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PREDICTORS OF PSYCHOSOCIAL DISTRESS AFTER SUICIDE, SIDS AND ACCIDENTS

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This article compares the outcome and predictors of psychosocial distress of parents bereaved by young suicides, sudden infant death syndrome (SIDS), and child accidents. One objective is to explore whether suicide bereavement is more difficult for those left behind than other forms of bereavement. Data have been collected from 140 families, consisting of 232 parents, by the use of the Impact of Event Scale, the General Health Questionnaire, and the Inventory of Traumatic Grief. Qualitative aspects of bereavement are assessed by in-depth interviews with family members from 40 families. The results show that the similarities between the samples on outcome and predictors are more striking than the differences, which is explained by the common traumatic aspect of unexpected and violent deaths. One and a half years post-loss, 57–78% of the survivors scored above the cut-off levels for traumatic grief reactions. Although no significant differences are found between survivors of suicide and accidents, both groups evidence significantly greater subjective distress than the survivors of SIDS. Self-isolation is by far the best predictor of psychosocial distress in all three samples. Rather than focusing on the exceptional position of suicide survivors, it seems important to call attention to sudden and traumatic death in general as a factor to be associated with post-traumatic reactions and complicated mourning.

Despite the rich literature on the situation for traumatically bereaved parents, relatively few studies have assessed the differences and compared predictors of psychosocial outcome across comparable groups bereaved by different causes. The purpose of the present study is to

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examine if there are differences and explore possible predictors of parental reactions following suicide (< 30 years), sudden infant death syndrome (SIDS) (< 1 year), and accidents (< 18 years). In Norway, with a population of only 4.7 million, there were 145 suicides, 27 SIDS, and 70 accidental deaths in the relevant age groups in 1998. In 1998, the suicides represented 15.2% and accidents 13.4% of all the Norwegian deaths in the age groups covered by this study. In the same year SIDS constituted 0.5 deaths per 1,000 births in Norway. If, in every family, an estimated 20 people have a close relationship to the deceased, these figures imply that several thousand close family members and friends become survivors of these kinds of sudden, traumatic deaths every year.

The rationale for comparing the different groups of bereaved is that all the deceased are children or young people and the deaths are sudden, unexpected, and traumatic. Sudden bereavement is found to be a complex, multidimensional process involving physical, psychological, and sociological domains (Cleiren & Diekstra, 1995; Jordan, 2001; Lundin, 1984; Reed, 1993, 1998).

Several studies have discussed how modes of death, characteristics of the survivor or the deceased, time since death, behavioral variables, or social isolation determine grief symptomatology (for a review, see Reed, 1998). When comparing reviews of survivors' reactions after different kinds of sudden deaths, there are divergent findings. Several authors stress that "unnatural death" such as suicide results in grief reactions that are different from and more complex than those seen following other forms of bereavement caused by more "natural death" (Barrett & Scott, 1990; Clark & Goldney, 1995; Hiegel & Hipple, 1990; Knieper, 1999; Reed, 1998; Silverman, Range, & Overholser, 1994). However, several researchers find more similarities than differences in reactions when comparing suicide and other sudden death survivors (Clark, 2001; Cleiren, Grad, Zavasnik, & Diekstra, 1996; Jordan, 2001; McIntosh, 1993). Cleiren and Diekstra (1995) noted that the symptom patterns common in suicide bereavement are also found in other types of traumatic loss. Still, other authors claim that the differences might manifest themselves as different qualitative or thematic aspects of the grief, but not showing variations on quantitative measures (Jordan, 2001; Range, 1998; Wagner & Calhoun, 1991–1992). Thus, it has been argued that guilt, shame, anger, rejection, and the need to understand *why*, are reactions specific to suicide.

Besides mode of death other risk factors have been examined as relative contributors to psychosocial distress. Most researchers report that women experience more severe psychosocial distress than men, that higher parental age is found to go together with a less intense bereavement response, and that education is negatively related to grief symptomatology (Reed, 1998). Having a job outside home seems to predict less psychosocial problems (Dyregrov, 1988), whereas the existence of more children in the family is not related to reduced grief reactions (Dyregrov & Matthiesen, 1987; Ostfeld, Ryan, Hiatt, & Hegyi, 1993). When considering characteristics of the deceased as risk factors, the deceased's age is generally found to be negatively related to grief symptomatology, whereas the scarce research on grief and gender of the deceased has not proved the latter to be a risk factor (Dijkstra, 2000; Reed, 1998).

Usually, shorter time since bereavement is found to predict more intense feelings of grief (Reed, 1998). As some studies show that bereaved populations tend to withdraw from social life (Lang, Gottlieb, & Amsel, 1996), many authors claim that suicide survivors are becoming more isolated than other bereaved groups because of stigmatization or "self-stigmatization" (Dunn & Morrish-Vidners, 1987; Jordan 2001; Van Dongen, 1993). Sèguin, Lesage, and Kiely (1995) found that suicide survivors tended to isolate themselves more than accident survivors because of more physical illnesses and changes in life events. This is considered an important factor that may explain why it is more difficult for the social network to support the bereaved.

With this background the following questions arise: Do survivors of suicide struggle more than other comparable groups of bereaved? Are similarities or differences most striking when comparing predictors of psychosocial distress on groups? To answer these questions, the present study intends to (a) explore the differences of psychosocial impact of survivors on suicide, accident, and SIDS and (b) determine if characteristics of the survivor or the deceased, time since death, or isolation best explain the variation of the psychosocial impact 1-1.5 years post-loss.

Method

Participants

The sample was composed a total number of 232 parents from 140 families. Eighty-three families (128 parents) were bereaved by suicide,

37 by accident (68 parents), and 20 families lost a child by SIDS (36 parents). All the deaths occurred between July 1, 1997 and December 31, 1998. The mean age of the deceased was 22 years for suicide (ranged = 11–29 years), 11 years (range = 0–18 years) for accidents, and 2.5 months for SIDS (range = 0–1 year). There was a significantly higher mean age for victims in the suicide sample than in the two other samples ($p < .001$). There were also significantly fewer girls among suicide and accident victims than among SIDS victims ($p < .01$).

Group differences were significant concerning the age of the survivors, the suicide sample being the eldest ($M = 51.0, SD = 8.0$) followed by the accident sample ($M = 40.0, SD = 8.5$), whereas the SIDS parents ($M = 30.0, SD = 5.7$) were the youngest ($p < .001$). All three samples consisted of more women than men; the female/male ratio for the survivor samples was 76/52 for suicide, 20/16 for SIDS, and 43/25 for accidents. Participation in the research took place between 6 and 23 months after the deaths ($M = 15$ months for SIDS and suicide, and 14 months for accidents).

A subsample of 40 families (20 suicide, 10 accident, 10 SIDS) was interviewed indepth. Selection criteria for this sample (N = 69) were (a) representation from both rural and urban parts of the country, and variation concerning (b) educational background, (c) time elapsed since the loss, (d) age of the deceased, and (e) gender (50/50).

Instruments

For parents, four self-report instruments were applied:

The General Health Questionnaire (GHQ-28; Goldberg & Williams, 1988) consisting of 28 questions was used as a measure of psychic distress (somatic symptoms, anxiety and insomnia, social dysfunction and severe depression) that might lead to long-term impairment of life-quality. Sum scores for the 28-item GHQ may vary between 0 and 28, with a higher score denoting greater problems. As recommended by Goldberg and Williams a cut-off score (>4) was used to identify high-risk individuals. Cronbach's alpha for the GHQ in this study was .94.

The 15-item *Impact of Event Scale* (IES-15) was used to assess current levels of posttraumatic psychological distress. The 15-item self-report instrument was used to measure two key elements of post-traumatic stress disorder: event-intrusion and event-related avoidance (Horowitz, Wilner, & Alvarez, 1979). Sum scores may vary between 0 and 75,

with a higher score denoting higher level of subjective distress. For the analysis of symptom severity a cut-off score >35 for non-clinical populations was used (Joseph, 2000). The test is composed of two subscales: Intrusion (7 items) and Avoidance Behavior (8 items). Intrusion is characterized by unbidden thoughts, images, dreams into consciousness, and strong emotional reactions. Avoidance involves denial of the meanings and consequences of the event, and the blunting or numbness of emotions and sensations. Possible scores can range from 0 to 35 on the Instrusion subscale, and 0 to 40 on the Avoidance subscale (Horowitz et al., 1979). The Cronbach's alpha for the total scale concerning the current sample was .85, whereas it was .82 for the Instrusion subscale and .77 for the Avoidance subscale.

The Inventory of Complicated Grief (ICG; Prigerson et al., 1995), consisting of 19 items, was used to measure maladaptive symptoms of loss and predict complicated grief and long-term dysfunction. Identifying symptoms distinct from bereavement-related depression, it measures preoccupation with thoughts of the deceased, searching and yearning for the deceased, disbelief about the death, crying, being stunned by the death, and not accepting the death. Sum scores may vary between 0 and 76, with a higher score predicting more severe problems. Following Prigerson et al.'s suggestion, a general cut-off point of >25 was chosen to distinguish "complicated" from "uncomplicated/normal" grief (Prigerson et al., 1995). Internal consistency as reported from the authors of ICG is .94. Cronbach's alpha for the scale in this study was .91.

Additionally, a questionnaire was specifically developed for this study (229 variables) mapping parental experiences of professional and social network assistance and changes in patterns of social interaction post loss. The latter was explored by the survivors grading (to a large degree, to some degree, not at all) the following statements: (a) "I have experienced that other people feel sorry for the family"; (b) "I have experienced that other people look down on the family"; (c)"I have experienced that other people have withdrawn from me"; (d) "I have isolated myself from other people"; (e) "I have got closer to other people"; (f) "Family members have drifted apart from each other"; and (g) "Family members have got closer to each other."

A theme-guide was developed for the in-depth interviews, addressing aspects of the grief, family functioning, individual coping abilities, thoughts of ideal help, and the quality of the assistance from professionals and social networks. The interviewers were two trained

professionals (a sociologist and a psychologist) working in the field of bereavement, who also conducted the other parts of the research. As much as possible, the interviewer let the interviewees direct the sequence of the themes according to their own associations (Briggs, 1986).

Procedure

After a thorough process of application, The Ministry of Law and Justice in Norway gave access to the national police register (Strasak) of families bereaved by suicide, SIDS and child accidents. The Attorney General, The Council for Professional Secrecy and Research, the Medical Ethical Research Committee, and the Data Inspectorate of Norway also gave permissions for the study. A one-and-a-half-year cohort of bereaved families after suicide ($n = 162$), and SIDS/child accidents ($n = 132$)[1] were contacted in April 1999. The families were thoroughly informed by letter about the purpose of the project and were at the same time offered telephone contact with the researcher. Every stage of the research was carried out in a very sensitive and careful way, showing deep respect for the very difficult period of time the families had experienced. On the basis of thorough information about anonymity and confidentiality, the parents gave informed and written consent. They were also told about their right to withdraw from the study at any time.

Fifty percent of suicide survivors and 57% of SIDS/accidents survivors participated in the study, with a total response rate of 53%. Additionally, 11% first accepted to participate, but then withdrew mainly because of "lack of energy". The noncontact rate for the total sample was 29% and the refusal rate was 7%. Because of confidentiality, the Attorney General did not permit inquiries about non-responders beyond the information of the gender, age, mode of death, and place of residence of the deceased already in the register. There were no statistically significant group differences between participants and non-participants concerning these demographic variables. Participating family members (age > 13) were asked to fill in questionnaires and were requested to participate in an interview study later. The collection of questionnaires ended in August 1999, whereas the interviews were conducted during the autumn of 1999. The interviews, conducted in

[1]The police-register did not differentiate clearly between SIDS/accidents.

the homes of the survivors, lasted approximately 2.5 hours per person/couple (range = 1.5—4 hours).

Statistical Analysis

The standard measurement scales were tested by basic analysis of internal reliability (Cronbach's alpha). Descriptive statistics were used to describe general health, post-traumatic psychological distress, and complicated grief reactions. Frequency tables, mean scores, and standard deviations were conducted. To explore potential differences between the samples they were compared on variables measuring psychosocial health (*F* value), whereas significance of difference (LSD post-hoc tests) was tested through one-way analysis of variance. Further, correlation analysis investigated the co-variation of background and demographic variables and measures of psychosocial health. Finally, hierarchical regression analysis was used to explore the best predicting power of the demographic/background variables on the measures of psychosocial distress.

The interviews were tape-recorded and then transcribed by the interviewer. The meanings in the transcriptions were condensed according to a phenomenological mode of analysis and thereafter categorized on dimensions in line with the tradition of quantification of facts in the social sciences (Kvale, 1996). Only some illustrative quotations from the qualitative data are used in this article.

Results

The Psychosocial Impact

As shown in Table 1, the majority of parents bereaved by suicide, SIDS, and child accidents evidenced severe reactions on all the measures of psychosocial distress. More than half (44—72%) of all parents scored above the cut-off score for high level of psychosocial and physical complaints (GHQ), 34—52% experienced a high level of post-traumatic distress (IES), and 57—78% scored above recommended cut-off levels for complicated grief reactions (ICG). In an interview, a father described the enormous impact of the suicide of his young son: "I think I will have him with me every day the rest of my life. Even if someone had

TABLE 1 Perceived Health by Surviving Parents After Suicide, Accidents and SIDS

Symptom measures	Sample 1: Suicide ($n = 128$)		Sample 2: SIDS ($n = 36$)		Sample 3: Accident ($n = 68$)			
	M (SD)	Risk-zone	M (SD)	Risk-zone	M (SD)	Risk-zone	F	LSD test
GHQ	9.8 (8.3)	62	5.8 (7.1)	44	10.4 (7.8)	72	4.17*	2 < 1–3**
IES-15	35.8 (13.7)	52	27.9 (17.4)	34	36.3 (14.4)	51	4.64**	2 < 1–3**
IES-avoid-ance	13.7 (7.9)		11.6 (9.2)		13.6 (8.8)		0.94	*ns*
IES-intrusion	22.4 (7.7)		16.3 (9.6)		22.7 (7.6)		8.29***	2 < 1–3***
ICG	35.3 (13.5)	78	32.0 (13.4)	57	38.0 (15.0)	78	2.19	2 < 3*

Note. GHQ = General Health Questionnaire; IES = Impact of Event Scale; ICG = Inventory of Complicated Grief. Risk zone GHQ > 4 (%); Risk-zone IES > 35 (%); Risk-zone ICG > 25 (%).

LSD (least significant difference) values are indicating more or less group differences concerning the dependent variables.

*$p < .05$. **$p < .01$. ***$p < .001$.

dropped an atom bomb in the middle of our community center, we could not have been more affected" (1-1.5 years post loss).

Table 1 also indicates that survivors of SIDS experienced significantly less ($p < .05$) problems than parents bereaved by suicide and accidents. Thus, the multiple range test showed that the suicide and the accident sample differed significantly (LSD procedure) from the SIDS sample concerning level of complaints on GHQ (suicide: $M = 9.8, SD = 8.3$; accident: $M = 10.4, SD = 7.8$; vs. SIDS: $M = 5.8$, $SD = 7.1$, $F = 4.17$, $p < .05$) and IES-15 (suicide: $M = 35.8$, $SD = 13.7$; accident: $M = 36.3$, $SD = 14.4$; vs. SIDS: $M = 27.9$, $SD = 17.4$, $F = 4.64$, $p < .01$). Intrusive memories were also far more common in the suicide and accident samples than in the SIDS sample ($F = 8.29, p < .001$). While there was a significant difference between the SIDS and the accident sample concerning scores on ICG ($p < .05$), this was not the case for the SIDS versus the suicide sample. The accident sample evidenced the highest mean scores on all the sum scores on the outcome variables. However, the differences between the suicide and accident samples were limited and not statistically significant.

Initially correlations (Pearsons r) were conducted among all the predictor and outcome variables (sum scores of GHQ, IES, ICG). Important predictor variables were initially age, gender of the deceased, time since death, and age, gender, education, place of residence of the survivor, and if the survivor was working outside/inside home, or had any children left. Furthermore, the social interaction variables in the questionnaire developed specifically for this study were explored as possible predictors of psychosocial impairment. The variable "I have isolated myself from other people" evidenced the strongest correlation with the outcome variables and was chosen to enter into further analyses. Because of the number of variables in the three samples, the tables of intercorrelations cannot be presented for reasons of space. Instead, statistically significant bivariate correlation of demographic/background variables and psychosocial health variables are presented in Table 2.

As seen in Table 2, several variables concerning both the deceased and the survivor correlated significantly ($p < .05$) with impaired psychosocial health. However, some variation was seen among the samples. The variable of survivors reporting to "isolate themselves from others" was the only statistically significant variable showing the same direction on all the measures of psychosocial health in all three samples. Frequency analysis showed that 45% of the suicide sample, 50% of the

TABLE 2 Correlations Between Outcome and Predictor Variables (Pearson's *r*)

Demographic and background variables	Suicide ($n = 128$)			SIDS ($n = 36$)			Accident ($n = 68$)		
	GHQ	IES	ICG	GHQ	IES	ICG	GHQ	IES	ICG
Deceased									
Age	.01	.08	−.01	−.16	−.14	.04	−.09	−.21	−.29*
Gender	.11	−.01	−.03	−.07	.37*	.11	−.04	.05	.04
TSD (months)	−.16	−.11	−.02	−.46**	−.25	−.21	−.01	.07	.16
Survivors									
Gender	−.10	−.27**	−.32***	−.27	−.31	−.37*	.03	−.20	−.14
Age	.02	.03	−.08	−.31	−.37*	−.33	.19	−.06	−.04
Education (l/m/h)	−.34***	−.23**	−.11	−.22	−.25	−.12	−.10	−.21	−.15
WOH (y/n)	.19*	.29***	.26**	.60***	.23	.34*	.15	.08	.06
CH (y/n)	.11	.17	.24**	.34*	.17	.37*	.26*	.37**	.27*
Isolation from others	−.37***	−.36***	−.52***	−.39*	−.58***	−.44**	−.44***	−.49***	−.51***

Note. GHQ = General Health Questionnaire; IES = Impact of Event Scale-15 items; ICG = Inventory of Complicated Grief; TSD = Time since the death; WOH = Working outside home; CH = Any children left; l/m/h = little (secondary school)/medium (college)/high (university).

*$p < .05$. **$p < .01$. ***$p < .001$.

accident sample, and 57% of the SIDS sample reported to "isolate themselves from others" to some or to a large degree.

The inter-correlations of the dependent variables in all three samples were significant at $p < .000$ level, except for GHQ–ICG for the SIDS sample ($p < .01$). The highest inter-correlation was between ICG and IES (.82–.72) for all three samples. Follow-up correlations were conducted between IES subscales of Intrusion and Avoidance and ICG and GHQ, showing the highest correlations between ICG and the Intrusion subscales (.70–.81; $p < .001$). Examination of the correlation matrix revealed that the highest inter-correlation between the demographic/background variables was .26 in the suicide sample, .49 in the SIDS sample, and .31 in the accident sample, suggesting no multicollinearity concerns for further regression analyses. The tolerance values were also high.

Because the relatively small samples restricted the use of statistical multivariate control, hierarchical (stepwise) multiple regression analysis was chosen to investigate the most central predictors among many possible ones. Thus the analysis was performed on statistically significant ($< .05$) demographic/background variables from Table 2 to predict the outcome on the psychosocial measures of distress (GHQ, IES, ICG; see Table 3). The variables predicting most on the variance on the dependent variable were automatically and successively entered into the analysis from the composite of possible predictors. The stepwise procedure was stopped when the first variable appeared that did not contribute significantly ($< .05$) to the equation.

Table 3 shows the regression results for the dependent variables of the three samples. The most important findings, first within and then between the samples, will be commented on.

The Best Predictors of Reduced Psychosocial Health

In the suicide sample the best predictors for reduced general health (GHQ) were isolation ($\beta = -.43$), little education ($\beta = -.35$), and short time elapsed since death ($\beta = -.23$). Post-traumatic psychological distress (IES) was best predicted by isolation ($\beta = -.34$), little education ($\beta = -.23$), not working outside home ($\beta = .18$), short time elapsed since death ($\beta = -.17$), and by being a woman ($\beta = -.17$). The variables best predicting the outcome of complicated grief reactions (ICG) were isolation ($\beta = -.41$), being a woman ($\beta = -.23$), and not having more children left ($\beta = .17$).

TABLE 3 Summary of Multiple Regressions (Hierarchical/Stepwise) with Control Variables Predicting Scores on GHQ, IES and ICG for Survivors of Suicide, SIDS, and Accidents ($n = 128,36,68$)

	GHQ β			IES β			ICG β		
Variable	SU	SI	AC	SU	SI	AC	SU	SI	AC
Child characteristics									
Age									
Gender ($f = 1, m = 2$)					$.32^{2}$				
TSD (months)	$-.23^{3}$	$-.32^{3}$		$-.17^{4}$					
Survivor characteristics									
Gender				$-.17^{5}$		$-.19^{4}$	$-.23^{2}$	$-.55^{1}$	
Age									
Education (l/m/h)	$-.35^{2}$			$-.23^{2}$		$-.26^{3}$			
WOH (y/n)		$.41^{1}$		$.18^{3}$					
CH (y/n)			$.26^{2}$			$.36^{1}$	$.17^{3}$		$.33^{2}$
ISO	$-.43^{1}$	$-.39^{2}$	$-.39^{1}$	$-.34^{1}$	$-.50^{1}$	$-.48^{2}$	$-.41^{1}$		$-.48^{1}$
Total R^2	.32	.46	.25	.32	.44	.54	.32	.30	.38
Total adjusted R^2	.30	.39	.22	.28	.40	.51	.30	.27	.36
F	16.33*	7.07*	8.76*	9.45*	10.65*	15.12*	16.95*	11.93*	16.53*

Note. SU = Suicide; SI = SIDS; AC = Accidents; GHQ = General Health Questionnaire; IES = Impact of Event Scale-15 items; ICG = Inventory of Complicated Grief; TSD = Time since the death; WOH = Working outside home; y/n = yes/no; CH = Any children left; ISO = "I withdraw from others"; l/m/h = little (secondary school)/medium (college)/high (university). Superscript numbers $^{(1-4)}$ signify the order of the variables in the hierarchical regression equation. Betas are only shown for statistic significant ($p < .05$) variables currently in the equation.

*$p < .01$.

For the SIDS sample, not working outside home ($\beta = .41$), isolation ($\beta = -.39$), and short time elapsed since death ($\beta = -.32$) were the best predictors of high scores on GHQ. Post-traumatic distress (IES) was best predicted by isolation ($\beta = -.50$) and when losing a boy (.32%), whereas complicated grief (ICG) was best predicted by being a woman (−.55).

The best predictors for reduced general health (GHQ) in the accident sample were isolation ($\beta = -.39$) and not having more children left ($\beta = .26$), whereas not having more children ($\beta = .36$), isolation ($\beta = -.48$), low educational level ($\beta = -.26$), and being a woman ($\beta = -.19$) were the best predictors for traumatic after-reactions (IES). Isolation ($\beta = -.48$) and not having more children left ($\beta = .33$) were the best predictors of complicated grief (ICG) among the survivors after child accidents. All the analyses were statistically significant on at least $p < .05$ level. However, neither the age of the deceased nor that of the survivor turned out to be a statistically significant predictor of psychosocial distress in any of the analyses.

Evidently, the isolation variable ("I withdraw from others") is the most central predictor for psychosocial distress in all three samples ($p < .01$). The variable is either loading as number 1 or 2 (see Table 3) on each of the dependent variables for all the hierarchical regression analyses of the three samples. The other most significant predictors ($p < .05$) across the samples are not having surviving children, having little education, not working outside home, and being a woman.

Discussion

Survivors of Suicide and Accidents Are Similarly Affected

Results from this study show that one and a half years after the sudden death of a child in suicide, SIDS, or accident, a considerable proportion of parents show symptoms of general health problems, post-traumatic distress and complicated grief reactions, as measured by GHQ, IES and ICG. There is, however, no evidence proving that suicide survivors have greater difficulties in adapting to the loss compared with survivors of SIDS or accidents. On the contrary, although not statistically significant, accident survivors showed slightly higher mean scores on all the perceived health measures compared with survivors of suicide.

The results are consistent with what has been found by other researchers: that there are some differences in psychopathology between survivors following sudden deaths but fewer than would be expected (Cleiren & Diekstra, 1995; Jordan, 2001; McIntosh, 1993; Seguin et al., 1995). The present results are also in line with studies (Reed, 1998) claiming that accidental death survivors might experience an even greater shock than suicide survivors. The SIDS parents had significantly less problems than the two latter samples. However, it is necessary to stress that this only implies that fewer SIDS parents are above the cut-off scores for serious complaints, as a considerable proportion of all the parents proved to exceed this limit. Thus, these results confirm previous research showing that to lose a child suddenly and in traumatic circumstances is a devastating experience for the survivors most often resulting in a tremendous and long-lasting impact (Dyregrov & Dyregrov, 1999; Janoff-Bulman & Berge, 1998; Lehman, Wortman & Williams, 1987; Parkes, 1986; Schwab, 1996; Thuen & Schlytter, 1996; Vance et al., 1993).

The traumatic aspect of unexpected and violent deaths has received much attention in recent years (Amaya-Jackson et al., 1999; Figley, Bride & Mazza, 1997; Murphy et al., 1999) as it may result in post-traumatic stress disorder (PTSD). As found by other researchers (Joseph, 2000) this study confirms that half of the survivors of suicide and accidents suffer from levels of post-traumatic psychological distress indicating risk of PTSD (Joseph, 2000; Yule, 1999). Considering the accumulating number of survivors over time, the findings support a recent study concluding that sudden unexpected death of a loved one accounts for approximately one third of PTSD cases in the community (Breslau et al., 1998).

The results from ICG are consistent with other findings showing that sudden, untimely, preventable, and violent death may also lead to delayed, or distorted mourning, or syndromes of complicated grief (Prigerson et al., 1995; Prigerson et al., 2000; Rando, 1994). Dijkstra (2000) found in her study that 50% of the mothers and 20% of fathers suffered complicated grief as late as 20 months after their loss of a child. Following the same standard as Dijkstra (2000) and Prigerson's (1995) cut-off levels, as many as 78% of the survivors of suicide and accidents in this study are above the risk zone of maladaptive symptoms of loss and long-term dysfunction. The follow-up correlations conducted between the IES subscales of Intrusion and Avoidance and the total scores of ICG and GHQ, which show the highest correlations between

ICG and the Intrusion subscales (.70—.81, $p < .001$), may support the notion that traumatic grief is an important component of complicated grief (Jacobs, 1999; Prigerson et al., 1999).

Isolation—The Best Predictor of Psychosocial Distress

In spite of certain differences in the composite of variables found to predict psychosocial distress in the three samples, the similarities are more striking than the differences. Therefore, the discussion will mainly focus on the similarities of the predictors across the samples. Thereafter, some reflections will be made on differences across samples.

The overall best predictor of impaired psychosocial health is the "isolation of the survivor" variable. Unlike the study of Sèguin et al. (1995), comparing parental bereavement after suicide and accident, this study proves that half of the survivors of all groups "withdraw from others" to some or to a large degree. In fact, more accident survivors (50%) isolate themselves than suicide survivors (45%). For suicide and accident survivors isolation explains 43% versus 39% of general health complaints, 34% versus 48% of traumatic after-reactions, and 41% versus 48% of complicated grief reactions.

However, the direction of any associations between the isolation variable and the reported reactions might be ambiguous; it might be a cause (predictor) as well as an effect (outcome). As pointed out by Sèguin et al. (1995), the tendency toward isolation among suicide survivors creates a feedback loop between social and psychological dimensions that is extremely important. Apparently, this may not only be the case for suicide survivors, but also for other bereaved groups. Hence, it seems difficult to explain the isolation by referring to shame and stigma of suicide survivors only. Rather, a tendency to withdraw seems to be linked to factors common to parents who lose their children in sudden and traumatic deaths.

Through the interviews the bereaved parents explained why they withdrew from others, showing that a combination of explanations is probably plausible for most of the survivors. Guilt feeling was described as a common reason for their isolation and, importantly, not only the survivors of suicide stated that they felt guilty about losing the child. Guilt and self-blame was as strongly described by the father who had given his 4-year-old son a bike on which he got run over by a car, as by the SIDS mother who had put her baby in the prone sleeping position

(one of the known risk factors for SIDS). Hence, unlike some authors that assume that interview data may more clearly detect differences between suicide survivors and other types of survivors (McNiel, Hatcher & Reubin, 1988; Neimeyer & Hogan, 2001; Wagner & Calhoun, 1991–1992) our interview data confirmed that the similarities of the guilt feelings of suicidal bereaved were more striking than the differences when comparing suicide, accident, and SIDS survivors.

As suggested by Jordan, Kraus, and Ware (1993), one of the most important sequelae of trauma is the shattering of the individual's assumptive world (Janoff-Bulman, 1992). Loss of energy because "the world was turned upside down" and "everything was abnormal" was another commonly described reason for withdrawal by all groups of survivors. A father expressed this by saying;

> I will never be the same person as before the loss of my child. Then a new era started. What was of great importance before does not matter now. At work I am listening to what my colleagues define as problems in their private lives, but it is nothing. Therefore I rather choose to withdraw or to leave the room. My scale of values is turned upside down.

Frightening post-traumatic reactions—such as loss of memory and concentration, and intrusive voices or pictures of the deceased—also lead to withdrawal from other people. A mother described such a frightening event:

> I remember we were sitting together the whole family to watch a movie on television. Afterwards we wanted to talk about the film, but nobody could remember what we had just seen. We had even been laughing, but none of us was able to remember, and we still cannot, even to this day. Such things make me really scared.

Many of the survivors explained that they were so scared by what was happening to them, that they hardly told anyone about these unusual experiences. As stated by Jordan et al. (1993), traumatic experiences seem to produce a kind of "experience differential" in which the range of trauma-induced feelings and thoughts of the survivor are so different from the experiences of those who have not been victimized that the survivors become alienated from their social network.

In line with other findings (Calhourn & Allen, 1991; Thompson & Range, 1992; Wertheimer, 1999) the survivors in this study described the withdrawal as a response to the helplessness of social networks on

how to encounter people in crisis. People in the network suggested that it was time to "go on with their lives", "stop visiting the grave", and so on. This may reflect what survivors report as being a lack of support, which has proved to be an important predictor of impaired psychosocial health in other studies (Dyregrov & Matthiesen, 1987). Parallel to this, a growing body of knowledge demonstrates the important role of social support in reducing the impact of sudden loss on grief symptomatology (Johnson, 1991; Reed, 1993, 1998; Sherkat & Reed, 1992). Therefore, it makes sense when the survivors in this study claim that the best self-help strategy has been to break out of their isolation by informing social networks how they want to be supported in their grief.

Besides isolation, statistically significant predictors across the samples were not having more children, having little education, not working outside home, and being a woman. Apparently, several of these predictors may be linked to isolation. Thus, not working outside home is the strongest predictor of general health complaints in the SIDS sample and loading as the third variable for suicide survivors on post-traumatic reactions. This has also proved to be a risk factor after sudden deaths in other studies (Dyregrov, 1988). Contradictory to some earlier findings concerning sudden deaths (Dyregrov & Matthiesen, 1987; Ostfeld et al., 1993), not having any children left proved to be one very important predictor of all measures of impaired health for the accident sample. Although this variable did not enter the regression equation for the SIDS sample, there is probably a strong link between not having any children left and psychosocial distress also for the SIDS parents. This assumption is based on the strong correlations between this variable and measures of psychosocial distress and the fact that a larger SIDS sample would have increased the probability of significant regression results. In the interviews, parents of all groups pointed out how the parents of their children's friends helped them socialize after the death. This is consistent with earlier research showing that surviving children have a protective influence on a bereaved population (Dyregrov & Dyregrov, 1999).

Being a woman was another important predictor of traumatic stress in the suicide and accident samples, as was the case for complicated grief in the suicide and SIDS samples. This is coherent with previous results showing that mothers report higher levels of grief, preoccupation with the loss, guilt feelings and psychological distress than fathers (Bohannon, 1990; Dijkstra, 2000; Schwab, 1996). However,

it may be important to keep in mind studies indicating that fathers may postpone their grief, only yielding to their own sorrow when their wives have recovered from the loss and therefore may be at risk for prolonged grieving (Dyregrov & Dyregrov, 1999; Dijkstra, 2000).

Why do SIDS Parents have Fewer Problems?

From the present data there is no obvious answer as to why the SIDS sample evidenced significantly less psychosocial complaints than the two other survivor groups. One exclusive predictor for the SIDS sample was that to lose a boy accounted for 32% of the variance of posttraumatic reactions. As no studies have demonstrated that gender differences of the deceased predict specific grief reactions of the survivor (Reed, 1998), it is difficult in a western culture to explain why parents should be more traumatized by losing a boy than a girl.

The fact that SIDS parents as well as the deceased in this sample were significantly younger than in the two other victim groups could have a positive influence on reducing these parents' problems. However, as most studies have found that lower parental age is related to higher grief symptomatology, this group should have been worse off than survivors after accidents and suicide (Reed, 1998). Although some studies find that the older the child is when it dies the worse the impact on parents, others show the opposite (Dyregrov, 1990b; Reed, 1993, 1998). Age did not turn out to be a predictor of distress, neither in the SIDS sample nor in either of the other samples in the study.

One important factor differentiating the samples is that only the SIDS sample had a survivor organization at the time of the study. Although not tested, the advantages of the SIDS parents might therefore be the result of 15 years of systematic work of the National SIDS Society in Norway in improving psychosocial support for their members. The great importance of the bereaved being counseled and informed after traumatic death has been pointed out by several reports (Amaya-Jackson et al., 1999; Clark, 2001; Dyregrov, 1990a; Murphy et al., 1998; Murray et al., 2000).

Limitations and Strengths of the Study

Some possible limitations of the study should be discussed. Although the total response rate was not more than 53%, this must be considered

to be a fairly high participation rate for vulnerable samples that usually have great difficulties in participating research (Paykel, 1983; Caplan, 1990). Considering the possibility of generalizing the results, it is also of importance that no group differences were found when comparing participant and non-participant survivors on available basic background variables. However, earlier studies have shown that the non-participants might even be worse off than those who do participate in such studies (Paykel, 1983; Dyregrov, 2002). Nevertheless, one should be careful when generalizing from the findings, especially because of the small sample size of SIDS parents. The small sample size also put some restrictions as to the number of independent variables that could enter the regression analysis and the kind of analysis chosen. Thus, with a larger sample size of SIDS parents, more predictors might have proved statistically significant in the hierarchical regression analysis. The fact that the samples are nationwide, recruited from a total population of bereaved, and relatively large is perceived as a strength in the difficult task of studying such vulnearable groups. The combination of quantitative and qualitative data gives important knowledge that may help to interpret the results more adequately.

An important concern is how the results should be applied to improve the situation for the bereaved. First of all, local authorities as well as social networks should be made aware of the consequences of the extreme impact that groups of suddenly bereaved parents experience when losing a child by suicide, accidents, and SIDS. The community health services should acknowledge their responsibilities for psychosocial health and initiate necessary efforts to relieve the survivors of the heavy and long-lasting burdens after sudden traumatic deaths. Some subgroups (which include people who for different reasons tend to isolate themselves, parents who lost their only child, and women) should be followed up even more carefully. Social network support should also be mobilized to reduce the tendency of survivors to isolate themselves.

Further research should add some information of personality traits and correlate such profiles with the measures of psychosocial health and acceptance of help. However, this was not possible in this study. Further, to be able to understand more thoroughly the grief processes as well as changes of predictors over time, long-term comparisons of traumatically bereaved groups are needed.

Conclusion

When comparing quantitative data of parents who experienced three different kinds of traumatic death of young children, the similarities of grief reactions are apparently greater than the differences. This is evident both when it comes to general health problems, post-traumatic reactions, and complicated grief. This study therefore supports the notion that the unique features of traumatic deaths, when present in suicide or in any other traumatic loss, account for much of the variance in bereavement outcome in comparison to natural causes of death (Jordan, 2001). It may therefore be useful to conceptualize suicide as one example of the more general class of traumatic deaths that is likely to be associated with post-traumatic reactions and complicated mourning. The similarity of the most important predictors was striking, with self-isolation by far being the strongest predictor of grief-related problems in all groups. However, it will also be important to focus on the unique characteristics of different survivor groups, something that probably will come out more clearly through use of qualitative research methods.

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