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Bereaved by suicide

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Chapter 4

The effectiveness of cognitive-behavior therapy to prevent complicated grief in relatives bereaved by suicide: The role of suicide ideation

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(submitted)

ABSTRACT

Background

The effectiveness of grief interventions depends on the risk status of the bereaved as interventions are more beneficial for high risk individuals. Suicide ideation (SI) may indicate increased risk of mental disorder and complicated grief (CG). Relatives and spouses with suicide ideation (SIs) at three months after a suicide of a loved one may benefit more from family-based cognitive-behavior grief therapy (FGT) than those without suicide ideation (NSIs).

Method

Three months following the suicide, mental health history, personality, and bereavement outcome of 27 SIs were compared to 95 NSIs. Subjects were assigned to either FGT (n=68) or usual care (n=54) which they received between three to six months after their loss. The primary outcome was CG, secondary outcomes were observed maladaptive grief reactions, depression, suicidality, and perceptions of guilt. Using linear and logistic regression, a possible modifying effect of suicidality on the outcomes was examined.

Results

SIs had more often a positive lifetime history of clinical depression, anxiety and suicide attempts than NSIs. SIs also had lower self-esteem and mastery, and higher neuroticism. At 13 months, the effect of FGT on the outcomes was stronger among SIs than NSIs. This modifying effect of suicidal ideation was statistically significant for observed maladaptive grief reactions and suicidality only.

Conclusions

Results indicate that relatives bereaved by suicide who suffer from suicide ideation are at high risk for psychiatric consequences of the loss. As their risk indicators improve more than of NSIs after FGT, it is proposed that they in particular benefit from FGT.

INTRODUCTION

Bereavement increases the risk of psychiatric and somatic morbidity (Kaprio, Koskenvuo, & Rita 1987) and suicide (Luoma & Pearson 2002; Li et al. 2003). Adverse bereavement outcome may be defined as complicated grief (CG); a clinical entity proposed to be distinct from existing DSM-IV diagnoses (Prigerson et al. 1999b). CG poses individuals at risk for long term physical and psychiatric morbidity (Prigerson et al. 1997) including suicidality (Szanto et al. 2006). Six to 20% of all bereaved individuals develop CG.

Risk factors for CG such as vulnerability for mental disorder and insecure attachment styles (Zhang, El Jawahri, & Prigerson 2006) may cluster in families affected by suicide. Suicide may give rise to dysfunctional beliefs regarding one's role, or misinterpretations of grief reactions like relief and anger. These beliefs are postulated to be critical in the onset and maintenance of CG (Boelen, Van den Hout, & Van den Bout 2006). A family history of suicide increases the suicide risk up to ten times (Kim et al. 2005) independent of a possible inherited vulnerability for mental disorders that is possibly shared with the victim (Qin, Agerbo, & Mortensen 2002). Thus, relatives bereaved by suicide may be at particular risk for CG and, following on, long term mental and physical morbidity (Prigerson et al. 1997) and suicide (Latham & Prigerson 2004; Mitchell et al. 2005).

Preventive grief interventions are more beneficial for high risk individuals (Genevro, Marshall, & Miller 2004), so, notably those bereaved by suicide may benefit (Hawton & Simkin 2003; De Groot, De Keijser, & Neeleman 2006). A randomised controlled trial (RCT) on the effects of family-based cognitive-behavior grief therapy (FGT) to prevent CG among relatives bereaved by suicide showed no effect of the FGT on self report CG, depression and suicidal ideation. However, at 13 months after the loss subjects who received FGT had fewer observed maladaptive grief reactions and perceptions of guilt than relatives who received care as usual (De Groot et al. 2007a). This, however, only holds for first-degree relatives or spouses of suicide victims in general. The aim of the present study is to identify a subgroup who benefits most from FGT by distinguishing the bereaved by risk status (Schut et al. 2001; Jordan & Neimeyer 2003). Identification of predictors of beneficial effects of FGT is of interest for reasons of clinical efficiency.

Prior suicidal behaviours have been identified as predictors of subsequent suicide (Shaffer et al. 1988). Suicide ideation is postulated as an expression of an early stage of a continuum characterized by evolving suicidal expressions which may lead to suicide. This continuum is referred to as 'the suicidal process' (Retterstol 1993; Van Heeringen, Hawton, & Williams 2001). Prevention of progression on this continuum may contribute to suicide prevention. Reducing the risk of CG may also decrease the suicide risk, given the strong association of CG with suicidality (Latham & Prigerson 2004). Cognitive-behavior therapy (CBT) helps adjustment to bereavement by exploring, articulating and challenging the reality of the loss (Fleming & Robinson 2001).

Against this background, it is hypothesized that high risk individuals as indicated by the presence of suicidal ideation benefit more from FGT than those without suicidal ideation. Using data from a randomized controlled trial (De Groot et al. 2007a) it is hypothesized that relatives bereaved by suicide suffering from suicidal ideation at 2.5 months following the loss (SIs) benefit more of FGT to prevent CG than otherwise comparable bereaved relatives without suicide ideation (NSIs).

METHOD

Sample recruitment and allocation

First-degree relatives and spouses recently (< 8 weeks) bereaved by suicide from the general population of the northern part of the Netherlands (n=1,685,463 inhabitants (Netherlands Statistics 2006) were eligible for inclusion. During 28 months, coroners reported cases to the research team by the name of the victim's GP. Subsequently, families were approached via the GP. Exclusion criteria were detainment, lack of Dutch fluency, and (psychiatric) conditions assumed to impair session attendance, introspection, communicating with relatives, doing homework exercises. Relatives' eligibility was left at the discretion of the GP. Families' refusal or participation could be expressed via the GP or on response forms. Families were included if at least one relative consented. All participants gave written informed consent. Details (sample size, recruitment, allocation) have been described

elsewhere (see De Groot, De Keijser, & Neeleman 2006) (De Groot et al. 2007a) The study was ethically approved by the University Medical Center Groningen ethics committee.

Treatment condition

The FGT was based on a cognitive-behavioral concept of CG (Boelen, Van den Hout, & Van den Bout 2006) which views CG as resulting from three co-occurring, interacting processes: i) insufficient integration of the loss into existing autobiographical knowledge, ii) negative beliefs, unhelpful cognitions and catastrophic misinterpretations of grief reactions, and iii) anxious and depressive avoidance strategies. To prevent CG, the underlying processes have to be discouraged (Boelen, Van den Hout, & Van den Bout 2006) by challenging dysfunctional thinking and unhelpful behaviour. The aim is cognitive restructuring (Beck 1964) which may facilitate effective processing of the loss. Aims of the intervention are: i) offering a frame of reference for grief reactions following suicide, ii) engaging emotional processing, iii) enhancing effective family communication, iv) improving problem solving skills, v) consolidating resources of support. Overall, the intervention focused on the family system rather than relatives individually, regardless of how many relatives out of one family attended sessions. The sessions were audio taped for supervision goals and to check for adherence to the treatment protocol.

A unit secretary randomised families and informed relatives of their allocation only after the family had completed baseline assessments. Experienced psychiatric nurses with good knowledge of suicidal behaviour and group dynamics led the sessions. They underwent training in cognitive-behavioral skills and were supervised by JdK. Families were treated by one single nurse.

Between three to six months following the suicide four two-hours sessions were held at the families' homes. FGT was conducted following a manual providing psycho education about suicidal behaviour, grief, and typical thoughts, feelings, behaviors and physical reactions following suicide bereavement. The manual was mailed to the relatives a fortnight prior to the first session, and relatives were encouraged to read, or at least leaf through

the information. The manual contained five modules: 1) cognitive restructuring, 2) social support and comfort, 3) children's and adolescent's grief, 4) family grief and interaction, 5) problem solving skills. Each module contained homework to apply skills.

In the first session, relatives were invited to tell about the suicide and give details of the victim like mental health problems, previous suicidal behaviour and personality features. The risk status of families and individual relatives was established by assessing prior and current mental health problems, family history of suicide, prior losses and observation of family functioning (Kissane et al. 1996). At the end of the first session, the aim of module 1 was explained. Challenging negative thinking was demonstrated and exercised by role-plays, preferably by using possible negative thinking exposed during the relatives' stories. As a homework exercise, relatives were encouraged to identify and challenge negative thinking by themselves or by their relatives.

The aim of module 2, dealt with in the second session, was to evaluate the quantity and quality of perceived social support, and to identify and challenge negative cognitions unhelpful to mobilize appropriate support. Module 3 contained information on normal and abnormal grief reactions of bereaved children and adolescents and on whether and how to discuss the cause of death to best help the youngest with their grief. Module 4 was dealt with in session 3 and aimed at ameliorating family relationships, encouraging mutual support, reducing exposure to negative events and serious conflicts. Module 5 provided a do-it-yourself-method to resolve serious problems caused by the loss (finance, housing), as well as ordinary problems such as housekeeping or babysitting. Modules 3 and 5 were optionally dealt with in session 3 and 4. The final content and emphasis of the last two sessions depended on individual and family needs and potentials, either expressed by relatives or observed by the nurse. In the last session the therapy was evaluated and vulnerabilities and possible pitfalls for the future were discussed. A bibliography and (internet) addresses for additional help were provided.

Measurements

Baseline self report assessments were carried out at 2.5 months after the suicide covering the victim's and respondent's socio-demographic features, participant's personality, and mental health, and the expectedness of the suicide. This timing was chosen to prevent high refusal rates and response bias caused by acute distress. Follow up was scheduled at 13 months after the loss rather than 12 months to avoid measuring temporal effects of the anniversary of the suicide on symptom levels.

A family history of suicide prior to the index suicide was assessed by: 'Before the index suicide, have you ever been involved in suicidal behaviour (attempted or completed suicide) of others?' If participants scored 'yes', the type of relation to that person was explored. Attempted or completed suicide of a first or second degree relative indicated a family history of suicide.

Neuroticism, representing individuals' emotional instability, was measured using the revised Eysenck Personality Questionnaire (EPQ-RSS). Scores range from 0 to 12; higher scores indicate higher neuroticism (Eysenck & Eysenck 1964). Mastery, representing the general degree to which one experiences control over what goes on in one's life was assessed using the Pearlin's scale (Pearlin et al. 1981). Scores range from 7 to 35; low scores indicate a stronger sense of control. Self-esteem was assessed with the Rosenberg Self Esteem Scale (RSES) (Rosenberg 1965) ranging from 10 to 40; lower scores indicate higher self-esteem.

Bereavement outcome

Participants reported all sources of help other than the trial intervention that they used during the first year of bereavement. The subjective expectedness of the index suicide was assessed by a five point Likert scale ranging from 1= totally expected to 5=totally unexpected.

The primary outcome, CG, was assessed using the Dutch version of the Inventory of Traumatic Grief (ITG), a scalar measure of maladaptive grief symptoms (Boelen et al. 2003). Higher scores indicate a higher risk of CG. Depressive symptoms during the preceding week were assessed using the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff 1977); scores range from 0 to 60 with higher scores indicating higher levels of

depression. Suicide ideation over the previous 4 weeks was assessed with Paykel's suicidality items (Paykel et al. 1974). The questions were 'Have you ever felt that life was not worth living?', 'Have you ever wished you were dead?', 'Have you ever thought of taking your life, even if you would not really do it?' and 'Have you ever reached the point where seriously you considered taking your life or perhaps made plans how you would go about doing it?'. The items were scored on a five point Likert scale ($1=never$, $5=always$) and summed to give a range of 4 to 20. To assess lifetime suicide attempts before the index suicide the question 'Before the index suicide, did you ever attempt suicide?' was added to the suicidality items. Scores above 1 indicated previous suicide attempts.

Perceptions of guilt and being to blame (PBS) were assessed by: i) 'I think I could have prevented the suicide', ii) 'I feel guilty about the suicide' and iii) 'I am wondering what I have done wrong' scored in a five point Likert scale ($1=totally\ disagree$, $5=totally\ agree$). Scores were summed to give a range of 3 to 15.

At 13 months semi structured interviews were administered to assess lifetime clinical maladaptive grief reactions and mental health problems before the index suicide. For the assessment of clinical depression and anxiety questions were used of the SCAN 2.1 (Schedules for Clinical Assessment in Neuropsychiatry Dutch version) (Giel & Nienhuis 1996). Symptoms of depression and anxiety disorder were scored in a four point format scale ranging from 0=no complaints to 3=severe complaints. In case of a possible clinical episode (score >0) three former episodes at most were explored by questions about the degree of discomfort ($0=no\ discomfort$ to $3=severe\ discomfort$), use of primary health care, use of mental health care services, medication use and the need to be absent from work or school, and/or persisting complaints, scored in a yes/no format. A clinical episode was established if the respondent felt during at least one episode moderate to severe inconvenience due to the complaints (score > 0) and quit school or work, and (or) made use of mental health care service, and (or) used medication during an episode, and (or) if complaints persisted. Depression and anxiety disorder were scored separately ($0=absent$, $1=present$). Subsequently, maladaptive grief reactions (such as avoidance, anger,

purposelessness, disbelief) were assessed using the Traumatic Grief Evaluation of Response to Loss (TRGR2L) (Prigerson & Jacobs 2001). The TRGR2L is an interviewer-rated assessment for clinical use, measuring the frequency ($0=never$, $4=always$) and intensity of maladaptive grief reactions in a 0 to 4 format ($0=not\ at\ all$, $4=extremely$). Maladaptive grief reactions were present when at least one reaction scored above 2 on the frequency and intensity score. The interviews were undertaken by trained nurses who were not previously involved with the bereaved families.

STATISTICAL ANALYSES

Subjects with suicidality scores higher than 8 were indicated as suicide ideators (SIs). The cut-off was chosen on the base of the item content (De Groot et al. 2007a). The validity and reliability of the PBS was examined by principal component analysis and calculation of Cronbach's α . PBS scores were dichotomized (scores >9) *a priori* as they had a skewed distribution which could not be transformed to normality. First, socio-demographic and personality features were compared between SI and NSI and tested for statistical significance using t- tests and χ^2 -tests.

Second, the effect of the intervention was separately examined in the SI and NSI group. Effect analyses were on an intention-to-treat basis, i.e. irrespective of the final content of the therapy and number of sessions attended. The effect of the intervention on continuous and dichotomous outcomes was examined with linear and logistic regression respectively, adjusted for the baseline values of the outcome variables. Outcomes were also adjusted for imbalances between treatment groups (De Groot et al. 2007a) that may affect the outcomes (Sandler et al. 2003; Schut et al. 1997; Weisz et al. 1995) by entering the variables in the regression models. These are gender of the respondent, closeness to the victim by kinship, and whether or not the respondent had been living with the victim. The nominal kinship relationship variable was transformed into an ordinal variable that *a priori* indicated closeness to the victim ($1=parent\ or\ spouse$, $2=child\ or\ sibling$, $3=other$). Suicidality and PBS were additionally adjusted for possible depression by entering the baseline depression score as covariate in the regression models.

Linear regression models yield regression coefficients (B); logistic regression models odds ratios (OR). All results are presented with 95% confidence intervals (CI). Robust standard errors were calculated to adjust for clustering effects among family members (Huber 1972).

Finally, the effect of suicide ideation on treatment outcome was examined. Treatment effects were compared between NSIs and SIs by assessing the statistical significance of the suicidality X treatment interaction term. A significant interaction term indicates that suicide ideation modifies the effect of treatment (Kraemer et al. 2002). The significance level was set at $p < 0.05$. Analyses were performed in SPSS 14 and Stata 8.2.

RESULTS

Trial flow

Coroners reported 69% of the suicide cases in the catchment area (Netherlands Statistics 2006). The gender distribution of the deceased whose families were included was concordant with the over all distribution in the Netherlands. Families of young male victims were well represented in the study (Netherlands Statistics 2006). After randomization, the intervention group contained more male relatives, more parents, and more subjects who had shared the household with the victim than the control group (see De Groot et al. 2007a).

Socio-demographic features, personality and mental health history (table 1)

Twenty-seven out of 122 (22%) were SIs, and they were more often a parent or spouse of the victim than NSIs. Among SIs the victim was younger. Otherwise, there were no socio-demographic differences between groups.

SIs suffered more from emotional instability, had a lower sense of control, felt less confident, and had a less favorable mental health history as compared to NSIs. Fewer NSIs than SIs perceived the suicide as unexpected (44/95, 46% versus 17/27, 63%, $\chi^2 (1)=2.3$, $p=0.13$). During the first year of bereavement there were no differences in help seeking between SIs and NSIs.

Table 4.1

Socio-demographic characteristics and personality features of the sample. Comparison between subjects (n) with and without suicide ideation. ^{a 1}

	NSIs ¹		SIs ¹		t or χ^2
	n=95		n=27		
	51 families		19 families		
	n	%	n	%	
age of the victim yrs m (SD)	48	(15.9)	37	(14.1)	-2.67*
male victims	40	78.4	13	68.4	.75
age participant yrs m (SD)	43	(14.1)	42	(12.0)	-.32
male participants	30	(33.6)	10	(37.0)	.28
kinship relation					
spouse	27	(28.4)	9	(33.3)	6.25
parent	19	(21.0)	10	(37.0)	
child	25	(26.3)	2	(7.4)	
sibling	17	(17.8)	4	(14.8)	
in-law/other	7	(7.4)	2	(7.4)	
had lived with the victim	36	(37.9)	12	(44.4)	.38
ever clinically depressed ^a	19	(20.2)	12	(46.2)	7.15**
ever clinically anxious ^a	15	(16.0)	10	(38.5)	6.25*
ever attempted suicide	2	(2.1)	5	(18.5)	10.47***

^a n (%) unless otherwise indicated

¹ NSIs = relatives without suicide ideation; SIs = relatives with suicide ideation

^a assessed of 94 NSIs and 26 SIs

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

Unadjusted bereavement course (Table 4.2)

A Cronbach's α of 0.77 was found for the questions regarding PBS; one principal component accounted for 68.4% of the variance. Table 4.2 shows a less favorable bereavement outcome among SIs than NSIs. SIs have more symptoms of CG and depression than NSI.

Table 4.2
Unadjusted bereavement course of subjects with and without suicide ideation distinguished by treatment condition.

	baseline 2.5 months following the suicide				follow-up 13 months following the suicide			
	NSIs ¹ n=95		SIs ¹ n=27		NSIs ¹ n=95		SIs ¹ n=27	
	intervention	control	intervention	control	intervention	control	intervention	control
complicated grief								
m	73.4	69.2	96.4	95.7	65.7	60.0	84.0	91.9
SD	19.1	18.5	18.5	16.5	22.2	19.1	21.1	24.5
maladaptive grief reactions ³								
n	NA ²	NA ²	NA ²	NA ²	11	9	4	8
%					21.2	20.9	25.0	72.7
depression								
m	17.1	22.0	32.1	33.9	11.2	10.0	23.8	26.2
SD	11.2	11.7	8.0	11.2	10.5	9.2	8.8	16.1
suicidality								
n	--	--	16	11	5	2	7	7
%			100	100	10	5	44	64
perceptions of being to blame								
n	15	6	7	7	7	8	3	4
%	28.8	14.0	43.8	63.6	13.5	18.6	18.8	36.4

¹ NSIs = relatives without suicide ideation; SIs = relatives with suicide ideation

² not applicable

³ examined in 94 NSIs and 26 SIs

Statistical examination of interaction term: suicide ideation X treatment (Table 4.3)

In the first column of Table 4.3 the results of previously published analyses are presented (De Groot et al. 2007a). The table also shows the results of the subgroup analysis. It demonstrates a main effect of suicidality on all the outcomes but not PSB at 13 months. CG increased somewhat more among SIs than NSI who received therapy, but not significantly so. Table 4.3 also shows that, following the intervention, maladaptive grief reactions are less likely, and significantly so, among SIs than NSIs with reductions of 87 and 30% respectively. As regards the suicidality outcome; a more than threefold reduced proportion of persons with suicidality in the SI group, compared to an amply threefold increase of this proportion in the NSI group was observed, while overall (column one) no effect of the intervention was shown. For the remaining outcomes, no statistically significant different treatment effects between SI and NSI were observed. The outcomes did not substantially change when they were also adjusted for the victim's age.

DISCUSSION

This study shows that the presence of suicide ideation at three months following the suicide of a loved one predicts a likely effectiveness of the intervention to prevent negative outcomes among relatives of suicide victims at 13 months after the loss. It was also found that a decline in suicidality is more likely among SI than among NSI following FGT. This may suggest that FGT prevent suicide ideators from progressing along the suicidal process (Retterstol 1993; Van Heeringen, Hawton, & Williams 2001).

Limitations

A limitation of this study is that the results derive from post hoc subgroup analyses. Thus, hypotheses can only be proposed, but are not tested. (Kraemer et al. 2002) The subgroup of SIs was relatively small limiting the study's power, and a decrease of suicidality is more likely when it is high at the outset. However, the results are in line with expectation given the content of the intervention.

Table 4.3

Effects of grief therapy at 13 months following the suicide. Comparisons of effects between subject with and without suicide ideation. * Outcomes are adjusted for familial clustering of symptoms.

	All participants ^{3 a} n=122	NSIs ⁰ n=95	SIIs ⁰ n=27	differences in mean values or odds ratios for binary outcomes (95% CI)		
		P		main effect of suicidality	interaction SI x FGT	
				P	P	
complicated grief B	-0.61 (-6.1 to 4.8)	.82	2.60 (-3.8 to 9.0)	-6.57 (-22.2 to 9.1)	1.88 (0.24 to 3.53)	.03
maladaptive grief reactions ² OR	0.39 (0.2 to 1.01)	.06	0.70 (0.2 to 2.3)	0.13 (0.01 to 2.2)	1.41 (1.04 to 1.91)	.03
depressive symptoms B	1.97 (-1.7 to 5.6)	.28	2.81 (-0.9 to 6.5)	-1.98 (-14.4 to 10.4)	1.52 (-0.03 to 3.06)	.06
suicidality ¹ OR	1.08 (0.3 to 3.6)	.89	3.75 (0.7 to 19.8)	0.32 (0.1 to 2.2)	NA [∞]	.03
perceptions of being to blame (PBS) ¹ OR	0.18 (0.1 to 0.7)	.01	0.07 (0.01 to 0.5)	0.29 (0.01 to 6.3)	0.97 (0.68 to 1.39)	.88

* continuous measures stated in regression coefficients (B), dichotomous measures in odds ratios (OR)

⁰ NSIs = relatives without suicide ideation; SIIs= relatives with suicide ideation

¹ adjusted for depression

² examined in 94 NSIs and 26 SIIs

³ adjusted for participants' sex (male); having lived with the dead person; closeness of relationship (a priori)

^a De Groot et al. 2007a

[∞] NA=not applied

The findings support previous findings of a strong association between CG and suicidality (Heikkinen et al. 1997; Prigerson et al. 1999b; Latham & Prigerson 2004; Mitchell et al. 2005; Szanto et al. 2006). This may imply that suicide ideation has declined as a result of decreased CG.

It is unclear whether the prevalence of suicide ideation in the current sample represents the prevalence among suicide bereaved individuals in the population. Previous findings vary from 9 to 80% (Farberow 1992; Brent et al. 1993a; Prigerson et al. 1999b; Murphy et al. 2003). Therefore, the findings should be interpreted with caution and need independent replication.

Strength of this study is that the study group included all types of kinship relationships and that the sample was drawn from the general population reducing the likelihood of selection bias.

Comparison with existing literature

Overall, the results confirm findings of Latham & Prigerson (2004) who also found a higher prevalence of pre loss mental disorder among bereaved with suicide ideation (Latham & Prigerson 2004). Szanto and colleagues (1997) found that a history of suicidal ideation predicts suicidal behaviour following the loss (Szanto et al. 1997). Conversely, subjects without suicide ideation are like non bereaved individuals with respect to their risk of mental disorder and suicidal behaviour: pre loss levels of depression and anxiety among NSIs are in line with the overall prevalence of depression and anxiety in the general population of the Netherlands (Bijl, Ravelli, & Van Zessen 1998). SIs may have progressed in the suicidal process even before the index suicide as the prevalence of attempted suicide in that group was increased, whereas attempted suicide among NSIs was virtually concordant with the 2.9% prevalence in the Dutch population (Bernal et al. 2007).

Higher neuroticism levels of SIs indicate their vulnerability to the development of mental disorder (Neeleman, Bijl & Ormel 2004). SIs also had lower self-esteem and lower sense of control than NSIs. Such adverse personality features may have mediated the perception of unexpectedness among NSIs as sudden losses are less threatening to individuals with high self-esteem and high internal control beliefs (Stroebe & Schut 2001b). Alternatively, stronger perception of unexpectedness among SIs may be an

expression of increased tolerance for suicidal behavior and ignorance of the abnormality of suicidal behavior. This may lead to misinterpretations of the lethality of (habitual) suicidal behavior, putting SIs at increased suicide risk (Joiner 2005; Van Heeringen, Hawton, & Williams 2001).

Self-reported CG tended to be lower among SIs than NSIs (Table 4.3), and maladaptive grief reactions were less observed among SIs. Although the difference between SIs and NSIs of the intervention's effect on self-reported CG was not statistically significant, the direction of the difference is in line with the other results, notably those regarding maladaptive grief reactions. Possibly, maladaptive grief reactions are more sensitive to treatment effects than self-report symptoms of CG. Although the TRGR2L interview (Prigerson & Jacobs 2001) is reported to assess symptoms of CG (H.G. Prigerson, personal, communication), the instrument's validation has not been published. Therefore, the results regarding maladaptive grief reactions should be considered as preliminary.

The clinical presence of maladaptive grief reactions among SIs who received treatment and NSIs in the control group was equal (Table 4.2) and meets the 20% prevalence of CG at 13 months found in people bereaved by a death through natural causes (Prigerson et al. 1997). This may indicate that FGT counteracts the added effects if the bereavement is through suicide rather than other causes on the onset of maladaptive grief reactions, especially among those who are at risk for those effects.

The family strengthening skills taught in FGT may be more compatible with the roles of females in bereaved families (Sandler et al. 2003). However, no changes of outcome were found when analyses were adjusted for respondent's gender, suggesting that FGT is equally effective for male and female relatives. Gender has found to influence the effects of a family bereavement programme for parentally bereaved children and adolescents (Sandler et al. 2003) and gender effects are also found in a study to the effect of grief intervention for bereaved widowed (Schut et al. 1997).

Assuming the cognitive-behavioral concept of CG (Boelen, Van den Hout, & Van den Bout 2006), it is hypothesized that the intervention has challenged ineffective beliefs which are considered as critical in the

maintenance of complicated grief. Psycho education on the psychiatric context in which suicide generally occurs, the role of impulsivity, and limited contingencies to prevent suicide once the suicidal process has been entered, may have challenged relatives' perceptions of being to blame for the suicide. Possibly this may have enhanced effective emotional processing of the actual situation rather than struggling with perceptions of guilt, self blame, and feelings of anger and bitterness. The latter are maladaptive grief reactions that possibly cause, or interact with, suicidal ideation.

Discussing suicidal feelings was part of the intervention. Sharing suicidal feelings with relatives may have enhanced family support, leading to feelings of belonging and improved problem solving, which is helpful to reduce suicide ideation (Williams & Pollock 2000).

The mechanisms of change responsible for the decline of maladaptive grief reactions, self-blame and suicidality however, cannot be identified at this point and need further study.

Clinical implications

Suicide ideation should be assessed in people who are bereaved by suicide as its presence indicates the risk of future suicide behaviour, independent of a possible vulnerability of mental disorder (Qin, Agerbo, & Mortensen 2002). Suicide ideation is also associated with a good response to cognitive-behavioural interventions. FGT may be particularly helpful to bereaved individuals with suicidal ideation, who have no relatives to rely on, and who are not inclined to seek help. They may be more at risk of loneliness and therefore of suicidal ideation and actions (Joiner & Rudd 1996; Stroebe, Stroebe, & Abakoumkin 2005). This might be the case, for instance, by spousal loss that affected one's main resource of environmental support, or in hostile families characterized by high conflict, low cohesiveness and poor expressiveness (Kissane et al. 2006) resulting in family disruption. Suicide bereaved are often involved in such problems (Jordan 2001). The family focused approach may contribute to the effect of the intervention, as this approach has been shown to be effective for families marked by high levels of distress and poor social adjustment during bereavement (Kissane et al. 2006).

Environmental influences on suicidal behaviour are found to be most pronounced early in the suicidal process which, after it has progressed, becomes more autonomous and intricately linked with mental illness and depression in particular (Neeleman, De Graaf, & Vollebergh 2004). GPs and other professionals who are involved in those bereaved by suicide need instruments and skills to facilitate the assessment of suicide ideation.

Future research

The best test of validity of the findings is replication in a subsequent randomised controlled trial in which the presence and/or absence of suicidal ideation is a stratification variable (Rothwell 2005b). Subsequent research is needed to disentangle the mechanisms of change to identify and refine useful components of the treatment programme and discard inactive elements (Kraemer et al. 2002). The intervention might be extended by CBT-strategies for the treatment of suicidality and, thus, the prevention of future suicide attempts (Brown et al. 2005).

Offering the intervention in a different time frame may demonstrate different effects (Schut et al. 2001) and may possibly reveal the long term course of suicide ideation during bereavement.