the western coast of Norway. At the Department of Obstetrics there are around 4 000 deliveries per year, and the Department of Pediatrics treat 3 600 inpatients and 15 000 outpatients annually. All families who had suffered the loss of their child due to stillbirth or neonatal death (a

living child transferred to the Neonatal Intensive Care Unit who later died) at the Department of Obstetrics and the Department of Pediatrics within a 3 year period were included in the study. In addition Sudden Infant Death Syndrome (SIDS) families that came in contact with the Department of Pediatrics in relation to the death were included. This group constituted around 80% of all families that lost a child in SIDS during the time period covered (based on data from the birth register). A total of 28 families were excluded when other types of crises made it ethically and clinically difficult to subject them to the investigation, such as an extremely adverse family situation, or the expectation of a new child in the near future.

A total of 214 parents who had lost a child 12 to 48 months earlier (M=27.02 mnths, SD=9.20), received a questionnaire. Of these, 117 parents returned the questionnaire. Fifty-three percent were women. In 55 pairs both parents responded. The sample analysed here consists of these 55 pairs. Their age ranged from 19 to 49 years (M=29.4, SD=5.77). 62% of the parents were younger than 30 years. 58% lived in urban areas. Regarding education, 23% had primary school as their highest level of education, 56% had high school or the equivalent, and 21% had university background.

The sample consisted of three groups of bereaved parents. These three groups were 1) a stillbirth group (N=15 pairs), 2) a neonatal group (N=26 pairs), and 3) a SIDS group (N=14 pairs).

All parents were offered assistance after the investigation. An intervention program was started at the same time as this investigation, but, except for 6 SIDS families, none had received systematic help before the investigation. Qualitative clinical data from the intervention program have been used to illustrate some of the statistical observations.

Measures

All subjects were asked to complete a written questionnaire. Mother and father in each family filled out separate questionnaires. The questionnaire contained three parts designed to provide 1) sociodemographic information, 2) data related to the loss itself including the family reactions to the loss, and 3) data on psychic and somatic discomfort at the time of study, 1 to 4 years following the loss.

Questions for the instrument were adapted from the literature on family reactions to the death of a child (Kennell et al., 1970; Cullberg, 1966; Rowe et al., 1978; Benfield et al., 1978; Cornwell et al., 1977; Mandell et al., 1980), and from exploratory interviews and meetings with parents who had lost a child.

To obtain information on the parents' reactions in the time period following the loss, the questionnaire presented them with a list of common grief reactions (anxiety, anger, depression, restlessness etc., see Table 1 for format of questions) for which they were asked to indicate the degree they had experienced the reaction in question. The questionnaire also included questions on the parents' perception of partner, family, friends and health care professionals (questionnaire format in Tables 2 and 3). While the data from the questionnaires related to the frequency with which the parents experienced different emotional reactions, qualitative information collected through the intervention program gave additional information on the different types of reactions experienced by the parents.

To investigate long term adaption to the event, as well as eventual differences in long term adaption, the final questionnaire also included the following inventories:

1. The Impact of Event Scale (IES) (Horowitz et al., 1979; Zilberg et al., 1982) which provide a measure of intrusive thinking and periods of avoidance associated with traumatic life events. Cronbach's Alpha IES Intrusion =0.89, IES Avoidance =0.71. All Cronbach's alpha values relate to results from this study.
2. The 20 item version of the Goldberg General Health Questionnaire (GHQ) (Goldberg, 1978) was used to assess psychological impairment of health. Cronbach's Alpha =0.92.
3. The state version of the State-Trait Anxiety Inventory (STAI) (Spielberger et al., 1970) to assess degree of residual anxiety. Cronbach's Alpha =0.94.
4. The Bodily Symptom Scale (BSS) (Persson & Sjøberg, 1981) was employed to provide a measure of bodily discomforts. Cronbach's Alpha =0.93.
5. The short form of the Beck Depression Inventory (BDI) (Beck & Beck, 1972) was employed to provide a measure of depression. Cronbach's Alpha =0.88.

Procedure

One week prior to sending the questionnaire, a letter was sent informing the parents of the study. The goals of the study were explained. The main objectives stated were increasing health personnels' knowledge of family reactions after the loss of a child, as well as to improve support for such families. Three weeks after receiving the original questionnaire, non-responding families were sent a follow-up letter requesting their response. In all communications with the families', parents were offered the

assistance of a pediatrician and a psychologist (the first author), should they feel the need for asking questions, or expressing thoughts or feelings concerning the loss.

Mothers and fathers received almost identical questionnaires, and they were requested to fill them out separately. The mother's questionnaire contained questions about sibling reactions, and factual questions requiring only one of the parents to answer. The length of the questionnaire was thus 18 pages for mothers, and 15 pages for fathers.

Statistics

The data from the questionaires were coded and entered on a permanent data file. SPSS (Nie et al., 1975) was used for the statistical computations.

RESULTS

About half (54.7%) of the parents returned the questionnaire. Based on hospital records, responding and non-responding mothers were compared on some selected variables. There were no significant differences between the groups (t>0.05, two-tailed test), on variables such as; the child's weight at birth, the life-span of the child, the mother's age, and whether the family lived in rural or urban areas (the analysis included both mothers from the 55 couples and the additional 7 "single" mothers).

Early grief reactions

To assess the parental grief reactions in the period following the bereavement, parents were presented with a list of common grief reactions and asked to what degree they had experienced these reactions. Table 1 gives an overview of the extent to which the parents experienced these emotions.

On all questions there were more instances where the mother, within each pair of parents, reported more of the specific reaction than the father (this is indicated by a larger number of minus differences than plus differences). The differences between the parents were significant on 5 out of 8 emotional reactions.

Within the parental pairs there were significantly more mothers indicating *anxiety* as an emotional reaction in the time following the loss, than fathers (Table 1 A, in this and the following tables a higher score indicates more of the specific reactions or problem). In 26 pairs mothers reported most anxiety, in 7 pairs the father had a higher score, and in 15 pairs both partners indicated the same amount of anxiety. When looking at the percentage score, 50% of the women compared to 21% of the men had experienced strong or very strong anxiety. The anxiety for surviving children seemed especially strong: "I need to know where he is at all times, and even when he is out with his father and they are not at home at the appointed time, I get almost hysterical. He (her husband, author's comment) does not at all feel the same anxiety that I do".

Concerning *anger*, only a small percentage of the sample reported having experienced this emotion in the early loss period, while many felt no anger at all (Table 1 B). No apparent differences existed between mothers and fathers in this regard (31 pairs indicated similar reactions, and the rest of the pairs were evenly distributed between the mothers and fathers having the highest score).

"*Self-reproach*" differentiated clearly between the two sexes. The fathers blamed themselves significantly less than the mothers (Table 1 C). In 25 pairs the mother indicated more self-reproach that the father, and in only 6 pairs, the father reported more self-reproach than the mother. A mother commented after a SIDS death: "I have heard that if you can pick up the child exactly when it happens, he will not die. I think that if I had picked him up, he would still have been mine today".

The partners also differed significantly in the degree of reacting with *sadness* after the

Table 1. *Early grief reactions in parents after their child's death*

Differences between mother and father tested for significance with the use of Wilcoxon matched-pairs signed ranks test (for related samples)

Question	Father		Mother		Direction of differences within pairs[b]	Wilcoxon[c] Z
	N[a]	%	N	%		
To *what degree did you react with*						
A. Anxiety						
1. Not at all	19	35.8	8	16.0		
2. Some	23	43.4	17	34.0		
3. Much	8	15.1	14	28.0		
4. Very much	3	5.7	11	22.0	26−7+/15=	−3.37***
B. Anger						
1. Not at all	26	51.0	19	37.3		
2. Some	17	33.3	26	51.0		
3. Much	6	11.8	3	5.9		
4. Very much	2	3.9	3	5.9	9−/8+/31=	−0.40
C. Self-reproach						
1. Not at all	22	44.9	9	16.7		
2. Some	19	38.8	22	40.7		
3. Much	6	12.2	8	14.8		
4. Very much	2	4.1	15	27.8	25−/6+/17=	−3.63***
D. Sadness						
1. Not at all	0	0	0	0		
2. Some	7	12.7	4	7.3		
3. Much	32	58.2	13	23.6		
4. Very much	16	29.1	38	69.1	26−/5+/24=	−3.28***
E. Restlessness						
1. Not at all	9	17.0	7	12.7		
2. Some	31	58.5	25	45.5		
3. Much	9	17.0	14	25.5		
4. Very much	4	7.5	9	16.4	17−/10+/26=	−1.85
F. Worked more						
1. Not at all	35	68.6	27	50.0		
2. Some	11	21.6	20	37.0		
3. Much	3	5.9	5	9.3		
4. Very much	2	3.9	2	3.7	17−/9+/24=	−1.47
G. Intrusive thoughts about the child						
1. Not at all	2	3.8	3	5.7		
2. Some	19	36.5	3	5.7		
3. Much	16	30.8	14	26.4		
4. Very much	15	28.8	33	62.3		
Mean	2.85		3.45		25−/6+/19=	−3.23***
H. Sleep disturbances						
1. Not at all	23	43.4	11	20.4		
2. Some	25	47.2	20	37.0		
3. Much	0	0	10	18.5		
4. Very much	5	9.4	13	24.1		
Mean	1.76		2.46		28−/8+/16=	−3.12**

[a] Total *N* are 55 for both mothers, fathers and pairs. However, when one or both of the partners have failed to answer a question, the number of responders (pairs) are less than 55.

[b] Minus differences (−) indicates number of pairs where the mother had a higher score than the father. Plus differences (+) indicate the number of pairs where the father had a higher score than the mother, and the number of pairs where both partners had the same scores is indicated by a tie score: (=).

[c] The Wilcoxon matched-pairs signed-ranks test. *$p<0.05$, **$p<0.01$, ***$p<0.001$.

death (Table 1 D). Although mothers in most cases (26) reported more sadness than the fathers, many couples reported the same amount of sadness (24). From the percentages we see that almost all mothers reported much or very much of this reaction. It was usual to hear mothers say; "I feel like an open wound. I cry so much, it is even frightening to myself".

Many of the parents experienced *restlessness* and some reported that they *worked more* (Table 1 E, F). Although there were more mothers scoring higher than the fathers on these two questions than the other way around, the majority of the couples indicated the same amount of these reactions, and the within pair analysis of difference showed no significant differences.

Mothers had experienced more "*intrusive thoughts*" about the deceased child, than fathers in 25 pairs, in 6 instances it was the other way around, and in 19 pairs both partners indicated the same score (Table 1 G). A mother of a SIDS child reported: "I saw her blue face nearly all the time. It was imprinted inside of my head". Her husband reported: "I saw, and can still see, her red socks sticking out of the blanket when the ambulance personnel carried her out of our house."

The loss also affected the partners' sleep differently (Table 1 H). Mothers experienced more sleep disturbances than fathers in 28 pairs, in 8 pairs fathers experienced more problems than the mother, and in 16 pairs both partners indicated the same frequency of problems. The percentages in the table (question H) demonstrate that as many as 35% of the mothers had experienced much or very much of these disturbances, compared to close to 10% of the fathers.

Perception of other's reactions

Table 2 gives an indication of how the parents perceived their social surroundings in this situation. There were small differences between the mothers and the fathers in how they perceived their family and friends. For question A, B, and C, most pairs checked the same category of answer. For all three questions there was a trend towards more pairs where the mothers scored higher than the fathers (especially on question C). This trend, however, did not reach statistical difference. From the percentages we see that a majority of both fathers and mothers felt that their family and friends in some way avoided talking about the death (Table 2, questions A and B). A father (SIDS) said: "They did not know what to say, they were afraid to contact us, and we had to contact them. When we were together we felt they had difficulties talking to us about what had happened".

Most parents, both mothers and fathers, did not to any strong degree lack support and help from others after the bereavement (se Table 2, question C). A considerable part of the parents (more than half the mothers, and one third of the fathers) had sometimes lacked help and support from others following the loss.

The partners had divided perceptions of the support they received from the hospital. In 21 pairs the fathers were least satisfied with the support from the hospital, compared to 6 pairs where the mother had a higher score. In 18 pairs both partners checked the same category. The differences were statistically significant (see Table 2, question D). More than half of both mothers and fathers reported that they felt they had received little or very little support from the hospital (Table 2, question E). Many parents, however, had a positive perception of the support they received from the hospital.

The parent's relationship

Most parents felt they had grown closer together after the death (Table 3, question A). More than twice as many fathers as mothers felt they had grown further apart. Within 15

pairs fathers indicated a more negative score than the mothers, in 7 pairs this was the other way around, and in 33 pairs the parents scored the same. The difference between the partners was statistically significant. Those who felt that they had coped well together, often related this to their ability to talk about what happened: "We managed because we talked about it from the start. It would have been so much worse to bottle it up inside and live with it alone" (mother, SIDS). We analysed whether there were any relationship between the parents' experience of difficulties talking about the death, and their experience of distance in the marital relationship. We found a positive relationship between these two variables ($r=0.26$, $p<0.01$, Pearson product moment correlation). Parents who

Table 2. *Parents' perception of support from family and others*

Differences between mothers and fathers tested for significance with the use of Wilcoxon matched-pairs signed ranks test (for related samples)

Question	Father		Mother		Direction of differences within pairs[b]	Wilcoxon[c] Z
	N[a]	%	N	%		
A. Did your family often avoid talking about the death?						
1. No	21	38.2	21	38.2		
2. In part	22	40.0	19	34.5		
3. Yes	12	21.8	15	27.3		
					14−/10+/31=	−0.51
B. Did your friends often avoid talking about the death?						
1. No	15	28.3	13	23.6		
2. In part	18	34.0	23	41.8		
3. Yes	20	37.7	19	34.5		
					14−/10+/29=	−0.09
C. Did you lack help and support from others after the bereavement?						
1. Never	15	27.8	14	25.5		
2. Rarely	17	31.5	9	16.4		
3. Sometimes	19	35.2	29	52.7		
4. To a high degree	3	5.6	3	5.5		
					21−/13+/20=	−1.08
D. Did you receive adequate or inadequate support from the hospital following the bereavement?						
1. Very good support	3	6.4	11	22.0		
2. Good support	19	40.4	12	24.0		
3. Little support	7	14.9	17	34.0		
4. Very little support	18	38.3	10	20.0		
					6−/21+/18=	−2.54*

[a] Total N are 55 for both mothers, fathers and pairs. However, when one or both of the partners have failed to answer a question, the number of responders (pairs) are less than 55.
[b] Minus differences (−) indicate number of pairs where the mother had a higher score than the father. Plus differences (+) indicate the number of pairs where the father had a higher score than the mother, and the number of pairs where both partners had the same scores is indicated by a tie score: (=).
[c] The Wilcoxon matched-pairs signed-ranks test.
*$p<0.05$.

answered affirmative regarding problems talking with their spouse following the death also tended to report growing further apart in their marriages.

Although more than half the mothers and 42% of the fathers stated that it was not difficult to talk together about the death, more than half the fathers acknowledged that

Table 3. *Parents perception of own vs. partner's reaction*

Differences between mother and father tested for significance with the use of Wilcoxon matched-pairs signed ranks test (for related samples)

Question	Father		Mother		Direction of differences within pairs[b]	Wilcoxon[c] Z
	N[a]	%	N	%		
A. Did the loss lead you closer together or further apart?						
1. Closer together	33	60.0	36	65.5		
2. Same as before	4	7.3	12	21.8		
3. Further apart	18	32.7	7	12.7		
B. Was it difficult to talk together about the death?					7−/15+/33=	−2.05*
1. No	23	41.8	32	58.2		
2. In part	28	50.9	13	23.6		
3. Yes	4	7.3	10	18.2		
C. Did you react more strongly, less strongly or just as much as your spouse?					17−/25+/13=	−0.24
1. Reacted less	38	69.1	2	3.6		
2. Equal reactions	16	29.1	14	25.5		
3. Reacted more	1	1.8	39	70.9		
D. Did your reactions continue for a longer, a shorter or the same length of time as your spouse?					43−/2+/10=	−5.70***
1. A shorter time	38	71.7	3	5.5		
2. An equal time	13	24.5	11	20.0		
3. A longer time	2	3.8	41	74.5		
E. Did you and your spouse react differently to the bereavement?					44−/2+/7=	−5.27***
1. Quite equal	20	36.4	15	27.3		
2. A little difference	26	47.3	30	54.5		
3. A strong difference	9	16.4	10	18.2		
					11−/7+/37=	−1.13

[a] Total *N* are 55 for both mothers, fathers and pairs. However, when one or both of the partners have failed to answer a question, the number of responders (pairs) are less than 55.

[b] Minus differences (−) indicate number of pairs where the mother had a higher score than the father. Plus differences (+) indicate the number of pairs where the father had a higher score than the mother, and the number of pairs where both partners had the same scores is indicated by a tie score: (=).

[c] The Wilcoxon matched-pairs signed-ranks test.

*$p<0.05$. ***$p<0.001$.

they in part found it difficult to talk (Table 3, question B). Among the mothers nearly one fifth answered yes to the question of difficulties talking together, and another fourth of them in part had experienced difficulties talking with partner. The differences between the pairs were not significant (see Table 3, question B).

Regarding the intensity and length of grief following the death of a child, both sexes agreed that mothers' grief had been of stronger intensity and longer duration than fathers' (Table 3, questions C, D). For both these questions, the significant differences in the Wilcoxon analyses were evidence of agreement that the mothers' grief reactions were stronger and of longer duration than the fathers'.

In qualitative comments in the questionnaires, and through information gathered in the intervention program, parents related the difference to the fact that the mother had carried the child through the pregnancy: "I carried the child for 9 months. The father's feelings appear later!" (mother, neonatal death). Regarding the duration of grief a mother (neonatal death) gave the following explanation of why she grieved longer: "My reaction first came when I recovered from the birth. I cried almost continuously for a long time". Another mother (SIDS) reported that father's grief lasted longest, and she gave this explanation: "He did not want to talk about it. I was more open, and took a shorter period before I recovered".

There were only minor differences in how mothers and fathers viewed whether or not they had reacted differently following the loss. In 11 pairs mothers felt there were more differences than the fathers, in 7 pairs fathers indicated more differences than the mothers, and in 37 pairs they indicated the same amount of differences. Around a third of the sample perceived their reactions as quite equal. Around half of the sample reported that they reacted a little different than their partner following the death, and a little less than one fifth felt they reacted very differently. Many parents commented on the fact that women more openly showed their grief. "I openly let my grief show. I cried at home and in shops. I reacted with apathy when my husband returned to work after the funeral" (mother, SIDS). "We grieve for the same reason, but I manage to talk more openly about the loss. It is always I who start talking about what happened. I do think that I react more strongly, but could it be that I show more of my feelings?" Her husband reports: "We have the same thoughts and questions in connection with the death, but she experiences stronger feelings" (parents, stillbirth). "I wanted to forget it all, while she was more open, and wanted to talk about the death" (father, SIDS).

Parental differences 1 to 4 years following the death

Table 4 shows the relative differences between the parents on 5 psychometric inventories 1 to 4 years after the death. The data for the Impact of Event Scale is reported for its two subscales; IES Intrusion and IES Avoidance. In addition the parents' response to a direct question on how much they felt they had recovered since the death is included in the table.

Women reported their situation to be less favorable on all measures. The difference is significant on 5 of 7 inventories (with the exception of GHQ and IES Avoidance. The direction of the differences on these two measures were in the same direction with the mothers scoring higher than the fathers). In significantly more number of pairs did the mother have a higher score (indicating more "mental agony") than the father. Mothers acknowledged more state anxiety, depression, somatic discomfort and intrusive thoughts than men. They also subjectively felt that they to a lesser degree than fathers had recovered from the loss. The following comment illustrates how many women viewed their situation at the time of study: "I have not recovered my own self following the death. I am much more anxious for everything, and I think about illness and death every day" (mother, neonatal death). "I have become more heavy at heart. I constantly brood over

my thoughts and feelings" (mother, stillbirth). We like to emphasize, however, that for the different measures a considerable amount of pairs showed father having a higher score than the mother (see Table 4).

In order to investigate whether the two partners' score tended to go in the same direction, we carried out a rank order correlation analysis by the help of the data management program SIR (Robinson et al., 1980). Table 5 shows the relationship between the fathers and mothers in the 55 pairs when they are compared directly on the psychometric measures. The positive relationship indicates that a high "grief score" in the mother was associated with a high grief score in the father, or vice versa. This relationship was significant for all measures (except the GHQ).

DISCUSSION

The results demonstrate that the marital partners tend to experience different amount of grief reactions following the loss of an infant, with mothers reporting significantly more anxiety, self-reproach, sadness, intrusive thoughts about the child, and sleep disturbances

Table 4. *Parents who lost a child.*

Differences on inventories tested for significance by the use of Wilcoxon matched-pairs signed ranks test (for related samples)

Dependent variable	Father		Mother		Direction of differences within pairs[b] −/+/=	Wilcoxon[c] Z
	Mean[a]	SD	Mean	SD		
Experience of recovery	1.69	0.63	2.07	0.69	21−/4+/30=	−3.19***
STAI X−1	32.46	9.31	37.33	11.34	33−/20+/2=	−3.08**
BDI	1.85	2.91	3.21	4.02	25−/11+/15=	−2.00*
BSS	52.29	16.44	66.94	18.35	27−/14+/2=	−3.30***
GHQ	2.93	4.61	3.65	4.71	25−/16+/14=	−1.48
IES intrusion	7.24	7.90	10.66	7.88	29−/11+/7=	−3.01**
IES avoidance	6.82	5.93	6.39	5.13	16−/13+/6=	−0.12

[a] For all means a higher score indicates more distress.
[b] Minus differences (−) indicate number of pairs where the mother had a higher score than the father. Plus differences (+) indicate the number of pairs where the father had a higher score than the mother, and the number of pairs where both partners had the same scores is indicated by a tie score: (=).
[c] The Wilcoxon matched-pairs signed-ranks test.
*$p<0.05$., **$p<0.01$. ***$p<0.001$.

Table 5. *Rank order correlation (Spearmans rho) between fathers' and mothers' grief (the spouses in each couple is compared directly)*

	Inventories						
	Experience of recovery	STAI X−1	BDI	BSS	GHQ	IES intrusion	IES avoidance
Father vs. mother	.40**	.40**	.34*	.59***	.23	.54***	.58***

*$p<0.05$. **$p<0.01$. ***$p<0.001$, two-tailed test.

than the fathers. No significant differences were found in the amount of anger, restlessness and work-involvement between the two partners. Typically both partners agreed that mothers experienced more intense and long-lasting grief reactions than the fathers. Mothers also tended to perceive their family and friends as somewhat less supportive than fathers, while fathers were significantly less satisfied with the support they received from the hospital.

In most marriages, the partners felt the death brought them closer together. However, a considerable group of parents, especially fathers, reported feeling more distant from their partner following the loss.

The 5 psychometric measures used to evaluate the long term adaption of the parents indicated more lasting emotional and bodily problems in mothers 1–4 years after the loss. The mothers also felt they had recovered less from the loss than fathers. Our results must be taken as a confirmation of other research showing the death of a child to have an impact several years following the event (Rubin, 1982; Rando, 1983), and that women have more adaption problems than men.

Following the child's death the mothers experienced significantly more anxiety, sadness, intrusive thoughts about the child, and sleep disturbances than the fathers. These results are supported by other reports (Benfield et al., 1978; Wilson et al., 1982; Berg et al., 1978; Cornwell et al., 1977; Helmrath & Steinitz, 1978; Forrest, 1983).

Mothers reported significantly more "self-reproach" than fathers. This is in agreement with other research reporting guilt to be particularly more common among women than men (Clyman et al., 1980; Benfield et al., 1978; Helmrath & Steinitz, 1978; Wilson et al., 1982). Although there seldom was any objective cause for these feelings, mothers blamed themselves. Their responsibility for carrying the child through the pregnancy, and being the primary caretaker of the child, may explain the excess of guilt feelings in mothers.

On all questions there were a number of couples where the father acknowledged more of the reaction or problem than the mother. The level of distress in fathers, as indicated by their scores on sadness and intrusive thoughts in Table 1, were also considerable. This does make it important to address the father's grief in programs of intervention and support.

The cause of the differences in mothers' and fathers' reactions is unclear, and from a theoretical viewpoint several explanations seem viable; 1) they may be caused by a difference in amount of attachment or "bonding" to the child (for use of the concept see Raphael, 1983), 2) they may reflect different reactivity to stress or different methods of coping in men and women, 3) they may arise because men underreport or fail to acknowledge emotions and reactions, or, 4) they may reflect the different social situation the two sexes experience following the loss. A combination of these causes is possible and plausible. The data reported here does not clearly favor any of the different explanations.

However, parents in our study wrote comments on their questionnaires that could be taken as support for the third explanation, i.e. that the observed sex differences were caused by men's underreporting or suppression of emotions. One of the fathers put it this way: "Maybe I have a stronger ability (mechanism) to suppress what has happened to the child. This is also true generally, it is easier for me to forget or suppress events, as I do not reflect on them as long as my wife" (neonatal death). This is supported by some studies where men have been shown to express less emotions than women (Allen & Haccoun, 1976; Notarius et al., 1982; Dosser et al., 1983). Furthermore it has been shown that men, in addition to a lack of outward expression, experience less feelings and bodily reactions than women (Allen & Haccoun, 1976; Allen & Hamsher, 1974). These researchers report that differences are greatest regarding overt expression but present in covert responsiveness too. The differences vary across emotions, being greatest for fear and sadness, and

least in anger. Our results are in line with these findings. Men reported less "feelings" as well as less bodily reactions than women. We also found that the differences varied across emotions, with no significant differences found in anger.

Another observation made when reviewing the questionnaires, was the lack of written comments by fathers compared to mothers. In addition fathers often failed to answer open-ended questions included to get qualitative material, while the mothers did answer these questions. We see this as an indication of the fathers unwillingness to freely express their feelings.

Clinical impressions from the intervention program suggest that even though men tend to underreport their feelings, there are real sex differences in reactions experienced. Therefore it is difficult to interpret conclusively the reported gender differences.

Some support is also found for the explanation of the observed differences on the basis of the different social situations the two parents return to following the loss. The parents often put this explanation forward themselves. They both stressed the fact that the father had his work to return to. Here his thoughts were occupied, and there was little time left to brood over what had happened. "I went to work the day after he died. I know some people thought it strange, but it was good for me. It kept my thoughts away from what had happened. If I had had to stay at home, I would have found some work there. It helps me to use my hands" (father, neonatal death). The socially more isolated mother was left with more time to think and feel. This may be necessary in order to work through the grief, but it can also lead to social isolation and overindulgence in what has happened.

The difference in intensity and duration of reactions was the cause of disharmony in many couples: "I felt he reacted much less than me, and I felt hurt and aggressive because of that, and also because he did not console me when I felt sad. I felt he reacted negatively to my demands and needs for consolation. Even though my head told me that he cared for me, my heart told me that he did not care enough" (mother, neonatal death). One explanation of the fact that more fathers than mothers tended to report that they felt they had grown further apart could be that men harbor feelings of grief without being able to express them to their partners. The fathers may find it difficult to express their feelings to their partners, in fear of adding to the mothers already intense grief. Clinically many fathers expressed that they felt they had to be strong to support their partner. Our results show that intramarital lack of communication about the event was related to feelings of having grown further apart.

Clinically we have the impression that many mothers tend to blame their partners for not having cared enough about them, or the diseased child. The fact that fathers perceived less support from health personnel and soon returned to their work, constitutes a situation very different from the mothers. The fathers may feel estranged by the situation at home, and perceive a greater distance to their partner.

It was evident that although mothers and fathers differed in their reactions, there were significant positive correlations between the reactions of the two spouses. A strong reaction in one spouse was associated with a similar reaction in the other, a finding that might indicate the reciprocal emotional influence within a relationship. It might also indicate that fathers in these families in addition to facing the child's death also had to face their partners' strong reactions. Clinically, in families where one partner shows a strong grief reaction, one should make sure that both partners receive adequate care and support.

Although not significant, there was a trend towards mothers experiencing more difficulties with their families' and friends' reaction than fathers. If women truly experience longer and stronger reactions than men, and at the same time feel a greater need to talk about what has happened, then others' unwillingness to do so may be felt very deeply. From other studies, as well as our own clinical experience, it is evident that family and

friends expect the parents to be "back to normal" relatively shortly after the death (Stringham et al., 1982). At times some mothers felt that fathers joined their family and friends in this deletion.

In the clinical intervention program, parents, especially mothers, have reported; "it is as if the child is deleted from other people's memory". It has not been uncommon to hear from parents taking part in the intervention program that comments and reactions from others were the cause of distress: "I became extremely irritated when people said; "Oh well, at least you have one child left", even if I thought so myself" (mother, SIDS). "It was painful when people at home blamed *me* when they learned that the baby was seriously ill" (mother, neonatal death). "People show too much sympathy, and they revive memories" (father, neonatal death). "I feel that some of my friends do not understand what we have gone through" (mother, neonatal death). Some parents reported that they had to console others instead of receiving support.

However, it is evident that parents vary in their perception of help and support from others, as well as the opportunity to express thoughts and feelings in conversations with family and friends. Generally both partners felt they did not lack support and help from others, but more than half of both mothers and fathers felt that family and friends avoided talking about the death.

Regarding support from the hospital, we found fathers to be more dissatisfied than mothers. In our intervention program fathers have complained about being overlooked in the hospital. Usually, they say, it was the mother who was asked how she felt, and rarely anyone asked how he felt. When studies have reported fathers to be reluctant to talk about the dead child or that fathers avoid professional support (Wilson et al., 1982; Nixon et al., 1977; Mandell et al., 1980), this may result from less care and support received following the loss.

Some caveats should be mentioned with regard to these findings. First of all, about half of the parents failed to return the questionnaire. The response rate was similar to other studies conducted several years after the death of a loved one (see Shanfield et al., 1984). The attrition rate reflects the difficulties in conducting follow-up studies in bereavement (cf. Blueglass, 1981; Parkes, 1972). Research in bereavement (Clarke & Williams, 1979; Cooper, 1980) has indicated non-respondents to be more emotionally affected following a loss than respondents.

The quantitative data is gathered retrospectively. People tend to forget the painful and remember the pleasant (cf. Ericsson & Simon, 1980).

The probable attrition of more emotionally affected respondents, and the use of retrospective data indicates that it is likely that our estimates of emotional reactions are lower than the true prevalence of reactions among parents who have lost their child.

Our increased knowledge of differences in short- and long-term emotional reactions between parents must be included in our efforts to tailor psychoeducational and therapeutic intervention for the bereaved families. Anticipatory information about grief differences between mothers and fathers, whatever the causes, can prevent marital difficulties and help parents adapt to a major life stress situation. The large proportion of both mothers and fathers indicating strong to severe reactions following the loss of a child should lead health care professionals to be sensitive to the presence of these reactions, in order to facilitate care and support for these families. We need to know more about parental interaction and coping following the loss of a child if we are to provide more effective guidance and counseling for the family.

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Stillbirth, neonatal death and Sudden Infant Death (SIDS): parental reactions

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The differences between parental grief reactions following different types of infant losses were investigated. A total of 117 parents (55 couples) from three groups of parents (stillbirth, neonatal death and Sudden Infant Death), 53% women and 47% men, answered a survey on different grief reactions one to four years following the death. Included in the survey were psychometric measures relating to anxiety, depression, impact of event, bodily discomfort, and general wellbeing. The results demonstrated that the three groups differed in their experience of various grief reactions. Sudden Infant Death Syndrome (SIDS) parents reported significantly more anxiety and intrusive thoughts than the other two groups in the early post-loss period, as well as significantly more anger, restlessness, and sleep disturbances than the neonatal group. The SIDS parents also scored significantly higher on some of the measures (experience of recovery, IES intrusion) relating to how they felt at the time of study. While the death being sudden did not show any correlation with the parents' experience of recovery or the psychometric measures, the length of time the child had lived showed a strong relationship to these measures. It is emphasized that counselling to parents must be based on increased knowledge about parental reactions, tailored to the individual family's needs.

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The death of a child is considered an extremely distressing event. Many studies have investigated how such losses affect the family (for a review see Dyregrov, 1985). Some controversy exists in regard to whether the family members' reactions depend on the type of loss they experience, and the length of time the child has lived (Peppers & Knapp, 1980; Laurell-Borulf, 1982; Kennell *et al.*, 1970; Benfield *et al.*, 1978; Lovell, 1983; Kirkley-Best & Kellner, 1982).

Peppers & Knapp (1980) did not find the mean grief score significantly different in women who had experienced miscarriage compared with women who experienced stillbirth or neonatal loss. Likewise, Laurell-Borulf (1982) found no differences in how mothers who lost a child prior to, during or after birth had worked through the crisis resulting from the loss. That parental grieving is not related to the duration of the child's life is also supported in other studies (Kennell *et al.*, 1970; Benfield *et al.*, 1978).

However, in a study of late miscarriage, stillbirth and perinatal loss, mothers whose babies had lived, even fleetingly, were found better able to make sense of the tragedy than mothers experiencing stillbirth (Lovell, 1983). More intense grieving responses have been found associated with stillbirth when the loss was late in the pregnancy (reported in Kirkley-Best & Kellner, 1982). These results fit the view that attachment develops during pregnancy. Kennell *et al.* (1970) found high mourning to be associated with the amount of contact the parents had with the child before the death. They found, however, no relation between the length of the baby's life and the mourning score. The gestational age of the infant as a factor in perinatal grieving has, however, never been systematically explored (Kirkley-Best & Kellner, 1982).

While suddenness of death seems to be a significant factor in predicting adverse grief reactions in adults (Parkes, 1972, 1975; Parkes & Weiss, 1983; Glick *et al.*, 1974; Lundin, 1982,

1984; Carey, 1979–80; Vachon *et al.*, 1982), this aspect is relatively unexplored in studies on the effect of a child's death on the family. Authors have commented on the fact that unanticipated loss of a child leads to more intense, disruptive and intolerable feelings (Woolsey *et al.*, 1978) and to forms of pathological bereavement (Raphael, 1975). In one study (LaRoche *et al.*, 1982) there was a trend towards more inappropriate grief reactions in unexpected versus expected stillbirth. Peppers & Knapp (1980) found the mean grief score highest at the time of death in the stillbirth group, compared with a miscarriage and neonatal group. Although this difference was not statistically significant, it may reflect the sudden impact of stillbirth. A salient feature of the reactions to sudden losses is the amount of anger experienced by the bereaved parents (Woolsey *et al.*, 1978; Cooper, 1980). In studies of parental reactions following the death of a child from cancer, a poor adaption following the loss was associated with a short duration of the child's illness (Spinetta *et al.*, 1981; Rando, 1983). The subsequent adaption of the parents was also poor when the duration of the child's illness was very long (18 months) (Rando, 1983).

Parents who conceive a new child soon after the death, have been said to replace the child they have lost, and not work through their grief (Cain & Cain, 1964; Poznanski, 1972; Lewis, 1979). Early conception of a new child after the loss of an infant has been found to correlate with morbid grief reactions (Rowe *et al.*, 1978), and with rejection and negative feelings toward the new baby (Forrest, 1983).

Other studies, however, indicate that the birth of a new child can be helpful. Mothers list the birth of a subsequent child as one of the factors that helped them most in their grief (Stringham *et al.*, 1982). Researchers have found a less intense grief reaction (Peppers & Knapp, 1980), and less depression (Videka-Sherman, 1982) among mothers who have given birth to a subsequent child, compared with parents without such a child. In one study no relationship between giving birth to a new child and the mother's "crisis outcome" was found (Laurell-Borulf, 1982). In this last study, however, the single factor most frequently mentioned by the mothers as most helpful in their grief work was having a new child, even though less than two-thirds of the mothers experienced this (Laurell-Borulf, 1982).

This report will address the following questions: Do early parental grief reactions differ in relation to the type of death that they experience? Does sudden death lead to more intense disruptive grief reactions than anticipated death? Will the length of time the baby lived influence the parent's grief reactions? Will parents who conceive a new child shortly after the loss fare worse than those who do not?

METHODS

Subjects

This paper is based on data gathered from families served by the Department of Obstetrics and the Department of Pediatrics at the University Hospital in Bergen, Norway. At the Department of Obstetrics there are around 4 000 deliveries annually. The Department of Pediatrics treat approximately 3 600 inpatients and 15 000 outpatients per year. It provides services to families living on the western coast of Norway. All families which lost their child due to stillbirth or neonatal death (a living child transferred to the Neonatal Intensive Care Unit who later died) in a three-year period were included in the study. In addition Sudden Infant Death Syndrome (SIDS) families that came in contact with the Department of Pediatrics in relation to the death were included. This group constituted around 80% of all families in the region that lost a child in SIDS during the time period of the study (based on data from birth register). A total of 28 families were excluded when other types of crises made it clinically and ethically difficult to subject them to the study, such as an extremely adverse psychosocial family situation, or the expectation of a new child in the near future.

A total of 214 parents that lost a child 12–48 months earlier (M=27.02 months, SD=9.20) received a questionnaire. Of these, 117 parents returned the questionnaire. In 55 families both parents responded. In addition seven mothers only responded (three married, one living with partner, three divorced). Their age

ranged from 19 to 49 years (M=29.1, SD=5.79). Sixty-two per cent of the parents were younger than 30 years; 56% lived in urban areas. Regarding education, 23% had primary school as their highest level of education, 55% had high school or college level and 22% had university or graduate level background.

The sample consists of three groups of bereaved parents. These three groups were (1) a stillbirth group (N=31), (2) a neonatal group (N=57, including deaths occurring in the first week after birth), and (3) a SIDS group (N=29).

All parents were offered assistance after the investigation. An intervention programme was started at the same time as this investigation, but, except for six SIDS families, none had received systematic help prior to the investigation. Qualitative clinical data from the intervention programme have been used to illustrate some of the quantitative observations.

Measures

All subjects were asked to complete a questionnaire containing sociodemographic questions, questions related to the loss itself, including the family reactions to the loss, and inventories measuring psychic and somatic discomfort.

The questions concerning the loss were constructed for this study. Questions were based on previous literature (Kennell *et al.*, 1970; Benfield *et al.*, 1978; Rowe *et al.*, 1978; Cullberg, 1966; Cornwell *et al.*, 1977; Mendell *et al.*, 1980) and exploratory interviews and meetings with parents who had lost a child. An early enlarged version of the questionnaire was used as an interview guide in a "pilot study" of five bereaved families, and revisions were made. The questionnaire explored both immediate reactions to the loss, reactions during the time following the loss (anxiety, anger, depression, restlessness, etc.), siblings' reaction, and thoughts and feelings now, at the time of study. The format of these questions is found in Table 1.

The final questionnaire also includes the following inventories:

1. The Impact of Event Scale (IES) (Horowitz *et al.*, 1979; Zilberg *et al.*, 1982) which provides a measure of intrusive thinking and periods of avoidance associated with traumatic life events. Cronbach's alpha IES intrusion=0.90, IES avoidance=0.70. All Cronbach's alpha values relate to results from this study.
2. The 20-item version of the Goldberg General Health Questionnaire (GHQ) (Goldberg, 1978) was used to assess psychological impairment of health. Cronbach's alpha=0.93.
3. The state version of the State–Trait Anxiety Inventory (STAI) (Spielberger *et al.*, 1970) to assess degree of residual anxiety. Cronbach's alpha=0.94.
4. The Bodily Symptom Scale (BSS) (Person & Sjøberg, 1981) was employed to provide a measure of bodily discomforts. Cronbach's alpha=0.93.
5. The short form of the Beck Depression Inventory (BDI) (Beck & Beck, 1981) was employed to provide a measure of depression. Cronbach's alpha=0.88.

Procedure

One week prior to sending the questionnaire, a letter was sent informing the parents of the study. The goals of the study were explained. The main objectives stated were increasing health personnel's knowledge of family reactions after the loss of a child, and to improve support for such families. Three weeks after receiving the original questionnaire, non-responding families were sent a follow-up letter requesting their response. In all communications with the families parents were offered the assistance of a pediatrician and a psychologist (the first author) if they felt the need for asking questions, or for expressing thoughts or feelings concerning the loss.

Mothers and fathers received almost identical questionnaires, and they were requested to fill them out separately. The mother's questionnaire contained questions about sibling reactions, and factual questions requiring only one of the parents to answer. The length of the questionnaire was thus 18 pages for mothers and 15 pages for fathers.

Statistics

Admittedly data in Table 1 were treated on the interval level by the use of one-way analysis of variance. Chi-square analyses are not reported due to the frequencies in some of the cells. However, we conducted such analyses, and the significant group differences were almost identical with the results presented in Table 1.

RESULTS

About half (54.7%) of the parents returned the questionnaire (53% of the responders were women). Based on hospital records, responding and non-responding mothers were compared with the child's weight at birth, the length of time the child lived, the mother's age, and whether the family lived in rural or urban areas. There were no significant differences between the groups on these variables (no t values >2.00, $p>0.05$).

When the responding parents in the stillbirth, neonatal and SIDS groups were compared for age, education and number of children, no significant differences were found (no t values>2.00, $p>0.05$).

In Table 1 the parents' responses to questions regarding their grief reactions in the period following the loss are listed. The three groups differed in their experience of various early grief reactions (in this and the following tables a low score indicates low distress, while a high score indicates high distress).

The SIDS group showed the highest mean scores on all questions, indicating more distress in the period following the loss. Although not included in the table, this was true for both men and women when they were treated separately. It is apparent from the table that the SIDS parents had stronger reactions than neonatal death parents and the stillbirth parents. There was a significant group effect on seven out of eight measures. The differences between the three "death groups" were similar for both men and women, except for the questions regarding "self-reproach", "restlessness" and "worked more", where the differences were most apparent for men.

By adding the numerical score each parent received on each of the eight variables, an index based on sumscores of the spontaneous reactions for the parents in the three groups was made. This index showed SIDS parents to report significantly more early grief (M=21.65, SD=3.41) than stillbirth parents (M=17.71, SD=3.93) and neonatal death parents (M=17.25, SD=4.40, t=3.68, df=45, $p<0.001$; t=4.48, df=76, $p<0.001$).

The type of death the parents experienced was important for how much anxiety they reported. The vast majority of the SIDS parents experienced much or very much anxiety (69%) following the death, some of the neonatal death parents experienced such anxiety (27%), and only a small part of the stillbirth parents (15%) reported much or very much anxiety. The group effect was significant. A range test (*a posteriori* contrasts) was used to compare the groups means (Nie *et al.*, 1975). SIDS parents experienced significantly more anxiety than the other two groups (range test, LSD-procedure, $p<0.001$).

Few of the parents acknowledged anger as an early grief reaction. More than half of the neonatal death parents reported no anger at all, while more than half of the SIDS parents and the stillbirth parents reported that they had experienced some degree of anger. The groups differed significantly, and a range test (LSD procedure) showed that SIDS parents had experienced significantly more anger than the neonatal parents ($p<0.01$).

A majority of parents in all three groups had experienced some degree of self-approach. Half the SIDS parents reported to have felt much or very much self-reproach. A SIDS mother put it thus: "I still think that the baby must have cried, and if I had picked him up he would have been alive today". In the other two groups the tendency to self-reproach was less marked. A significant group effect was observed, with SIDS parents experiencing significantly more self-reproach than parents in the neonatal group (range test, LSD procedure, $p<0.001$).

The vast majority of all three groups experienced sadness. All respondents answered this question. No significant differences were found between the groups.

SIDS parents reported more restlessness than the two other groups, and stillbirth parents reported more restlessness than neonatal-death parents. One father (SIDS) commented on his restlessness in the following manner: "It was enormous. I could not be at home for an hour. I had to do something all the time. Doing something kept the thoughts from coming. I still feel

Table 1. *Early grief reactions in parents following their child's death. Comparison of groups*

Question	Group: Stillbirth N (31)	%	Peri/neonatal death N (57)	%	SIDS N (29)	%	F[a]	df
To what degree did you react with:								
1. Anxiety								
1. Not at all	9	33.3	18	32.7	1	3.6		
2. Some	14	51.9	22	40.0	7	25.0		
3. Much	2	7.4	8	14.5	13	46.4		
4. Very much	2	7.4	7	12.7	7	25.0		
Mean	1.89		2.07		2.93		10.76***	2/107
2. Anger								
1. Not at all	9	34.6	32	57.1	5	18.5		
2. Some	12	46.2	17	30.4	17	63.0		
3. Much	4	15.4	5	8.9	2	7.4		
4. Very much	1	3.8	2	3.6	3	11.1		
Mean	1.89		1.59		2.11		3.94*	2/106
3. Self-reproach								
1. Not at all	7	25.9	21	38.2	3	10.7		
2. Some	13	48.1	23	41.8	11	39.3		
3. Much	2	7.4	7	12.7	6	21.4		
4. Very much	5	18.5	4	7.3	8	28.6		
Mean	2.19		1.89		2.68		6.20**	2/107
4. Sadness								
1. Not at all	0	0	0	0	1	3.4		
2. Some	4	12.9	7	12.3	1	3.4		
3. Much	12	38.7	26	45.6	9	31.0		
4. Very much	15	48.4	24	42.1	18	62.1		
Mean	3.36		3.30		3.52		0.94	2/114
5. Restlessness								
1. Not at all	5	16.7	11	19.6	1	3.4		
2. Some	13	43.3	34	60.7	14	48.3		
3. Much	10	33.3	6	10.7	8	27.6		
4. Very much	2	6.7	5	8.9	6	20.7		
Mean	2.30		2.09		2.66		4.43*	2/112
6. Worked more								
1. Not at all	20	69.0	36	65.5	9	32.1		
2. Some	8	27.6	11	20.0	15	53.6		
3. Much	1	3.4	5	9.1	2	7.1		
4. Very much	0	0	3	5.5	2	7.1		
Mean	1.35		1.55		1.89		3.49*	2/109
7. Intrusive thoughts about the child								
1. Not at all	2	7.1	2	3.6	1	3.4		
2. Some	6	21.4	15	27.3	2	6.9		
3. Much	10	35.7	16	29.1	7	24.1		
4. Very much	10	35.7	22	40.0	19	65.5		
Mean	3.00		3.06		3.52		3.18*	2/109
8. Sleep disturbances								
1. Not at all	7	24.1	24	42.9	5	17.2		
2. Some	13	44.8	25	44.6	9	31.0		
3. Much	4	13.8	3	5.4	6	20.7		
4. Very much	5	17.2	4	7.1	9	31.0		
Mean	2.24		1.77		2.66		8.38***	2/111

[a]One-way analysis of variance. * $p<0.05$; ** $p<0.01$; *** $p<0.001$. NB: Not all respondents answered all questions. Responding *n* therefore does not add up to total *N* for each group.

Table 2. *Group differences in bereaved parents' score on psychometric inventories (one-way analyses of variance).*

	1 Stillbirth		2 Peri/neonatal		3 SIDS			
Dependent variable	Mean	SD	Mean	SD	Mean	SD	df	F[a]
1. Experience of recovery[b]	1.71	0.74	1.86	0.77	2.17	0.54	2/114	3.34*
2. STAI X-1	36.28	12.01	33.71	10.12	36.78	10.96	2/114	0.99
3. BDI	2.66	4.65	2.31	3.31	3.00	3.44	2/109	0.32
4. BSS	57.20	15.52	62.92	20.10	67.36	15.81	2/98	1.99
5. GHQ	2.94	4.47	3.25	4.98	3.79	4.88	2/114	0.25
6. IES intrusion[c]	6.48	5.58	8.74	8.54	12.35	9.19	2/104	3.88**
7. IES avoidance	5.96	6.26	6.53	5.25	7.68	5.10	2/89	0.59

[a] Over all effects were tested with analysis of variance, one-way.
[b] Multiple range test (LSD procedure, one-way) shows significant differences at the 0.05 level between the stillbirth and the SIDS group.
[c] Multiple range test (LSD procedure, one-way) shows significant differences at the 0.01 level between the stillbirth and the SIDS group.
* $p<0.05$; ** $p<0.01$.

some of the restlessness." The group effect was significant, and a range test showed significantly more restlessness in SIDS parents compared with neonatal parents (LSD procedure, $p<0.01$).

More SIDS parents compared with neonatal and stillbirth parents acknowledged having worked more since the loss. Few parents in all three groups experienced this reaction to any strong degree. The group effect was significant, and a range test showed SIDS parents reporting that they had worked significantly more than the parents in the stillbirth group (LSD procedure, $p<0.05$).

A common grief reaction was intrusive thoughts about the dead child. Nearly all SIDS parents had experienced this reaction to a strong or very strong degree. For most families the death took place in their home, and the events are "printed" at the back of their mind. One mother (SIDS) reported that she still was upset by frequent "flashbacks" to the situation when she found her baby dead on the floor. Her husband had taken the baby into his bed as the child was crying. She woke up, looked for the child under his blanket, did not find him, and the next thing she saw was the child dead on the floor. "I touched him, and he was cold. I have frequent nightmares taking me back to the situation, and also imagining our later born baby as the dead child." The group effect was significant (see Table 1). The SID group differed significantly (range test, LSD procedure, $p<0.05$) from the other two groups.

Sleep disturbances were common among parents in the SIDS and stillbirth groups. There was a significant group effect. Both the SIDS group and the stillbirth group differed significantly from the neonatal group when a range test were performed (LSD procedure, $p<0.001$ and $p<0.05$ respectively). Again, the SIDS parents had the highest percentage of problems in this area.

The differences between the three groups at the time of study (one to four years following the death), on five standarized inventories measuring different emotional aspects are shown in Table 2 (IES scores are reported separately for IES intrusion and IES avoidance). In addition the responses to a direct question asking to what degree they *now* felt recovered after the loss are included in the table.

Table 3. *The relation between clinical variables and grief inventories (Pearson's r correlations). Partial r correlations is shown in parentheses (controlled for interval between death and participation in research).*

	Inventories						
Clinical variables	Experience of recovery	STAI X-1	BDI	BSS	GHQ	IES intrusion	IES avoidance
Type of death[a]	0.26*	0.10	0.10	0.20	0.08	0.24	0.11
Suddenness	0.01 (0.01)	−0.04 (−0.04)	−0.02 (−0.01)	−0.03 (−0.03)	−0.03 (−0.03)	0.10 (0.10)	0.05 (0.05)
Child's age	0.33*** (0.33***)	0.24** (0.24**)	0.19* (0.19*)	0.17 (0.16)	0.20* (0.19*)	0.22* (0.20*)	−0.10 (0.09)
New baby	0.08 (0.07)	−0.05 (−0.09)	0.09 (0.05)	0.05 (0.02)	0.17 (0.12)	−0.05 (−0.12)	0.04 (0.01)

[a] Regarding the type of death the value 1 is defined as stillbirth, 2 as neonatal death, and 3 as SIDS, on the basis of a rational view of direction. The variable "type of death" is on nominal level, and hence Eta coefficients.

* $p<0.05$; ** $p<0.01$; *** $p<0.001$; two-tailed test.

SIDS parents had the highest mean score on all measures. A multiple range test showed that the stillbirth group felt significantly more recovered than the SIDS group at the time of study (a higher score indicates less recovery).

The stillbirth group had a higher (but non-significant) mean score on depression and state anxiety (Table 2) than the neonatal parents at the time of study. On the other measures the stillbirth group had a lower mean score than the neonatal group. Although not included in the table, the differences in scores between the groups were similar when men and women were treated separately.

Table 3 shows the relationship between some selected clinical variables held to be of importance for grief outcome, and the psychometric inventories (the parents' own report of recovery is added to the list). The type of death showed a significant correlation to how the parents felt they had recovered following the loss. Type of death did not show any correlation to the other measures (Table 3).

The child's age (the child's age refers to gestational age plus eventual time the child lived, as identified in the hospital records) showed a clear relationship across most inventories and recovery experience. The parents reported more symptoms and felt less recovered at the time of study if the child had lived a longer period of time (Table 3). All parents who experienced a SIDS death, a stillbirth with less than 24 hours notice of the death, or a death occurring within the first 24 hours of life were regarded as having experienced a sudden death. Parents in the neonatal group who, on a direct question, indicated that their baby's death occurred without notice, were also included in the sudden death group. All other deaths were regarded as anticipated deaths. The suddenness of the death did not show any correlation with either the experience of recovery or the standardized measures (Table 3). Having a new baby did not correlate with any of the measures.

As the interval between the time of loss and the time of answering the questionnaire varied between one and four years, we felt it necessary to control for this factor when examining the relationship between the clinical variables above, and the various measures reflecting grief. The partial *r* correlations indicated that the variability in time span only had a minor influence.

DISCUSSION

SIDs parents reported stronger early grief reactions than parents who experienced stillbirth or neonatal death. The SIDS group experienced significantly more feelings of anxiety, and intrusive thoughts than the other two groups. They also reported significantly more restlessness, anger, self-reproach, and sleep disturbances than the neonatal group, and having worked significantly more than the stillbirth group. Stillbirth parents reported significantly more sleep disturbances than the neonatal group. Sadness were more equally reported in the three groups. An index based on the sumscores of the early grief reactions showed that SIDS parents experienced more grief reactions than stillbirth parents, while the group scored somewhat higher than the neonatal death parents.

The same pattern emerged when the scores of the three groups were compared on the standardized psychometric inventories. The SIDS group's IES intrusion scores indicate more intrusive images and intrusive thoughts in this group compared with the other two groups. The SIDS families also experienced significant less recovery at the time of study. The SIDS group had higher mean scores on all the other inventories, indicating higher distress one to four years after the child's death. On the General Health Questionnaire the SIDS mean score was somewhat higher than the other two groups (although not significant). The scores for the three groups on the Beck Depression Inventory did not differ much.

The results confirm that SIDS deaths are a very traumatic form of death (Blueglass &

Hassall, 1979; Read *et al.*, 1982; Limerick, 1983). Parents are given no warning, no time for preparation, and the death usually happens in the home with the parents themselves discovering the dead child. Although SIDS is accepted as a valid post-mortem diagnosis, the mechanism of this sudden death is still largely unknown (Kelly & Shannon, 1982). This makes the situation and prospects for the future more unpredictable and frightening for the parents, as well as their family.

As discussed previously, sudden death is believed to result in more adverse psychological consequences than anticipated death. In previous grief research, bereaved with as long as five days to two weeks of forewarning have been included in the sudden death group (Parkes, 1975; Vachon *et al.*, 1982; Sanders, 1979–80). Our results, utilizing a more "pure" sudden death group, did not confirm the impact of suddenness on grief outcome.

Other aspects, apart from suddenness, must be more important in explaining why the SIDS families experience more intense and long-lasting psychological reactions. The highly traumatic circumstances surrounding the death might explain the differences between the SIDS group and the two other groups.

We found a clear relationship between lifelength and the parents' long-term adaption on all measures except the avoidance part of the Impact of Event Scale and the Bodily Symptoms Scale. Those parents whose child lived for a longer time (gestational age included) experienced more long-term adaption problems than those whose childred died early. Grief was related to the duration of the baby's life, and stronger grief reactions were evident with advanced length of the child's life. This confirms what others have found (Lovell, 1983; Kirkley-Best & Kellner, 1982). Parental attachment is believed to develop through pregnancy (especially in mothers) as the baby is harboured and nurtured by the mother's body (Raphael, 1983). As both parents have the opportunity to take part in the care of the child either in hospital or later at home, it is reasonable to expect a growing mutual bond formation, and thus a strong grief reaction.

Our results suggest that parents who delivered or were expecting a new child, did not fare worse than other parents. Parents taking part in the intervention programme have often commented on how helpful it was to be pregnant again, or having a new child. Other researchers have found the same (Laurell-Borulf, 1982), both regarding quantitative results, and qualitative comments. We cannot, however, draw any firm conclusion regarding the psychological welfare of later born children. It seems, however, that the negative consequences of having a new child may have been too much emphasized in the clinical literature (Cain & Cain, 1964; Poznanski, 1972; Lewis, 1979). Due notice should also be given to the potential beneficial aspects of having a new child.

The retrospective method requires the parents to draw on long-term memory involving both *post hoc* inference and interpretation. The human mind tends to forget the painful and remember the pleasant (Ericsson & Simon, 1980). Thus the report may be biased towards an under-reporting of painful feelings. The attrition rate is similar to other studies conducted one to four years following the death of a loved one (Shanfield *et al.*, 1984). From other research on bereavement there is reason to believe that the non-responders are more emotionally affected than the responders (Cooper, 1980; Clarke & Williams, 1979). This adds to the likelihood that our estimates of emotional reactions are lower than the true prevalence of these reactions among bereaved parents.

CONCLUSION

Parents continue to grieve for years after the child's death. Psychosocial assistance must be tailored to the need of parents, to reduce the possibility of long-term emotional sequelae.

Parents who have experienced SIDS need special care and follow-up. Early crisis intervention may benefit parents from all these groups, but seems especially needed for the SIDS group. When intrusive images and thoughts continue for more than three to four months, psychological techniques that reduce such intrusiveness should be part of the follow-up services. Further research will be needed to understand in more detail the mechanisms behind good versus poor outcome in bereavement following the death of a child.

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Anxiety and vulnerability in parents following the death of an infant

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Empirical data on the subjectively reported anxiety reactions of 117 parents who lost an infant at birth or during the first year of life are presented. From a retrospective survey conducted 1 to 4 years after the death it was evident that parents experienced a great deal of anxiety following the death of their child. Parents who experienced a sudden death in the home reported the strongest anxiety, but other parents who lost their child in hospital at birth or thereafter also experienced strong anxiety. The anxiety for surviving children and later-born children was extensive. In all areas mothers experienced more anxiety than fathers. More intense and longer grief in one's partner, the perceived lack of support from others, being older, and being a female were significantly correlated with anxiety. The results are interpreted as a confirmation that parents who lose their children experience a fundamental change in their beliefs about their family's future security. Better training of health personnel is required to secure an adequate follow up of families that lose a child.

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A sharp increase in fear and anxiety is one of the most common and distressing consequences of a post-traumatic stress disorder (PTSD, American Psychiatric Association; Diagnostic and Statistical Manual of Mental Disorders, 1980). A high level of fear and anxiety has been reported among survivors of concentration camps (Niederland, 1968), rape victims (Scheppele & Bart, 1983), victims of torture (Allodi & Cowgill, 1982), assault victims (Krupnick & Horowitz, 1980), and hostage victims (Ochberg, 1978).

The increase of fear and anxiety has been linked to a loss of the illusion of invulnerability (Janis, 1969; Janoff-Bulman & Frieze, 1983; Scheppele & Bart, 1983). This illusion refers to the inclination in people to look at themselves as less vulnerable than others (a review of research is given by Perloff, 1983). This strategy results in a sense of control which allows them to cope with their daily activities. However, a person can no longer hold on to a fundamental belief in his future safety after an extremely stressful event (Janis, 1969).

Several studies have reported an increased anxiety in parents following the death of a child (Clyman et al., 1980; DeFrain & Ernst, 1978; Cornwell et al., 1977; Lewis, 1981). Few authors have looked at anxiety and fear from the perspective of vulnerability. In this paper we will examine parental anxiety from the perspective of vulnerability and explore several aspects of the anxiety which parents experience following the death of their child.

The following questions will be addressed: 1) To what degree do parents react with anxiety following their child's death? 2) Is there any difference in the amount of anxiety reported among parents who experienced different types of loss (stillbirth, neonatal death, Sudden Infant Death Syndrome)? 3) Will the death of a child lead to increased anxiety for surviving and later born children? 4) To what extent do parents experience anxiety during a new pregnancy and birth? 5) What psychosocial conditions show the strongest relationship to anxiety? Finally in the discussion we will address the question: Does the death of a child lead to a loss of the sense of invulnerability in parents?

METHOD

Subjects

The study was carried out at The University Hospital of Bergen. This hospital provides services to families living on the western coast of Norway. At the Department of Obstetrics there are around 4000 deliveries per year, and the Department of Pediatrics treat 3600 impatients and 15000 outpatients annually. All families who lost their child due to stillbirth or neonatal death (a living child transferred to the Neonatal Intensive Care Unit who later died) at the Department of Obstetrics and the Department of Pediatrics within a 3-year period were included in the study. In addition Sudden Infant Death Syndrome (SIDS) families that came in contact with the Department of Pediatrics in relation to the death were included. This group constituted around 80% of all families in the region that lost a child in SIDS during the time period covered (based on data from the birth register). A total of 28 families were excluded when other types of crises made it ethically and clinically difficult to subject them to the investigation, such as an extremely adverse family situation, or the expectation of a new child in the near future.

A total of 214 parents who lost a child received a questionnaire. Of these, 117 parents who had lost a child 1 to 4 years previously (M=27.02 months, SD =9.20) returned the questionnaire; The group consisted of 55 couples and 7 mothers, and the respondents' age ranged from 19 to 49 years (M=29.1, SD =5.79). 62% of the parents were younger than 30 years. 56% lived in urban areas. All the fathers and 95% of the mothers were married. Regarding education, 23% had primary school as their highest level of education, 55% had junior college or correspondingly, and 22% had university or high school background.

The sample consists of three groups of bereaved parents. These three groups were 1) a stillbirth group (N=31), 2) a neonatal group (N=57), and 3) a SIDS group (N=29).

All parents were offered assistance after the investigation. An intervention program was started at the same time as this investigation. Except for 6 SIDS families, none of the parents had received any systematic help prior to the investigation. Qualitative data from the intervention program have been used to illustrate some of the quantitative observations. The psychologist's role allowed access to information not available through a questionnaire study.

Measures

The parents were asked to complete a written questionnaire. The questionnaire contained three parts designed to provide 1) sociodemographic information, 2) data related to the loss itself including the family reactions to the loss, and 3) data on psychic and somatic discomfort.

Questions for the instrument were adapted from the literature on family reactions to the death of a child (Kennell et al., 1970; Cullberg, 1966; Rowe et al., 1978; Benfield et al., 1978; Cornwell et al., 1977; Mandell et al., 1980), and from exploratory interviews and meetings with parents who had lost a child. Subsequent revisions were made. From the more extensive questionnaire only data pertaining to anxiety was used (see Table 1 for specific questions answered by the parents regarding the time period following the loss (question A) and later (questions B and C)). Qualitative information collected through the intervention program gave additional information on the different types of anxiety experienced by the parents.

In addition the questionnaire also included Spielberger's STAI Form X-1 (Spielberger et al., 1970). In the state version of the State-Trait Anxiety Inventory subjects indicates the intensity of their feelings of anxiety at a particular moment in time. The parents were asked to report how they felt *now*. Cronbach's alpha was 0.94.

Procedure

One week prior to sending the questionnaire, a letter was sent informing the parents of the main objectives of the study; to increase health professionals' knowledge of family reactions after the loss of a child, and to improve support for such families. Three weeks after receiving the original questionnaire, non-responding families were sent a follow-up letter requesting their response. In all communications parents were offered the assistance of a pediatrician and a psychologist (the first author) it they felt the need for asking questions, or for discussing thoughts or feelings concerning the loss.

Mothers and fathers received almost identical questionnaires, and they were requested to fill them out separately. The mother's questionnaire contained questions about sibling reactions, and factual questions that required answers from only one of the parents. The length of the questionnaire was thus 18 pages for mothers, and 15 pages for fathers.

Statistics

The data from the 117 questionnaires were coded and entered on a permanent data file. SPSS (Nie et al., 1975) was used for the statistical computations.

RESULTS

About half (54.7%) of the parents returned the questionnaire (53% of the respondents were women). Based on hospital records, responding and non-responding mothers were compared on the child's weight at birth, the child's life-span, the mother's age, and whether the family lived in rural or urban areas. There were no significant differences between the groups ($t>0.05$, two-tailed test).

The amount of subjectively reported anxiety varied with the child's type of death. There was a significant group effect ($F=10.76$, df=2/107, $p<0.001$), with the parent's

Table 1. *Frequency of anxiety reactions in parents who lost a child*

Split in three groups according to type of death. Tested for significance between the groups

Question	Stillbirth		Neonatal death		SIDS		
	N	%	*N*	%	*N*	%	*F*[a]
A. To what degree did you react with anxiety following the death?							
1. Not at all	9	33.3	18	32.7	1	3.6	
2. Some	14	51.9	22	40.0	7	25.0	
3. Much	2	7.4	8	14.5	13	46.4	
4. Very much	2	7.4	7	12.7	7	25.0	
Non responders	4		2		1		
Mean	1.89		2.07		2.93		10.76*** df=2/107
B. Are you more anxious for your other children now than before the death?							
1. No	4	17.4	4	8.7	0	0.0	
2. To some extent	10	43.5	25	54.3	8	33.3	
3. To a large extent	9	39.1	17	37.0	16	66.7	
Non responders	8		11		3		
Mean	2.21		2.28		2.67		3.90* df=2/90
C. To what extent were you anxious during a new pregnancy?							
1. Not at all	2	6.9	2	5.9	0	0.0	
2. Very little	3	10.3	7	20.6	2	10.0	
3. Some	9	31.0	10	29.4	10	50.0	
4. Very much	15	51.7	15	44.1	8	40.0	
Non responders[b]	0		0		3		
Mean	3.28		3.12		3.30		0.37 df=2/80

[a] One way analysis of variance.

[b] The non responders are those who indicated that they either expected or had got a new child following the loss, but did not answer this question. *$p<0.05$ for stillbirth versus SIDS, and neonatal versus SIDS, using a range-test (lsd-procedure), ***$p<0.001$ for stillbirth versus SIDS, and neonatal versus SIDS, using a range-test (lsd-procedure).

subjective experience of anxiety in the period following the loss significantly higher in the "cribdeath" or SIDS (Sudden Infant Death Syndrome) group, than in both the stillbirth and the neonatal group (Table 1 A). Although not included in the table, women reported more anxiety than men in all three groups. The percentage of women versus men who reported 'much' and 'very much' anxiety was for the stillbirth group; 23.1% vs. 7.1%, for the neonatal group; 40% vs. 12%, and for the SIDS group; 92.9% vs. 50%.

The question A in Table 1, did not specify the kind of anxiety that the parents felt. Qualitative information from the intervention program indicated that the anxiety was both of an unspecified kind, the parents felt another disaster was imminent, and more specific, as fear of the dark, fear of being alone etc.

Clinically, parents often expressed anxiety for their partner. This anxiety took the form of needing reassurance of he or she being well or safe. Fear of oneself having a life-threatening disease, most often cancer, was also reported, together with the fear of own death. "I am afraid of being seriousy ill, having to die and not being with the others. I think of illness and death nearly every day" (mother, neonatal death).

Parent's anxiety were often triggered by intrusive images of the death. Sleep disturbances frequently followed periods of increased anxiety.

"After I have gone to bed I frequently see images—just like slides being turned on and off on a screen. I can't stop them when I want to, and that's why I lose control. Everything feels dark and suffocating in my bedroom, my heart starts beating faster and I get difficulties breating. I want to get out of bed, but it feels like being tied to the bed, and I can't move" (mother, neonatal death).

Parents also reported fear of something happening to surviving or later born children. SIDS parents reported significantly higher levels of anxiety for their surviving children than the other two groups ($F=3.90$, df=2/90, $p<0.05$, see Table 1 B).

One father who lost his child in cribdeath said that his fear for their surviving child could be compared to clinging to two ropes up in the air. If one rope broke, he would desperately cling to the other.

A majority of the couples tried to conceive a new child soon after the death of the child. In our sample 78% of the parents either had or expected a new child at the time of study (1 to 4 years following the loss). Parents frequently reported anxiety in relation to a new pregnancy and birth, as indicated in Table 1 C. When the percentages for the categories for "some" and "very much" were taken together, SIDS parents reported more anxiety than the other two groups of parents. However, in the category "very much", stillbirth parents had the largest numbers of responders (51.7%), followed by neonatal death parents (44.1%) and the SIDS parents (40%). No significant group differences were observed. For the categories "some" and "very much" taken together, the percentages for women versus men on this question (question C) were respectively: stillbirth group 86.7% vs. 78.6%, neonatal group 77.7% vs. 68.8%, and SIDS group 100% vs. 77.7%.

Qualitative information indicated that the anxiety sometimes was extremely high, and experienced simultaneously with sleep disturbances, nightmares, and intrusive, compulsive thoughts. If something was physically wrong with the new child, the anxiety rose sharply. If the child was admitted to the Pediatric ward it was not uncommon to find that the mother expected a message about the child's death every time someone came through the door to her room. The fear of reoccurrence was increased by similarities with the original traumatic situation, i.e. the new child was of the same sex as the deceased, if there was physical similarities between the two children ("God, I hope it will not be a girl that looks like her"), or the new child was born at the same time of year as the deceased child.

STAI-X (sumscore) showed state anxiety (how the parent felt *now*, 1 to 4 years following the death) to be highest in the SIDS group ($M=36.78$, SD=10.97), and the

stillbirth group (M=36.28, SD=12.01) while the neonatal group had a lower mean score (M=33.71, SD=10.12). No significant group effect was observed.

Table 2 provides an overview of some psychosocial conditions that are believed to be of importance in grief reactions. The relationship between these psychosocial conditions and state anxiety for the whole sample is presented.

A total of 5 out of 16 psychosocial conditions showed a significant relation to state anxiety (using product moment correlation). The more difficult it was to communicate with the spouse following the death, and the stronger or longer grief the informant felt he/she experienced compared to his/her spouse, the more anxiety he/she experienced at the time of study. More anxiety was also related to an experienced lack of support from others. There was also a postive correlation between anxiety and age. No relationship between state anxiety and the number of children in the family was observed.

As the interval between the actual loss and the time of participation in this research varied as much as 1 to 4 years, a partial correlation was computed to control for this interval. As evident from Table 2, whether the parents answered early or late in this time period had only minor influence.

Fig. 1 illustrates a multiple regression analysis that shows the relative relationship between state anxiety (dependent or criterion variable) and some of the psychosocial/demographic conditions (independent variables or predictors) listen in Table 2. Relative

Table 2. *Demographic/psychosocial variables, and their correlation and partical correlation (controlled for the interval between death and participation in this research) with state anxiety (Pearson product–moment correlation)*

Question	The whole group		State anxiety (n=117)	
	M	SD	r	pr
1. Age (years)	29.17	5.79	.19*	.18*
2. Education	–	–	.01	.02
3. Number of children	1.51	0.78	.04	.04
4. Sex	–	–	.23*	.24*
5. Interval between death and participation in research (months)	27.02	9.20	−.12	–
6. Better/worse relationship to partner	1.62	0.84	.07	.09
7. More difficult to talk with partner	1.65	0.71	.18*	.17
8. Informant felt partner reacted with more intense grief than him/herself	2.04	0.86	.30**	.30**
9. Informant felt partner's grief reaction was of longer duration than his/hers	2.07	0.89	.24*	.25*
10. Informant experienced partner's reaction as different from his/hers	1.87	0.69	.07	.06
11. Family avoided death in conversations	1.87	0.78	.12	.10
12. Friends avoided death in conversations	2.14	0.78	.10	.10
13. Lacked support from others	2.32	0.92	.35***	.34**
14. Post-loss contact with hospital	1.36	0.48	−.03	.02
15. Support from hospital	2.69	1.05	.02	.02
16. Satisfaction with information	1.83	0.84	.16	.18

Note. Questions 6–12, and 16 are trisected, with the value 1 defined as a positive value, value 2 defined as neither positive rno negative, and value 3 defined as negative. Questions 13 and 15 are listed with four values, where value 1 denotes very good support and value 4 very little support. In question 14 value 1 is defined as the existence of post-loss contact with the hospital, while value 2 denotes no such contact. *p<0.05, **p<0.01, ***p<0.001.

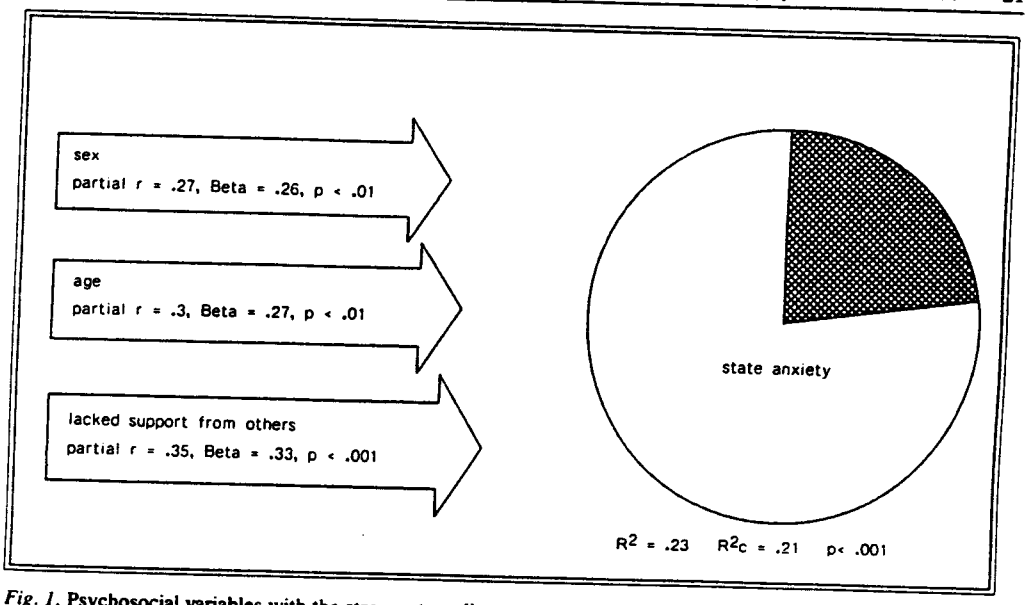

Fig. 1. Psychosocial variables with the strongest predictor contribution to explained variance of state anxiety in parents who have lost a child. The relative contribution of each variable is given in partial correlations (partial *r*) and beta. The significance level for each predictor-contribution is also listed (*p*). The circle represents the variance in the criterion variable or the predicted index. The shaded part of the circle denotes variance explained by the predictors. Total explained variance is listed as the squared R^2.

relationship is explained as the unique contribution the different predictors give to explain observed variance in the criterion varible, when the other predictors are held constant.

Different combinations of the psychosocial conditions listed in Table 2 were utilized in several regression models. In trying to isolate the demographic/psychosocial variables that would yield the optimal prediction equation, the cutoff point was determined by statistical criteria (Nie et al., 1975): 1) that the overall *F* ratio of the equation be significant, and 2) that the unique contribution (parital correlation and beta-weight) of each predictor in the final regression model be significant at 5% level. The regression model in Fig. 1 illustrates the psychosocial conditions which best predicted state anxiety. Non-significant ($p>0.05$) predictors were excluded from the model (beta-weights for the excluded predictors vary between 0.20 and −0.06, using a backward exclusion paradigm). The psychosocial conditions included in this model predicted 23% of the variation in state anxiety ($R=0.48$, $R^2=0.23$, $R^2c=0.21$, $F=11.14$, df=3/113, $p<0.001$). The strongest predictors in explaining variations in anxiety were the predictors' "lack of support from others", "age", and "sex", in their respective order.

DISCUSSION

The results showed that subjectively reported anxiety was very common in parents following the death of their child. This was especially so with parents who experienced a sudden death in the home (SIDS), but also following death at birth and thereafter. The anxiety for surviving and later-born children was even more extensive. Anxiety was also present during a new pregnancy and birth, and in the time following the birth. In all these

areas women experienced more anxiety than men (see Dyregrov (1985) and Dyregrov & Matthiesen (1987) for more extensive data and discussion relating to parental sex differences in grief.

Anxiety was related to problems of communication among the two partners, to differences in their respective grief reactions, to the perception of others as unsupportive, to increasing age, and to sex.

During the clinical intervention program many forms of anxiety have been noted, such as anxiety for one's spouse and for one's own health. Often the anxiety was felt as an everpresent, gnawing insecurity. Our results confirm those of others (Clyman et al., 1980; DeFrain & Ernst, 1978; Cornwell et al., 1977; Lewis, 1981) showing increased anxiety in parents following the death of a child. Parents who experienced SIDS reported more anxiety on all questions than the other two groups. Our material shows that as many as 50% of the fathers and 93% of the mothers who experienced a SIDS death reported strong to very strong anxiety after the death. A SIDS death gives no time for preparation, as in most perinatal and neonatal deaths. Most SIDS deaths occur in the home, with the parents finding their baby. Many parents developed aversive reactions towards their appartment or house where the death took place. "I felt it smelled of corpse inside. I did not dare walk into the house for days afterwards, and it took several weeks before I could enter the room where I found her. I shivered" (mother, SIDS). SIDS represents a highly unpredictable event, it occurs without warning or a clear explanation, and it is difficult to guard against reoccurrence.

The sex differences in anxiety reported here also confirms the general impression from other studies where mothers have been found to experience more intense and long-lasting grief than fathers (Clyman et al., 1980; Helmrath & Steinitz, 1978; Wilson et al., 1982; Walwork, 1985). See also Dyregrov & Matthiesen (1987) for further analysis.

We found a relationship between anxiety expressed at the time of study and the difficulty the parent felt communicating with one's spouse following the death. Anxiety was also related to the perception of one's spouse reacting longer and more strongly than oneself. Although the correlation does not imply any causal direction, it seems justifiable to believe that the intrafamiliar communication will affect one's emotional reactions. Communication seems necessary in securing support and care from one's spouse, and lack of such support makes one prone to more anxiety. Being unable to exchange information about one's reactions and seing the partner react differently than oneself, probably adds to feelings of isolation and diminishes the chance of mutually reducing insecurity and anxiety.

The death of a child leads to a strong increase in parental fears regarding their other children, as evidenced in other studies (DeFrain & Ernst, 1978; Clyman et al., 1980; Kennell et al., 1970). The unpredictability of the SIDS deaths render these parents especially vulnerable. In our intervention program parents have reported overprotection of their other children, in an effort to assure that nothing will happen to them, (see also DeFrain & Ernst, 1978; Cornwell et al., 1977; Clyman et al., 1980; Kennell et al., 1970). Others reported the need to be physically closer to their children for comfort (as also reported in Mandell et al., 1983). These changes in "parenting" may hamper the identity development of the child, and it is reasonable to think that the parents' anxiety lead to increased anxiety in the children.

The parents' fear was also present through a new pregnancy, with SIDS parents reporting the most fear. Again, the unpredictability of these deaths must bear the responsibitlity for this. This fear has been noted in many SIDS studies (cf. Blueglass, 1981; Lewis, 1981), and the anxiety of SIDS mothers has been found to be more than a transitory phenomenon (Lewis, 1981). But although SIDS parents generally experienced most anx-

iousness during a pregnancy, the stillbirth group reported "very much" anxiety most frequently. This was to be expected, as the death took place during their last pregnancy. Regarding both surviving and later-born children, parents seemed to develop an anxiety-preparedness; thus being ready for the worst to happen. To some extent this characterizes all three groups.

Multiple regression analysis showed that anxiety to a relatively high degree could be predicted from psychosocial conditions such as the parents' age, the perceived lack of support from others, and the sex of the parent. Anxiety increased with advancing age, and this could not be explained by having more living children. Our finding was in opposition to Benfield et al. (1978) who found no relationship between age and parental grief score. In their study, however, they did not focus on anxiety specifically. In the clinical follow-up we noted that younger parents more often than older seemed more "carefree", more apt to take the view that the future was ahead of them, and less willing to dwell on the negative impact of the event.

It should be emphasized that a relatively large part of the variance in anxiety was not predicted from the psychosocial variables utilized. It must also be emphasized that multiple regression analysis is a method expressing degree of covariance between variables, and it does not imply any causation. The method is descriptive or an interpretation tool (Kim & Kohout, 1975). Dependent and independent variables are chosen from rational considerations.

Our results confirm the mitigating effects of social support in loss situations, where lack of social support is found to be related to more adaption problems in both widowers and widows (Vachon et al., 1982; Cobb, 1976), and in parents following the death of a child (Klaus & Kennell, 1970; Laurell-Borulf, 1982; Spinetta et al., 1981). As parents in this study received very little follow up care and support from health professionals, it is not unexpected that their perception of support from the hospital shows little relationship to later experienced anxiety. The reaction of the parent's closest social surroundings (spouse and close family) was more important for long-term anxiety than the support and care received from health professionals.

Do parents lose their sense of invulnerability as a consequence of the loss? The results from the questionnarie as well as clinical observations document the heavy impact the loss of a child had on the parents' assumed feelings of security in the world. Especially following SIDS loss the parental reactions parallelled those reported following other extreme life events (Niederland, 1968; Scheppele & Bart, 1983; Allodi & Cowgill, 1982; Krupnick & Horowitz, 1980; Ochberg, 1978). From a relatively uncomplicated view of the world as a "safe" place to live, the world was turned into a place full of uncertainty, insecurity and fear. The cognitive frame for the experienced anxiety seemed to be an apprehension about a new disaster; "it has happened once and it can happen again". A mental "set" for experiencing even highly safe situations as unsafe was often evident. For many this implied a thorough change in their beliefs about the world and the future; "The truth is that life is on loan, even my own. This is increasingly clear to me. I am cautious, and do not plan a long time ahead" (father, neonatal death).

The quantitative data is gathered retrospectively. The human mind seems to forget the painful and remember the pleasant (see Ericsson & Simon, 1980). Thus one may expect an underreporting of painful feelings in a retrospective account of the loss experience. Although many parents failed to return the questionnaire, our response rate was similar to other studies conducted several years following the loss of a loved one (see Shanfield, Benjamin & Swain, 1984). Despite the relative high anxiety reported by the parents in this study, there is reason to believe that the anxiety level is even higher if non-responders are taken into account. Other studies have shown that non-responding parents are more

emotionally affected following the loss than responding parents (Clarke & Williams, 1979; Cooper, 1980).

All in all this indicates that our estimates of emotional reactions probably are lower than the true prevalence of reactions among parents who have lost their child.

CONCLUSION

From the results of this study it is evident that parents experience a great deal of anxiety following the death of their child. Parents who experience a SIDS death report more anxiety following the death than parents experiencing neonatal death and stillbirth. Regarding anxiousness for other children, and anxiousness during a new pregnancy, there is no over all group effects. A multiple regression analysis show "sex", "age", and "lack of support from other" to be the strongest predictors in explaining variations in state anxiety (STAI).

The results illustrate that anxiety experienced following the death of a child in many respects is comparable to the reactions shown to other traumatic life events. The illusion of invulnerability is very often badly shaken. While we have focused on anxiety, this is true regarding other reactions as well, such as sadness and intrusive thoughts (see Dyregrov & Matthiesen, 1985). The anxiety was not just a transitory phenomenon but continued over time, and was prominent in relation to a new pregnancy and birth.

In the literature on follow up of bereaved parents anxiety reactions aspects have received little attention. Health personnel are often inadequately and insufficiently trained to understand and handle the increase in vulnerability and anxiety among parents. To prevent the post-traumatic anxiety problems from turning into more permanent problems, it is important to have better trained health personnel, to provide families with adequate follow-up from hospitals, primary health providers and others. From a therapeutical viewpoint it seems well advised to use therapeutic techniques and working methods devised in relation to other traumatic life crises (as coherently presented by Horowitz, 1976, and Schrignar, 1984).

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Parental grief following the death of an infant—a follow-up over one year

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The course of parental bereavement during the first year following an infant's death was investigated. Also, the differences in mothers' and fathers' reactions, the differences according to the mothers' occupational role, and the similarities in couples' reactions were studied. From a total sample of 59 families, 13 families answered their questionnaires at all three time points (1, 6 and 13 months), 22 families responded at two time points, and 37 families responded at some point following the loss. Measures relating to anxiety, depression, bodily discomfort, general well being and impact of event were used at the three time points. The results showed that grief, as measured by the different inventories, decreased over time. The decrease was most evident from 6 to 13 months, and most prominent in women. A considerable number of the parents were still actively dealing with the loss all through the first year of bereavement. In most couples the mother reported most distress. Mothers were significantly more depressed than fathers at all time points, and mothers also had significantly higher anxiety and lower general health at 1 and 13 months, and intrusive scores of 1 and 6 months. Women at home evidenced more grief at all three time points than women employed outside the home. A high or low score in one spouse was more strongly correlated with a similar score in the other at 1 and 13 months, than at 6 months. The implications for counselling of parents, with special emphasis on the employment situation of the mother, is emphasized.

Key words: Infant loss, bereaved parents, grief reactions

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Many studies indicate a decline in *grief over time* following the loss of an infant child (DeFrain & Ernst, 1978; Clarke & Williams, 1979; Lowman, 1979; Price *et al.*, 1985). However, the time proposed for satisfactory adjustment varies considerably. The grief reactions of the majority of parents continued throughout the first year of bereavement (Jensen & Zahourek, 1972; DeFrain & Ernst, 1978; Forrest, Standish & Baum, 1982; Price *et al.*, 1985; Videka-Sherman & Lieberman, 1985), and there are indications of long-term consequences (several years) of child bereavement with little diminishing of grief over time (Jurk *et al.*, 1981; Laurell-Borulf, 1982; Miles, 1985; Rando, 1983; Lehman *et al.*, 1987). However, others (Lowman, 1979; Cooper, 1980) have found that the majority of parents had returned to normal function after 6 months.

Clinical reports and retrospective studies focusing on the father's grief find it to be less intense and shorter than the mother's following the death of a infant (e.g. Benfield *et al.*, 1978; Helmrath & Steinitz, 1978; Peppers & Knapp, 1980; Wilson *et al.*, 1982; LaRoche *et al.*, 1984; Videka-Sherman & Lieberman, 1985; Dyregrov & Matthiesen, 1987*a*). It has been reported that the majority of men were shown to have recovered within 6 months of the loss (Forrest *et al.*, 1982; Cornwell *et al.*, 1977). Systematic measurements of grief reactions have shown that fathers report less grief than mothers (Dyregrov & Matthiesen, 1987*a*; Kennel *et al.*, 1970).

There is mounting evidence suggesting that working women in general fare better emotionally than housewifes (Haw, 1982; Kessler & McRae, 1982; Verbrugge, 1983). Women

in the housewife role have been found to have lower self-esteem than their employed counterparts (Birnbaum, 1975), and they are significantly more depressed than wifes employed outside the home. Employed wives do not significantly differ in level of depression from comparable men (Gore & Mangione, 1983). Following infant loss, it is known that many men become increasingly involved outside the home (Mandell *et al.*, 1980). Men are said to find the structured activity of their work helpful. It is not known *how work outside the home affects women's grief reactions.* In this report this question will be addressed.

Mothers who report strong (or mild) reactions tend to have partners who report strong (or mild) reactions (Benfield *et al.*, 1978; Dyregrov & Matthiesen, 1987*a*). No prospective study has been conducted to see whether this changes during the course of bereavement.

The inconsistent findings in the various reports can be due to problems in measurement and method. The vast majority of studies have been retrospective, and systematic measures to rate various components of grief have seldomly been applied. In this article we will assess grief reactions prospectively over the first year of bereavement. We will apply *5* different psychological inventories to ensure a measurement of various components of grief, and both mens' and womens' grief reactions will be measured.

The following issues are addressed:

1. Is there a gradual decline in grief reactions, as measured during the first year of bereavement?
2. To what extent do mothers' and fathers' grief reactions differ during the first year of bereavement?
3. Do mothers' reactions differ according to their occupational role?
4. Do the two members of a couple react in a similar or different way?

METHOD

Subjects

Fifty nine families who lost a child during the first year of life received questionnaires. One family consisted of a mother only. This constituted all families (with the exception of 9 families mentioned below) who suffered the loss of their child at the Neonatal Intensive Care Unit at the Department of Pediatrics, Haukeland Hospital, Bergen within a $2\frac{1}{2}$ year period, and all Sudden Infant Death (SIDS) families that were in contact with the Department of Pediatrics in the same time period. Nine families were excluded because of practical, clinical or ethical reasons: foreigners (2), twin birth with the death of one or both twins (2) extremely adverse psychosocial family situation (4), address unknown (1).

In 13 of the 50 families who received the questionnaires both parents answered their questionnaire on all 3 occasions (1, 6 & 13 months) after the loss of their child. Some parents failed to fill in the whole questionnaire. In 9 additional families both parents responded on 2 occasions. Data from the 37 families who reported at one or more time points following the death of their child will be included (maximum N for women = 37 and for men = 33). The return rate at 1, 6 and 13 months were 51%, 35% and 37% for women, and 50%, 32% and 32% for men.

Based on hospital records, the families of responding (returned the questionnaire one or more times) and non-responding families were compared on some selected variables. There were no significant differences between the groups ($t > 0.05$, two-tailed test) on variables such as: the child's weigth at birth, the life-span of the child, the mother's age, the presence of siblings in the family, and whether the family lived in rural or urban areas. Comparisions on the same variables between the families who responded only at 1 month, and those who responded at two or three time points, likewise revealed no significant differences ($t > 0.05$, two-tailed test).

The mean age was 29.3 years for men and 27.4 years for women. 64.4% lived in urban areas. 16.9% of all the parents had primary school as their highest level of education, 62.7% had high school or the equivalent, and 20.3% had a university background.

The sample consisted of 8 families who experienced a SIDS-death and 29 families who experienced a peri- or neonatal death. Five children died within the first week of life.

All parents who had lost children at the Neonatal Intensive Care Unit (NICU) or in SIDS were offered grief crisis counselling as part of a three year project aimed at supporting families who had lost newborns and infants. All but 8 families received such intervention. The grief crisis intervention is described in more detail elsewhere (Dyregrov, 1990).

Measures

Questionnaires were distributed at 1, 6 and 13 months following the loss. The first questionnaire contained questions providing sociodemographic information, and questions related to the loss itself, including the parent's immediate reactions to the loss and their perception of support from partner and family. The questionnaires sent out at 6 and 13 months explored the parent's perception of support from spouse, family and others, their sense of recovery, and sibling reactions. Questions for the instrument were based on previous studies concerning parental reactions to the death of a child (i.e. Kennell *et al.*, 1970; Cullberg, 1966; Rowe *et al.*, 1978; Mandell *et al.*, 1980), and on exploratory interviews and meetings with parents who had lost a child.

To investigate adaption to the loss over time, 5 inventories measuring different components of grief were included at all three time points:

1. The Impact of Event Scale (IES) (Horowitz *et al.*, 1979; Zilberg *et al.*, 1982) which provides a measure of intrusive thinking (IES-I) and periods of avoidance (IES-A) following traumatic life events.
2. The 20 item version of the Goldberg General Health Questionnaire (GHQ) (Goldberg, 1978) was used to assess psychological impairment of health.
3. The state version of the State-Trait Anxiety Inventory (STAI X-1) (Spielberger *et al.*, 1970) was used to assess the degree of residual anxiety.
4. The Bodily Symptom Scale (BSS) (Persson & Sjöberg, 1981) was employed to provide a measure of bodily discomforts.
5. The short form of the Beck Depression Inventory (BDI) (Beck & Beck, 1972) was employed to provide a measure of depression.

Mothers and fathers filled out separate questionnaires.

All the inventories used in our study showed adequate psychometric properties (inter-item reliability), over time. Cronbach's Alpha varied between 0.81 and 0.97.

Procedure

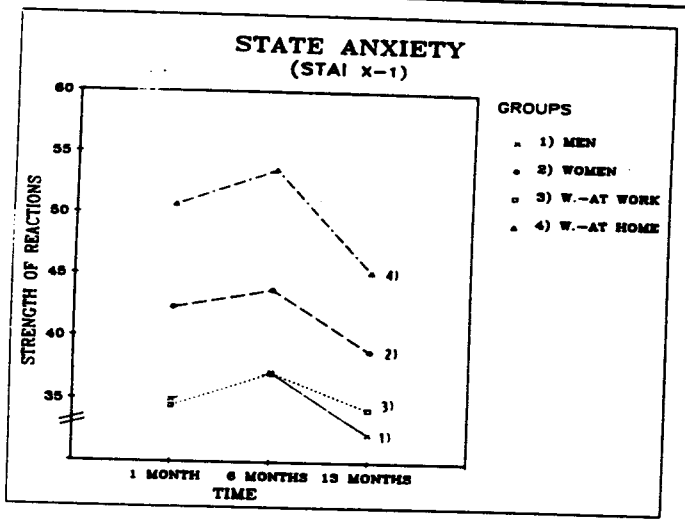
Whenever possible, parents met with the crisis counsellor (first author) within the first two days after the death. Contact was not established with 8 families, and these families received no grief follow-up intervention from the hospital. For anticipated deaths, contact was most often established with parents prior to the death. Following the death of their child, parents were informed about our effort to gain more information on parental responses to infant deaths, and that they would receive questionnaires at 1, 6 and 13 months following the death. We stressed that they were free to decline answering the questionnaire should the questions upset them. Failure to answer the questionnaires was not brought up in clinical sessions. However, parents received a questionnaire at 6 or 13 months even if they had failed to respond to an earlier request.

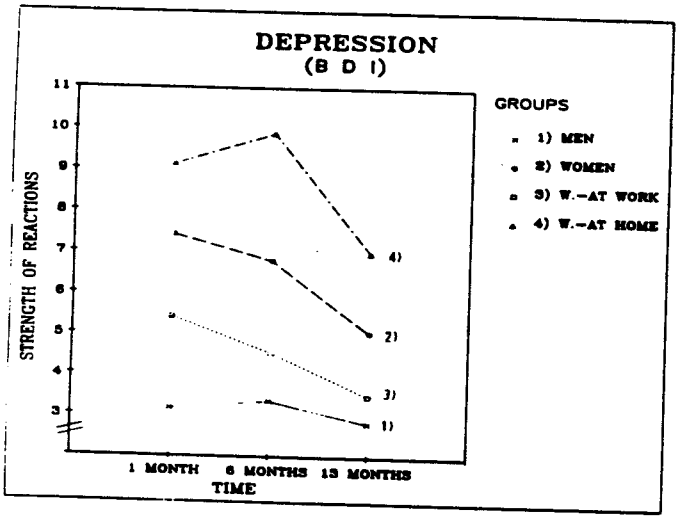
When contact was not established during the first period following the loss, the family received the questionnaires through the postal service at 1, 6 and 13 months. An introductory letter explained the objectives of the study, i.e. to increase health personnels' knowledge of family reactions after the loss of a child, and to improve hospital support for such families. The parents were offered our grief crisis counselling, as well as other assistance should they need it.

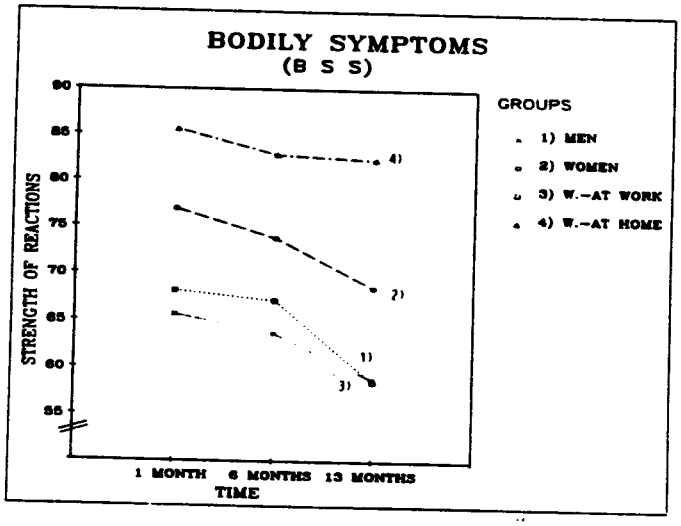
Mothers and fathers received identical questionnaires except that the mother's questionnaire also contained questions about sibling reactions, and questions requiring only one of the parents to answer (factual information). Estimated fill-in time for the questionnaire was 45–60 minutes (somewhat shorter for the father). As questionnaires were shorter at 6 and 13 months, fill-in time was reduced.

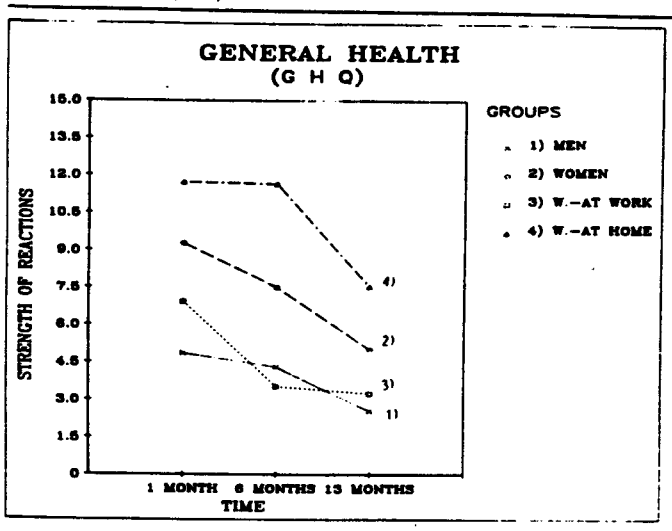
Statistics

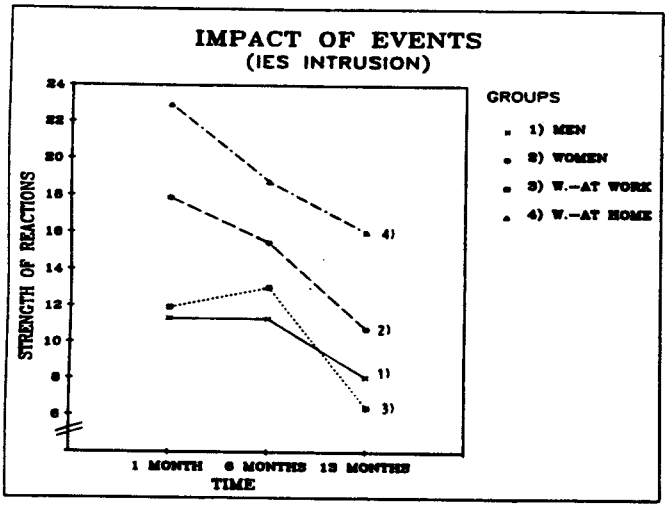
The data from the questionnaires were coded and entered on a permanent data file. SPSS-X (SPSS inc., 1983) and MULTIVARIANCE (Finn, 1972) was used for the statistical computations.


STATE ANXIETY
(STAI X-1)
STRENGTH OF REACTIONS
60
55
50
45
40
35
4)
2)
3)
1)
1 MONTH
6 MONTHS
13 MONTHS
TIME
GROUPS
1) MEN
2) WOMEN
3) W.-AT WORK
4) W.-AT HOME


DEPRESSION
(B D I)
STRENGTH OF REACTIONS
11
10
9
8
7
6
5
4
3
4)
2)
3)
1)
1 MONTH
6 MONTHS
13 MONTHS
TIME
GROUPS
1) MEN
2) WOMEN
3) W.-AT WORK
4) W.-AT HOME


BODILY SYMPTOMS
(B S S)
STRENGTH OF REACTIONS
90
85
80
75
70
65
60
55
4)
2)
1)
3)
1 MONTH
6 MONTHS
13 MONTHS
TIME
GROUPS
1) MEN
2) WOMEN
3) W.-AT WORK
4) W.-AT HOME





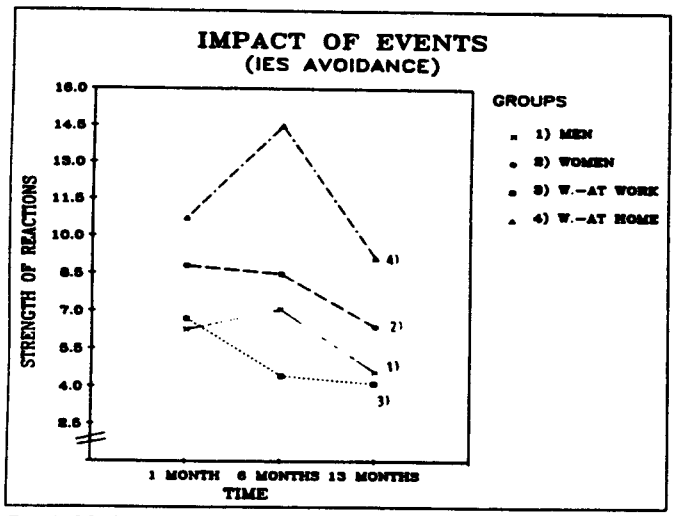


Fig. 1. Mothers' and fathers' grief at 1, 6 & 13 months after the death of their child.

Table 1. *Number of respondent (N) and mean scores (M) for the different inventories*

	Inventory	1 month		6 months		13 months	
		N	M	N	M	N	M
WOMEN	STAI X-1	29	42.3	20	43.8	19	38.8
	BDI	27	7.4	19	6.8	21	5.1
	BSS	28	76.9	19	73.7	19	68.6
	GHQ	28	9.3	19	7.5	19	5.0
	IES I	26	17.9	19	15.4	20	10.7
	IES A	27	8.8	20	8.5	20	6.4
MEN	STAI X-1	28	35.0	18	37.2	17	32.2
	BDI	25	3.2	17	3.4	17	2.8
	BSS	26	65.7	18	63.7	17	58.8
	GHQ	27	4.9	17	4.3	17	2.5
	IES I	26	11.3	17	11.3	18	8.1
	IES A	27	6.3	18	7.1	18	4.6

RESULTS

37 families (62.7%) returned their questionnaire at one or more occasions.

Exact N and the mean scores for men and women, based upon all available questionnaires for each of the three time points, are listed in Table 1.

Fig. 1 presents the mean grief scores of men and women at the three time points, as well as women split into two groupings; those who continued working outside the home and those who continued working at home.

Womens' (all women included in one group) and mens' mean score generally show a decline over time. The statistical analysis (ANOVA, repeated measures, and MULTIVARIANCE, using Helmert contrasts) are restricted to cases with valid data for all three points (max. $N = 22$ for STAI X-1, min. $N = 18$ for IES-I). The number of respondents included in the mean scores in Fig. 1 is therefore higher than in the ANOVA and MULTIVARIANCE analysis. However the means for the total sample and the means from the restricted sample are similar. The statistical analysis shows that the trend in the data (grief over time) is basically the same when using the whole or a restricted part of the sample. ANOVA, repeated measurements, shows that in women, the change in grief score is significant for the following measures: BDI ($F(2/18) = 1.95$, $p < 0.001$), GHQ ($F(2/18) = 2.76$, $p < 0.001$) and IES Intrusion ($F(2/16) = 3.82$, $p < 0.001$). Fig. 1 indicates that the reduction in mean grief scores is most evident among women, with the exception of anxiety where their mean level rises from 1 to 6 months.

ANOVA, repeated measurements, shows that for men the decline in grief is significant for the following measures: STAI X-1 ($F(2/20) = 2.24$, $p < 0.001$), BSS ($F(2/16) = 2.52$, $p < 0.001$), GHQ ($F(2/16) = 1.01$, $p < 0.05$), and IES Intrusion ($F(2/16) = 1.88$, $p < 0.001$). The mean levels of anxiety, depression, and avoidance for men rise from 1 to 6 months, otherwise the levels decline.

Multivariance, using Helmert contrasts, was selected to create a factorial design with sex as an independent variable. Sex was investigated in relation to two constrast factors: the difference between time points 1 and 2, summed up for all informants with valid answers on each of the 3 time points (trend 1), and correspondingly, the mean of time point 1 and 2, contrasted to time point 3. However, none of the contrast models for each of the grief inventories revealed significant overall effects.

Fig. 1 indicates that mens' and womens' (all women) mean values differ from each other at all three time points. There is a parallel drop (and rise in anxiety) in the two sexes' scores, and at no time and on no measures is the mean score of fathers higher than that of mothers. The differences between men and women are significant on the following measures: BDI 1 month ($t(2/50) = -2.65$, $p < 0.05$), BDI 6 months ($t(2/34) = -2.26$, $p < 0.05$), GHQ 1 month ($t(2/53) = -2.23$, $p < 0.05$), IES Intrusion 1 month ($t(2/50) = -2.13$, $p < 0.05$).

The group of women were split into 'working' women (employed outside the house) and housewives, and Fig. 1 shows that women at home have a higher level of distress than their working counterparts on all measures, at all times. 9 of 18 possible comparisons reveal significant differences between working women and housewives' grief scores ($p < 0.05$, using Student t-tests, two-tailed, see note 1 below). Differences are significant for STAI-X-1 (all time points), BDI (at 6 months), BSS (at 13 months), GHQ (at 6 months). IES Intrusion (at 6 and 13 months), and finally IES A (at 6 months). (For exact t-tests see note 1). For most measures the housewifes' mean scores either peak (anxiety, depression, avoidance) or remain stable (bodily symptoms, general health) at 6 months, but for intrusion the scores indicate a gradual decline. For working mothers there is a gradual decline from 1 to 13 months, except for anxiety and intrusion which peaks at 6 months. The score on GHQ drops from 1 to 6 months, and then remains at this level at 13 months.

Working womens' mean inventory scores are similar to those of men, while housewives show scores indicating much higher levels of distress. For some of the inventories the working mothers' score is below that of men (GHQ, IES Intrusion and IES Avoidance).

In Table 2 we have compared parent's grief reactions as a couple at 1, 6 and 13 months, using Wilcoxon matched-pairs signed ranks test. For all inventories, at all time points, there is a majority of couples where the mother has a higher score than her spouse, except for bodily symptoms at 6 months where the couples' score is equally distributed between mothers and fathers. In a majority of the couples it is the mother that indicates most distress. For depression the difference is significant at all three time points, for anxiety and general health it is significant at 1 and 13 months, and for intrusion at 1 and 6 months. In spite of these general results, however, it should be noted that the fathers in many couples indicate more distress than the mother.

For BDI (short version) a cutoff point score of 4 was used to identify those who evidenced mild, moderate or severe depression (Beck & Beck, 1972). We found that more women than men evidenced some form of depression at all three time points (see Table 3). The majority of women were above the cutoff point for depression all through the first year of bereavement, while 1/4 to 1/3 of the men were above this point. For both sexes there were more persons above the cutoff point at 6 months than at the other two time points.

With a a cutoff score of 4 in the GHQ (Goldberg, 1978), Table 3 shows that there is a decline over time in the percentage of men who score above the cutoff level. The percentage of women who score above the cutoff point remains the same from 1 to 6 months, with some decline at 13 months. There are more women than men who score above the cutoff point at all three time points.

[1]Significant t-tests between working women and housewives grief scores

STAI X-1: $t = -3.05$, df = 1/27, $p < 0.01$ (1 month), $t = -2.97$, df = 1/18, $p < 0.0$ (6 months), $t = -2.37$, df = 1/17, $p < 0.05$ (13 months).

BDI: $t = -2.41$, df = 1/17, $p < 0.05$ (6 months).

BSS: $t = -2.36$, df = 1/17, $p < 0.05$ (13 months).

GHQ: $t = -2.84$, df = 1/17, $p < 0.05$ (6 months).

IES I: $t = -3.35$, df = 1/24, $p < 0.01$ (1 month), $t = -2.66$, df = 1/18, $p < 0.05$ (13 months)

IES A: $t = -2.98$, df = 1/18, $p < 0.01$ (6 months).

Table 2. *Comparison of parent's grief reactions 1, 6 and 13 months after the loss. Differences on inventories tested for significance by the use of Wilcoxon matched-pairs signed ranks test for related samples*

	Direction of differences			
Inventory	Father highest score	Mother highest score	Equal score	Wilcoxon *Z*
	1 Month			
STAI	8	20	0	−1.97*
BDI	2	17	6	−3.28***
BSS	10	15	1	−1.91
GHQ	6	19	2	−3.07**
IES-I	6	17	2	−2.55**
IES-A	8	18	0	−1.74
	6 Months			
STAI	7	9	1	−1.09
BDI	2	13	1	−2.27*
BSS	8	8	0	−0.78
GHQ	4	10	1	−1.73
IES-I	4	12	1	−2.12*
IES-A	8	8	2	−0.16
	13 Months			
STAI	3	14	0	−2.63**
BDI	3	11	3	−2.42*
BSS	7	9	1	−1.73
GHQ	3	11	2	−2.23*

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table 3. *Percentages of men and women above the recommended cutoff points[1] at 1, 6 and 13 months following an infant loss*

	1 month		6 month		13 months	
Inventory[2]	men	women	men	women	men	women
Depression (BDI)	28	52	35	63	24	57
General health (GHQ)	41	57	29	58	18	41
Intrusion[3] (IES-I)	54(19)	69(42)	47(12)	79(21)	28(6)	40(20)
Avoidance[3] (IES-A)	26(4)	33(7)	12(6)	25(10)	17(0)	20(5)

[1]For BDI and GHQ the recommended cutoff score is 4. For the IES the low distress score is less than 9, medium distress score from 9 to 19, the high distress score is above 19. [2]*N* for the different time points are found in Table 1. [3]High and medium distress levels combined, with high distress only in parenthesis.

When using Horowitz' (1982) criteria for high (more than 19), medium (9–19) and low distress (less than 9) levels, we again found that for intrusion more women than men had a high or medium level of distress at all three time points. For both sexes there is a drop in distress from 6 to 13 months. 40% of the women still experience high or medium levels of intrusive distress at 13 months.

The percentages scoring above the cutoff points are lower for avoidance than for intrusion. Although womens' scores exceed men at all three time points, the differences are less

Table 4. *Rank order correlation (Spearmans rho) between fathers' and mothers' grief (the spouses in each couple is compared directly) for those pairs that completed the questionnaire at 1, 6 and 13 months*

		Inventories					
		STAI X-1	BDI	BSS	GHQ	IES Intrusion	IES Avoid.
Father vs. mother[1]	1 month	0.31*	0.43**	0.35*	0.44**	0.18	0.17
	6 months	0.06	0.32	0.16	0.27	0.33	0.22
	13 months	0.25	0.50**	0.37*	0.30	0.34	0.15

[1]At 1 month N varies between 25 and 28, at 6 months N varies between 15 and 18, and at 13 months N varies between 16 and 18.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$, two-tailed test.

pronounced. While the percentage of women indicating distress decreases, there are more men who indicate distress at 13 months than at 6 months.

The spouses grief reactions correlated significantly in 4 out of 6 inventories at 1 month following the loss, none at 6 months, and 2 at 13 months (see Table 4). This indicates that the spouses tend to have similar grief reactions early following bereavement, more dissimilar reactions at 6 months, and somewhat more similar reactions at 13 months.

The subjects who received grief intervention experienced significantly less anxiety (STAI X-1) at 1 month ($t(2/55) = 2.10$, $p < 0.05$) and 13 months ($t(2/34) = 2.30$, $p < 0.05$), and significantly more bodily symptoms (BSS) at 13 months ($t(2/34) = 2.58$, $p < 0.05$) and intrusive thoughts (IES-Intrusion) at 1 month ($t(2/50) = 2.72$, $p < 0.05$) than those who did not receive grief intervention.

The reactions of parents in families with a living child did not differ significantly from families without children, except from mothers with living children who reported significantly more depression at 6 months than those without children ($F = 7.12$, df 1/15, $p < 0.05$). There were no significant differences on the 5 inventories between those parents expecting a new child, and those who did not.

DISCUSSION

Resolution of grief over time

Grief, as measured by different inventories, showed decrease over time. The decrease was most prominent in women. When the decline in mean grief scores and the decline in percentages scoring above cut-off points are considered together, the decline in grief reactions is most evident from 6 to 13 months.

If we compare the mean values found at 13 months in this study with the mean values found in an earlier retrospective study where data were collected with the same measures at a mean of 27 months following the death (Dyregrov & Matthiesen, 1987*a*), we find that the mean scores in the retrospective study are somewhat lower, but not much. This can, cautiously, be taken as an indication that by 13 months much of the adaption to the loss has taken place. The recovery process for the parents in this study may have been accelerated as a majority of the parents received grief crisis intervention. However, the results show that although the parents who received grief intervention reported less anxiety at 1 and 13 months, they also reported more intrusive thoughts at 1 month and more bodily symptoms at 13 months. As the majority of parents received intervention, and only 8 couples did not, it is premature to draw firm conclusions based on these results.

Anxiety did not show the same decline pattern as the other measures. We have previously documented that anxiety constitutes a special problem for parents that have lost a child (Dyregrov & Mathiesen, 1987*b*). Their illusion of invulnerability is shattered and they expect the worst to happen, and their anxiety is increased by hearing or reading of other peoples' misfortunes.

The mean STAI X-1 scores for women at 6 months in this study were quite similar to those found by Rubin (1982) in his investigation of grief reactions in mothers 7 months after the loss of an infant. Rubin found a mean STAI X-1 score of 45.0 in women who had lost children an average of 7 months earlier, while our womens' mean STAI X-1 score at 6 months follow up were 43.8 (SD = 14.4). Rubin (1982) also studied a group of women who had experienced a loss about 52 months earlier, and found a STAI X-1 score that was almost identical to the mean STAI X-1 score found in mothers in our retrospective study (see Dyregrov & Matthiesen, 1987*a*) where about 27 months had elapsed since the death. Both Rubin's and our own findings indicate that bereaved mothers' anxiety scores remain elevated for years following the loss.

The level of state anxiety reported in normative population samples varies around a score of 30 (Speilberger *et al.*, 1970). In a discussion of the Norwegian version of the STAI X-1, Weisæth (1984) argued that there was a tendency to rate one's anxiety too low in a Norwegian sample. According to Weisæth, the Norwegian baseline state anxiety score was somewhat lower than the U.S normative samples.

We found that the loss of a child resulted in increased anxiety among parents (especially in housewives), well above normative samples, and that this anxiousness continued during the first year of bereavement.

The mean scores on the Bodily Symptoms Scale were above those found in a 'normal' group, and a group suffering from chronic disease (chronic rheumatism) in a Swedish study (Persson & Sjøberg, in press). The scores of the bereaved parents on the Impact of Event Scale, especially for intrusion, were mostly above those found in a Norwegian prospective study which measured intrusion and avoidance within 7 days, at 6–9 months, and $2\frac{1}{2}$ years following adults' hospitalization for accidental injury (Malt, 1988).

The percentage of persons scoring above the cutoff points for both depression and general health, as well as the percentage experiencing high to medium degrees of intrusiveness, are relatively high, suggesting that many bereaved parents show little evidence of resolution within 13 months. A considerable number of the parents still seemed to be actively dealing with the loss all through the first year of bereavement.

Differences in mothers' and fathers' grief score

As in our retrospective study (Dyregrov & Matthiesen, 1987*a*), we found mothers reporting more distress than fathers. Wilcoxon signed rank test also revealed that for all inventories, at all three time points, except bodily symptons at 6 months, there were more couples where the mother had a higher score than the father.

Fathers were much more reluctant to express their feelings than mothers both verbally and in writing. While mothers often cried in the clinical sessions, fathers almost never did this. On the questionnaires many mothers wrote long accounts on how they had experienced different aspects of the loss, while fathers usually gave brief 'matter of fact' answers. Although both women and men more freely reported their reactions in clinical encounters than in questionnaires, our impression is, in line with others (e.g. Mandell *et al.*, 1980), that fathers' grief often goes unarticulated. Fathers have generally more difficulties in setting words to their emotions. Although employed women had similar grief scores to the men on the inventories,

they did not differ from women who stayed at home concerning their verbalization of emotions throughout the clinical follow-up.

Data from the child bereavement literature (Tudehope *et al.*, 1986; Nixon & Pearn, 1977; Mandell *et al.*, 1980; Wilson *et al.*, 1982), and from other crisis situations, such as having a child with cancer (Chesler & Barbarin, 1984), also suggests that fathers avoid dealing with their own feelings and utilize their support systems less than mothers. Furthermore, men may have more difficulty in asking for intimate emotional help, or being open to such help, than women (Gourash, 1978). The males' images of strength, family leadership, and being emotionally unaffected, seems to prevent them from expressing their needs and receiving help when needed, while it is more socially acceptable for women to express various emotions. It is also our impression that the social environment is more focused on the mother's reactions, and thus the father's needs are more unrecognized.

It has been speculated whether men are more able to distort the situation in the face of a stressful experience than females (Sowa & Lustman, 1984). The opportunity to concentrate on other aspects of life may be a function of one's occupational (or social) role, more than inborn or socialized traits.

In several couples men scored higher than women on the inventories, so it is probably not male inexpressiveness but masculine inexpressiveness that is the operable phenomenon, as Ganong & Coleman (1985) emphasize. Sex-role orientation in males and females would probably have been more significant in determining how freely emotions were expressed. In forthcoming studies we need to include measures on sex-role orientation.

Employed mothers vs. housewives

We found that the housewives were more distressed than their working counterparts on all measures. The scores of men and working women were similar on most measures. However, these results, and the following discussion must be viewed in light of the small number of women in the two groups, and the lack of background data regarding their occupational choices. There were almost no changes in the occupational status of the mothers following the loss.

The loss of a child may signify less threat to the self of the working mother than the housewife, as their self-image and self-respect also are tied to their occupational role in addition to their role as mothers. The loss of a child threatens the housewives' primary role, and may influence her sense of worth as a mother and a women. Do housewives place more value on children, become more attached to them, and are they willing to sacrifice more for them? If so, one would expect more distress following a loss.

The data from this study show that mothers who return to work have a grief pattern, as reflected in the inventory scores over time, which are similar to fathers. A job confronts the parent with situational demands that must be met and these are apt to draw one's attention from personal troubles. Returning to work can therefore influence distress level by keeping parents from ruminating about the loss and keeping their thoughts on other issues. Verbrugge (1983) notes that health risks may generally be lower for socially active than for less active people, and that activity level associated with a job leads to less time spent on anxious or depressed states.

In several studies it has been commented on the mothers' loneliness and isolation when staying at home following their child's death (Stringham *et al.*, 1982). There is a tendency for mothers to isolate themselves from their social environment (Berg *et al.*, 1978). This social isolation may be a health hazard for housewives (Lopata, 1971). An inadequate social network appears to place housewives in special jeopardy when they are faced with a crisis—especially a marital crisis (Brown & Harris, 1978).

Housewives experienced more intrusive thoughts than working mothers. In fact the lowest level of intrusiveness experienced by housewives (at 13 months), was higher than the highest level experienced by working mothers (at 6 months). Preoccupation with thoughts about the lost child hinders relinquishment of the attachment, a part of the grief work considered necessary to adapt to the loss. Furthermore housewives are usually faced with a social environment where they are constantly reminded of their loss. Videka-Sherman (1982) found that persistant preoccupation with the death was associated with persisting depression.

The demands on housewives with children at home may be especially hard, as attending to the needs of surviving children can indeed be stressful for mothers (Dyregrov, 1990). The sample was too small to further split it into working mothers with and without children at home and employed women with and without children. However, there was little difference between women with alive children compared to women without living children, except for significantly more depression at 6 months for mothers of living children. A study with a larger number of respondents is called for to differentiate the effects of living children and employment status on the reactions of bereaved parents.

Selective factors may also account for some of the differences between housewives and working mothers. The mothers who enter and keep a job may be more "healthy" originally. The difference may also reflect other differences between working women and women in the housewife role. Due to lack of background data, the study does not permit firm conclusion in this area.

Clinically we have not noted any difference between housewives and working women in their ability to express emotions and thoughts about the loss. We therefore believe that these two groups of women similarly express their emotions, even though one group returns to work. This indicates that the role of the work place as a potential for social support for people in crisis should be more emphasized, and studied in more depth. Specifically, we need to know if the two sexes differs in utilizing social support at their work place.

The low number of women in the two groups, and the existence of several competing hypotheses for the differences between the two female groups, call for systematic research in this specific area.

Grief correspondance within the couples

As in our retrospective study (Dyregrov & Matthiesen, 1987*a*), we again found that the spouses' grief reactions are correlated, as others also have found (Benfield *et al.*, 1978). This suggests that the spouses influence each other's grief and that there may be family patterns of grieving. 6 months following the loss the two spouses' reaction differed most. This suggests that there is a period in the first year of bereavement when spouses are less well syncronized in their grief. This should be taken into account when counselling efforts are considered. This is a period when mothers often complain bitterly to the counsellor about the lack of support they receive from their social network—and when the father is sometimes felt to "join the opposition".

Methodological comments

The results presented here are based on a relatively small sample, with a high attrition rate which also increased with time. The attrition rate is high(er) in other comparable studies (e.g. Cooper, 1980; Videka-Sherman, 1982). In a follow-up study Videka-Sherman (1982) surveyed parents at two time points following a child loss, and only 17% of her original parents answered at the second time point. From other research on bereavement it is known that non-responders usually are more emotionally affected following a loss than responders (Clarke & Williams, 1979; Cooper, 1980; Lehman *et al.*, 1987). If so, our results may be

biased towards a better adjustment in parents than what would have been expected if all parents returned their questionnaires throughout the study period. However, analyses showed that there were no differences on the grief inventories between parents who only responded at 1 month, compared to those who answered several times.

CONCLUSION

1. There is a reduction in grief scores over the first year. However, the decline is largest from 6 to 13 months, and the reduction is largest in women. *2.* On most measures the mother reports more grief than the father at the three time points. *3.* The mother's grief reactions differ according to their occupational role. Mothers occupied outside the home report less grief than housewives. *4.* The spouses reactions were found to correlate more at 1 and 13 months than at 6 months.

The results presented here have implications for the counselling of parents who have lost children. Although there is a decline in grief over time, there are a considerable number of parents who experience distress more than a year following their loss. Bereavement counselling programs have to address the need for long-term follow-up as well as the different needs of those employed outside the home and those working at home. In particular there is a need to note that housewives as a group are more at risk for developing adverse reactions as a consequence of their loss than women employed outside the home. Individual counselling aimed at reducing parents' distress needs to be sensitive to this. When the mother stays at home following the loss, the discrepancy between the mother's and the father's grief will be most pronounced, and one would expect the risk of marital difficulties to be greater. Periodical follow-up with families should therefore be arranged.

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Crisis Intervention following the Loss of an Infant Child

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Introduction

Research reports indicate that the loss of a child precipitates a disruptive and severe grief and mourning response that can cause serious emotional and social problems, even years following the event[1]. Pathological grief reactions occur in 23 to 33 per cent of the parents[2-4]. This paper describes a support programme developed at the Department of Pediatrics, University of Bergen, Norway using preventive grief crisis intervention following the death of a child. The programme included families of children who died at the Neonatal Intensive Care Unit, families who experienced a Sudden Infant Death Syndrome (SIDS), and families who lost children in accidents (mostly older children).

Grief crisis intervention: objectives

Among the objectives of the grief crisis intervention were: (a) to offer human support and comfort (b) to promote the mourning process and prevent pathological grief (c) to prepare the parents for expected reactions and problems (d) to help mobilise social support resources, and (e) to stimulate family communication and cohesion.

As we gained knowledge from the intervention process, we changed detrimental hospital procedures, set up grief groups and conducted educational workshops and seminars for health professionals and community caregivers. These efforts were aimed at creating a better recovery environment for the bereaved families.

We tried to individualise our approach to each family and be sensitive to their needs. An outline of our general approach, and specific interventions aimed at surviving siblings, have been presented elsewhere[5-7]. In many respects our crisis intervention was similar to others'[8-10].

Anticipated loss

When the loss of an infant was anticipated the psychologist made early contact with the family, and emphasis was placed on creating a supportive environment on the ward, where both parents and siblings were encouraged to visit, see and touch the infant. The family was given the option of a separate room, and the effects of a technological environment was alleviated by introducing toys, pictures, etc. The family were offered support throughout the dying process, and the nurses were encouraged to handle the dead baby with great care and respect.

Frequent family conferences were held when the child's medical condition deteriorated, and parents were encouraged to discuss their reactions, thoughts and feeings about the child's situation and the anticipated death. The needs of other children in the family were addressed. Being able to stay with their child as much as possible seemed extremely important to most families (cf. Miles & Carter[11]), and parents were motivated to spend time together with the child whenever possible. When parents subjected themselves to intolerable doses of stress, they were advised about taking care of themselves and their children.

Immediate follow-up

When a child died, the intervention varied according to the type of death. Great care was taken to try to make sure that the situation brought no further stresses to the parents. This meant focusing on details, e.g. the way the baby was dressed or held by the nurses, the time the parents were allowed to spend with the child, and the way questions were phrased. Furthermore, the physician talked with the parents in a comfortable and quiet room, avoiding interruptions. Gentle touching was often appropriate to convey empathy and support to parents. It was often felt that a gesture such as a gentle arm across the shoulder or holding a parent's hand was more needed than words, especially when entering the room with the dead baby.

When a death happened suddenly, we used an active outreach approach and contacted the family. We tried to create a warm and supportive atmosphere for our first meeting. The meeting room was quiet, the surroundings pleasant and the parents were offered tea or coffee. By these means we wanted to convey our wish to help and offer comfort, as well as to prevent the family suffering instrusive recollections of a cold and impersonal hospital system.

In the first session the psychologist conveyed some importan information about normal shock r actions. Most parents experience feelings of numbness and unreality and needed gentle assurance tha their apparent lack of feelings wa normal. Without this assuranc they often interpreted the absenc of feelings as a sign of lack of lov for the child, or as the first sign o going insane. They also needed t feel that everything possible ha been done to save the child's life

The first meeting also include a discussion of their other chil dren's needs, when there were sur viving children. Parents welcome this opportunity to discuss how an when to inform siblings, an whether the siblings should see their dead baby brother or sister o attend the funeral. Most parent were very uncertain about thes matters, and our knowledge abou children's normal reactions t death at various ages was of grea value to them.

Previously, bereaved parent had either had a short glimpse o their baby following a death, o none at all. With our programme the psychologist encouraged pa rents to see their baby after the death. However, parents were always given time to become com fortable with the idea. They were told why they were being advised to see their baby and given time to reflect if they were reluctant Parents (and siblings) were pre pared for what they were going to see, as well as for reactions they might experience. Parents were supported if they declined to see the dead baby.

During the first meeting we found it was important to get both parents' accounts of how they experienced the situation. Letting both the mother and father tell their story was the first step to wards making this a shared event and helped to prevent a lack o understanding between the part ners. As the father often feels ex cluded from the loss, the first ses sion must signal clearly that he is part of the grieving process.

Parents were prepared for the fact that they might each experience a different grief reaction, and helped to understand these differences. They commented that this anticipatory guidance was especially helpful later on when difficulties arose.

Unfortunately there is a tendency in Norway to reduce the emotional distress of a funeral ceremony by having a ceremony where only the closest family members attend, and by stating in the death notice that no condolences are to be made. We advised against this practice by stressing that it prevented the grieving family from meeting sources of social support and that it fostered an escape from the emotional pain that needed to be confronted. We described the funeral rituals as painful but important and necessary milestones in the grief process.

Intermediate follow-up

Families varied in the amount of intervention required during the weeks following the loss. When possible a session was scheduled soon after the funeral, when the shock reaction often started to subside. However, due to the topography and extent of the region served by the programme, only a portion of the families received a minimum of one or two intervention sessions. Based on telephone reports and other feedback, it was intriguing how helpful many of the parents rated this limited number of follow-up sessions.

When the parents started to experience strong grief reactions, they were briefed on normal grief reactions. They were actively prepared for emotions and problems they would possibly face in the weeks that followed. Most parents had little knowledge of crisis reactions, and many normal reactions (e.g. irrational thoughts and 'hallucinations') were interpreted as signs of mental disease or serious disturbance. Psycho-educational counselling seemed to help parents cope with strong and unfamiliar emotions and thoughts, and to reduce their tendency to think that their reactions were abnormal or unique. In addition, parents were thus able to deal more effectively with their emotions and thoughts.

After the funeral, parents were better prepared to process information than immediately following the loss. This was the time when principal questions such as: Why did our baby die? Could the death have been prevented? Who is to blame? What did we do wrong? Can it happen again? needed to be addressed. Although these questions were difficult to answer, the physician usually gave straightforward answers or reassurance. Most parents were eager to find out why the baby died. They had many questions for the physician, and many reported in detail what had happened again and again. As soon as the autopsy results were ready, these were presented to the parents.

There were almost always feelings of guilt and self-reproach (especially in SIDS parents) that needed to be worked through in some detail. Until these feelings were explored in depth, we tried to refrain from saying that there was nothing the parents could have done to prevent what happened. The parents' fantasies about the cause of death were often the real basis for their reactions. When these had been explored, parents could often let go of some of these feelings.

Much of the intervention process during this phase dealt with grasping the cognitive meaning of the event, and dealing with the unreality of the event. The experience of unreality was often prolonged when the baby had lived only a very short time, died at birth, or when the loss came without warning. In these instances making the unreal real was central to the intervention. Talking about memories, looking at pictures and visiting the graveyard brought reality closer and furthered the grief process. Making a memory book or a box containing different memories also proved helpful, especially when parents had had little opportunity for interaction with the baby prior to death.

Other frequent topics in these sessions were the parents' concern for the future, whether or not to return to work, relationships with their parents and relatives, aspects of chronic guilt, sadness, anxiety, and intrusive images. Parents with other children often found it difficult to cope with the conflicting demands of grieving and caring for children at the same time. Frequently other children became more demanding following the death, and parents needed practical advice on how to handle this situation.

When two spouses are simultaneously responding to the loss of a child it can be difficult for them to support each other[12]. The person one would normally turn to for support is also deeply affected by the loss. One mother commented: 'I cannot console my husband—we suffer a common grief'. The sessions with the grief counsellor offered comfort and consolation, as well allowing for opening new ways of communicating within the family.

How mothers' and fathers' responses differ has already been documented[13,14]. Mothers usually grieved more intensely and longer than fathers. It was also evident that mothers were more able to express their feelings. It was not uncommon for one spouse to misinterpret the behaviour of the other, and for accusations which strained the marital relationship to increase. Sometimes the lack of synchronicity in grief influenced the intimacy of sexual contact and sexual interest, causing further problems for the relationship. In our anticipatory guidance we spent considerable time discussing such aspects with the parents, not only to provide them with information about expected reactions, but also to help them understand each other's different ways of feeling and showing grief.

Parents were prepared for the fact that they might each experience a different grief reaction, and helped to understand these differences. They commented that this anticipatory guidance was especially helpful later on when difficulties arose.

If there was an emotional block, i.e. the impossibility of crying or the avoidance of stimuli that triggered memories of the child, active confrontation with the event through guided imagery was a helpful therapeutic approach.

By taking the parents back to the situation and making them actively confront the event, it was possible to help them through the emotional blockage. In addition to guided imagery, we used different behavioural confrontations about different aspects of the death (e.g. visiting the graveyard or the site of death, looking at linking objects, touching toys or clothes) to undo the emotional numbing, and to release inhibited emotions. Once emotional blocks had been breached by appropriate stimuli, time had to be allowed for these feelings to be worked through. Such 'provocative' grief therapy should not be done without more formal training in psychotherapeutic work[15-17].

When the bereaved are unable to extricate themselves from the deceased, or when they totally fail to find the interaction with their environment rewarding, this is viewed as pathological grief[18]. In brief, the intervention for parents who evidenced chronic grief (most often mothers) consisted of facilitating the necessary detachment of

the parent from the deceased, of trying to get the mother (or father) to be active within their social environment, of stimulating emotional control, and of dealing with the deeper emotional meanings of the event. Sometimes the chronic grief originated from feelings of self-reproach and guilt. It was as though parents thought that their baby was watching them and would disapprove if they moved on in life.

Isolation

Many couples signalled cries for help to their external support systems but received little response (cf. Helmrath and Steinitz[19]). A child's death arouses fear and feelings of vulnerability in others, and the more sudden and tragic the circumstances, the more isolated the family becomes from their social environment. Many parents had to provide support for their shocked network. This paradoxical situation sometimes exhausted the bereaved parents, and to guard against this they chose to isolate themselves from others.

Although well-intended, the efforts made by the parents' social network were not always experienced as helpful. Some 'help' actually added to the pain, as comments were felt to be unhelpful and hurtful. Close friends and family also had difficulties knowing how to help and what kind of intimacy the parents wanted following a death. Often they kept away in order not to add to the parents' pain. Although this was well meant, it often added to the parents' sense of loneliness or abandonment. Such issues were dealt with in the sessions with the counsellor. Regrettably parents' only support often seemed to be the sessions with the counsellor. The death of a child seemed such a tragic event that the family's network was unable to confront the pain it triggered over an extended period of time. Paradoxically, when the families' need for support was greatest, they received it least.

As we gained knowledge about network responses, it was possible to modify how the parents elicited support as well as to prepare them for the problems they were likely to meet. Thus parents were helped on how mentally to prepare for their interactions with close friends and relatives. Parents who took an active role in making a social recovery (e.g. specified their own needs) received more of the support and help they needed, when they needed it. The grief groups for parents which I initiated proved useful for many parents. As well as offering social support, these groups provided the parents with a setting where they could compare their reactions with those of others and thus experience that their reactions were normal.

Long-term follow-up

An important issue that arose during the long-term follow-ups was that of a new pregnancy. The majority of parents decided to conceive a new child within a year after their child's death. No specific time limit was set on when it was advisable to have another child, unless there were medical reasons for waiting. However, the parents were advised that they ought to be through the first intense grief period (often lasting from two to three months) before starting a new pregnancy.

A high level of anxiety surrounds a new pregnancy and following the delivery[14, 20]. Assistance for families expecting a new child consisted of psychotherapeutic help for anxiety (e.g. relaxation training, hypnosis, though-stopping procedures), providing extra obstetric care, and extra paediatric check-ups following the birth. Parents' anxiety for their newborn child did not stop at birth, but continued after delivery. Often sessions were set up to focus on the parents' anxiety about their new child. Especially with SIDS parents, we observed extremely vigilant behaviour following the birth of a new child, with parents carefully watching the baby 24 hours a day and many choosing to use an apnoea monitor at home.

As a self-protective measure some parents did not dare to invest their feeings in their forthcoming baby until it was born. This also led them to doubt their ability to love the child when it was born, and here proper reassurance was needed. The programme therefore actively reached out to heighten the sensitivity of obstetric departments and private practitioners to these issues.

Parents gradually integrated the loss in their cognitive structures. Making sense of the event and finding some kind of meaning in misfortune were usually part of the cognitive working through of the loss[21]. In the follow-up session this cognitive integration was stimulated through discussions and interpretations.

Many parents continued to experience grief of various degrees for several years following the death. Anniversary dates were frequently difficult occasions, and periods of sadness and grief ensued. It was found helpful to schedule a follow-up meeting about 13 months after the death, to help with the thoughts and emotions triggered by the first anniversary.

Discussion

Our programme included rapi outreach, a flexible approach, focus on the present (althoug previous losses became a centra part of the intervention for severa parents), the availability of help, a open-door policy and the mobilisa tion of the victim's own resources Through extensive use of anticipa tory guidance and active reassu rance and support, the counsellor was more active than in more tradi tional therapies. There was no re fusal of the support offered by the programme, and this early inter vention prevented the sedimenta tion of maladaptive response patterns. A basic premise in the clinical approach was that the programme dealt with normal persons facing abnormal events. Grief can, of course, be a precursor of illness if not properly dealt with, but it is not to be met by traditional psychiatric approaches.

In retrospect it was apparent that many parents, although they did not lack support resources, were reluctant to use them for fear of being a burden or of being rejected. The counselling sessions might have focused more time on this topic and thus helped parents to become more aware of the importance of support, and more skilled at eliciting effective response from others without being rejected.

The programme also underestimated the need for more extensive follow-up sessions for several of the families. Recovery time was often found to take much longer than the time period stipulated for crisis to be resolved (Caplan and Grunebaum mentioned four to six weeks[22]).

Dealing exclusively with crisis work in bereavement can be extremely stressful[23]. Empathy and caring for the bereaved requires that the counsellors are able to be in touch with their own feelings concerning loss (or potential losses). Grief crisis counsellors must be able to act as an advocate for the parents, be a social worker, offer a shoulder for the parents to cry on, and provide information and coping assistance to others.

Without a solid support system, a stable family situation, and the ability to express one's own reactions about the work, grief crisis intervention cannot be sustained for a long period of time. In my experience if counsellors are to be helpful they should be involved in a mixture of educational, clinical and research work, as well as being involved in non-crisis therapeutic work. A formal support systems for caregivers in this area is strongly recommended.

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COURSES AND CONFERENCES

Cruse—Bereavement Counselling Courses. For details of Cruse Courses in the UK in Spring 1991, contact Cruse, 126 Sheen Road, Richmond, Surrey TW9 1UR (081-940 4818).

Good Grief Training Courses to complement the Good Grief Packs for schools and colleges are available through the author, Barbara Ward, 081-690 6365. (Packs available from Cruse, 126 Sheen Road, Richmond, Surrey TW9 1UR [081-940 4818].)

Hospice: Building Bridges. 6th International Conference of St. Christopher's Hospice. 20-24 May 1991. London. Details: Avril Jackson, St. Christopher's Hospice, 51 Lawrie Park Road, Sydenham, London SE26 6DZ.

Lisa Sainsbury Foundation residential workshops for GPs and district nurses. Topics include communication skills, loss and bereavement. 1991 dates and details from The Director, The Lisa Sainsbury Foundation, 8-10 Crown Hill, Croydon CR10 1RY (081-686 8808).

Loss and the Ill-treated Child. Includes Dr. Emanuel Lewis on The Ill-treated Replacement Child, and The Impact of Adoption on a Family with a History of Bereavement and Loss. 17 May 1991. London. Details from Training Office, The Tavistock Clinic, 120 Belsize Lane, London NW3 5BA, 071-435 7111.