

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

ATLE DYREGROV and STIG BERGE MATTHIESEN

*University of Bergen, Norway*

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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.

*A. Dyregrov, Forskningscenter for Arbeidsmiljø, Helse og Sikkerhet, Universitetet i Bergen, Hans Tanks gt. 11, 5000 Bergen, Norway.*

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; DeFraim & Ernst, 1978).

In studies either adresssing 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 and 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 4000 deliveries per year, and the Department of Pediatrics treat 3600 inpatients and 15000 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 ( $M=27.02$  months,  $SD=9.20$ ), 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 & Sjöberg, 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 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. 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 than 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 <sup>b</sup>	Wilcoxon <sup>c</sup> Z
	N <sup>a</sup>	%	N	%		
<i>To what degree did you react with</i>						
<b>A. Anxiety</b>						
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>B. Anger</b>						
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
<b>C. Self-reproach</b>						
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***
<b>D. Sadness</b>						
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***
<b>E. Restlessness</b>						
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
<b>F. Worked more</b>						
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
<b>G. Intrusive thoughts about the child</b>						
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***
<b>H. Sleep disturbances</b>						
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**

<sup>a</sup> 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.

<sup>b</sup> 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: (=).

<sup>c</sup> 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 (see 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 <sup>b</sup>	Wilcoxon <sup>c</sup> Z
	N <sup>a</sup>	%	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*

<sup>a</sup> 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.

<sup>b</sup> 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: (=).

<sup>c</sup> 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 <sup>b</sup>	Wilcoxon <sup>c</sup> Z
	N <sup>a</sup>	%	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	7- /15+ /33=	-2.05*
B. Was it difficult to talk together about the death?						
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	17- /25+ /13=	-0.24
C. Did you react more strongly, less strongly or just as much as your spouse?						
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	43- /2+ /10=	-5.70***
D. Did your reactions continue for a longer, a shorter or the same length of time as your spouse?						
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	44- /2+ /7=	-5.27***
E. Did you and your spouse react differently to the bereavement?						
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

<sup>a</sup> 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.

<sup>b</sup> 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: (=).

<sup>c</sup> 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 <sup>b</sup> -/+/=	Wilcoxon <sup>c</sup> Z
	Mean <sup>a</sup>	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

<sup>a</sup> For all means a higher score indicates more distress.

<sup>b</sup> 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: (=).

<sup>c</sup> The Wilcoxon matched-pairs signed-ranks test.

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

Table 5. *Rank order correlation (Spearman's 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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## REFERENCES

- Allen, J. G. & Haccoun, D. M. Sex differences in emotionality: A multidimensional approach. *Human Relations*, 1976, 29, 711-722.
- Allen, J. G. & Hamsher, J. H. The development and validation of a test of emotional styles. *Journal of Consulting and Clinical Psychology*, 1974, 42, 663-668.
- Beck, A. T. & Beck, R. W. Screening depressed patients in family practice. *Postgraduate Medicine*, 1972, 52, 81-85.
- Benfield, D. G., Leib, S. A. & Vollman, J. H. Grief response of parents to neonatal death and parent participation in deciding care. *Pediatrics*, 1978, 62, 171-177.
- Berg, U., Ekenstein, G., Höjer, B., Sandros, I. & Tunell, R. Information och stöd till föräldrar som förlorat sitt barn vid födelsen. *Läkartidningen*, 1978, 75, 128-132.
- Blueglass, K. Psychosocial aspects of the sudden infant death syndrome ("Cot death"). *Journal of Child Psychiatry*, 1981, 22, 411-421.
- Bourne, S. The psychological effects of stillbirths on women and their doctors. *Journal of the Royal College of General Practitioners*, 1968, 16, 103-112.
- Clarke, M. & Williams, A. J. Depression in women after perinatal death. *The Lancet*, 1979, April 28, 916-917.
- Clyman, R. I., Green, C., Rowe, J., Mikkelsen, C. & Ataide, L. Issues concerning parents after the death of their newborn. *Critical Care Medicine*, 1980, 8, 215-218.
- Cooper, J. D. Parental reactions to stillbirth. *British Journal of Social Work*, 1980, 10, 55-69.
- Cornwell, J., Nurcombe, B. & Stevens, L. Family response to loss of a child by sudden infant death syndrome. *The Medical Journal of Australia*, 1977, 1, 656-659.
- Cullberg, J. Reaktionen inför perinatal barnadöd. I. Psykiska följder hos kvinnan. *Läkartidningen*, 1966, 63, 3980-3986.
- DeFraix, J. D. & Ernst, L. The psychological effects of sudden infant death syndrome on surviving family members. *The Journal of Family Practice*, 1978, 6, 985-989.
- Dosser, D. D., Balswick, J. O. & Halverson, C. F. Situational context of emotional expressiveness. *Journal of Counseling Psychology*, 1983, 30, 375-387.
- Ericsson, K. A. & Simon, H. A. Verbal reports as data. *Psychological Review*, 1980, 87, 215-251.
- Forrest, G. C. Mourning the loss of a newborn baby. *Bereavement Care*, 1983, 2, 4-5, 11.
- Goldberg, D. (1978) *Manual of the General Health Questionnaire*. Windsor: NFER.
- Helmuth, T. A. & Steinitz, E. M. Death of an infant: Parental grieving and the failure of social support. *The Journal of Family Practice*, 1978, 6, 785-790.
- Horowitz, M., Wilner, N. & Alvarez, W. Impact of event scale: A measure of subjective stress. *Psychosomatic Medicine*, 1979, 41, 209-218.
- Jurk, I. H., Ekert, H. & Jones, H. J. Family responses and mechanisms of adjustment following death of children with cancer. *Australian Paediatric Journal*, 1981, 17, 85-88.
- Kennell, J. H., Slyter, H. & Klaus, M. H. The mourning response of parents to the death of a newborn infant. *The New England Journal of Medicine*, 1970, 238, 344-349.
- Klaus, M. H. & Kennell, J. H. Mothers separated from their newborn infants. *Pediatric Clinics of North America*, 1970, 17, 1015-1037.
- Knapp, R. J. & Peppers, L. G. Doctor-patient relationships in fetal/infant death encounters. *Journal of Medical Education*, 1979, 54, 775-780.
- Laurell-Borulf, Y. *Krislösning i långtidsperspektiv*. Lund: Studentlitteratur, 1982.
- Lowman, J. Grief intervention and sudden infant death syndrome. *American Journal of Community Psychology*, 1979, 7, 665-677.
- Lovell, A. Some questions of identity: Late miscarriage, stillbirth and perinatal loss. *Social Science and Medicine*, 1983, 17, 755-761.
- Mandell, F., McAnulty, E. & Reece, R. M. Observations of parental response to sudden unanticipated infant death. *Pediatrics*, 1980, 65, 221-225.
- Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K. & Bent, D. H. *SPSS. Statistical package for the social sciences*. New York: McGraw-Hill, 1975.
- Nikolaisen, S. M. & Williams, R. A. Parent's view of support following the loss of their infant to sudden infant death syndrome. *Western Journal of Nursing Research*, 1980, 2, 593-601.
- Nixon, J. & Pearn, J. Emotional sequelae of parents and sibs following the drowning or near-drowning of a child. *Australian and New Zealand Journal of Psychiatry*, 1977, 11, 265-268.
- Notarius, C. I. & Johnson, J. S. Emotional expression in husbands and wives. *Journal of Marriage and the Family*, 1982, 44, 483-489.
- Parkes, C. M. *Bereavement. Studies of grief in adult life*. New York: International University Press, 1972.

- Person, L.-O. & Sjöberg, L. *Mood and body feelings*. Department of Psychology, University of Göteborg, Sweden, 1981.
- Rando, T. A. An investigation of grief and adaption in parents whose children have died from cancer. *Journal of Pediatric Psychology*, 1983, 8, 3-20.
- Raphael, B. *The anatomy of bereavement*. New York: Basic Books, 1983.
- Robinson, B. N., Anderson, G. D., Cohen, E., Gazdizik, W. F., Karpel, L. C., Miller, A. H. & Stein, J. R. *SIR. Scientific information retrieval. User manual—version 2*. Evanston, Illinois: SIR Inc, 1980.
- Rowe, J., Clyman, R., Green, C., Mikkelsen, C., Haight, J. & Ataide, L. Follow up of families who experience a perinatal death. *Pediatrics*, 1978, 62, 166-170.
- Rubin, S. Persisting effects of loss. A model of mourning. *Series in Clinical Community Psychology: Stress and Anxiety*, 1982, 8, 275-282.
- Shanfield, S. B., Benjamin, A. H. & Swain, B. J. Parents' reactions to the death of an adult child from cancer. *American Journal of Psychiatry*, 1984, 141, 1092-1094.
- Spielberger, C. D., Gorsuch, R. L. & Lushene, R. E. *Manual for the State-Trait Anxiety Inventory*. Palo Alto; Consulting Psychologists Press, 1970.
- Spinetta, J. J., Swarner, J. S. & Sheposh, J. P. Effective parental coping following the death of a child with cancer. *Journal of Pediatric Psychology*, 1981, 6, 251-263.
- Standish, L. The loss of a baby. *The Lancet*, 1982, March 13.
- Stringham, J. G., Riley, J. H. & Ross, A. Silent birth: mourning a stillborn baby. *Social Work*, 1982, 27, 322-327.
- Watson, E. An epidemiological and sociological study of unexpected death in infancy in nine areas of Southern England. III. Bereavement. *Medical Science and the Law*, 1981, 21, 99-104.
- Wilson, A. L., Fenton, L. J., Stevens, D. C. & Soule, D. J. The death of a newborn twin: An analysis of parental bereavement. *Pediatrics*, 1982, 70, 587-591.
- Wolff, J. R., Nielson, P. E. & Schiller, P. The emotional reaction to a stillbirth. *American Journal of Obstetrics and Gynecology*, 1970, 108, 73-77.
- Zilberg, N. J., Weiss, D. S. & Horowitz, M. J. Impact of event scale: A cross-validation study and some empirical evidence supporting a conceptual model of stress response syndromes. *Journal of Consulting and Clinical Psychology*, 1982, 50, 407-414.

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