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Grief following homicidal loss

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Chapter 4

REVENGE AND PSYCHOLOGICAL ADJUSTMENT AFTER HOMICIDAL LOSS

Van Denderen, M., de Keijser, J., Gerlsma, C., Huisman, M., & Boelen, P. A.
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Abstract

Feelings of revenge are a common human response to being hurt by others. Among crime victims of severe sexual or physical violence, significant correlations have been reported between revenge and Post-Traumatic Stress Disorder (PTSD). Homicide is one of the most severe forms of interpersonal violence. It is therefore likely that individuals bereaved by homicide experience high levels of revenge, which may hamper efforts to cope with traumatic loss. The relationship between revenge and psychological adjustment following homicidal loss has not yet been empirically examined. In the current cross-sectional study, we used self-report data from 331 spouses, family members and friends of homicide victims to examine the relationships between dispositional revenge and situational revenge on the one hand and symptom-levels of PTSD and complicated grief, as well as indices of positive functioning, on the other hand. Furthermore, the association between revenge and socio-demographic and offense-related factors was examined. Participants were recruited from a governmental support organization, a website with information for homicidally-bereaved individuals, and members of support groups. Levels of both dispositional and situational revenge were positively associated with symptoms of PTSD and complicated grief, and negatively with positive functioning. Participants reported significantly less situational revenge in cases where the perpetrator was a direct family member than cases where the perpetrator was an indirect family member, friend, or someone unknown. Homicidally-bereaved individuals reported more situational revenge, but not more dispositional revenge than a sample of students who had experienced relatively mild interpersonal transgressions.

Keywords vengeance, victims, interpersonal violence, retribution, posttraumatic stress disorder, complicated grief, positive functioning

Introduction

Revenge is defined as ‘an aggressive, often violent, response to intentional harm that has been inflicted on the avengers and their families’ (Stuckless, 1996, p. 21). It particularly follows traumatic events involving interpersonal violence (Bloom, 2001; Kunst, 2011). Feelings of revenge are likely to be affected by the perceived severity of the transgression and degree of responsibility of the perpetrator: the more severe the transgression and the greater the responsibility of the perpetrator, the more victims generally experience feelings of revenge (Barnes, Brown, & Osterman, 2009; Schultz, Tallman, & Altmaier, 2010; Stuckless, 1996). Experiencing homicidal loss is likely to elicit stronger feelings of revenge than most other experiences. In case studies, retributive behavior was described in homicidally-bereaved individuals because of the intentionality of the death cause, disappointing punishment for perpetrators and an insufficient investigative-judicial system (Parkes, 1993; Rynearson, 1984). The extent to which revenge feelings arise is likely to vary according to offense-related factors, such as the closeness of one’s relationship with the victim and with the perpetrator (McCullough, 2008; Rynearson, 1984), time since the loss (Crombag, Rassin, & Horselenberg 2003; McCullough, Fincham, & Tsang, 2003), and the outcome of the juridical process (see Kunst, 2011; Orth, 2004). The level of revenge after homicidal loss directed at the specific perpetrator will probably be affected by the person’s attitude towards revenge in general: individuals with a vengeful disposition may be expected to experience feelings of revenge after victimization more readily than individuals with a more forgiving nature (Berry, Worthington, Parrott, O’Connor, & Wade, 2001).

It is unclear how feelings of revenge complicate adjustment after homicidal bereavement. In crime victims, other than homicide, revenge was found to be associated with more intense rumination, less life satisfaction and negative affect in students confronted with relatively mild interpersonal transgressions (McCullough, Bellah, Kilpatrick, & Johnson, 2001); it is associated with Posttraumatic Stress Disorder (PTSD) in victims of severe sexual or physical violence (Kunst, 2011; Orth, Montada, & Maercker, 2006) or war (Cardozo, Kaiser, Gotway, & Agani, 2003). In homicidally-bereaved individuals, revenge may block grief processing by maintaining an external, ruminative focus on why and how the loss occurred, and which punishment the perpetrator deserves. The preoccupation with thoughts and feelings of revenge may serve as a psychological mechanism to avoid acceptance of the death and trauma, which may contribute to complicated grief (Rynearson, 1984) and PTSD (Ehlers & Clark, 2000).

The relation between revenge and psychological adjustment after homicidal bereavement has not been empirically investigated. It is also unclear how revenge relates to socio-demographic and offense-related variables among homicidally-bereaved individuals. The present research therefore examined the relation between feelings of revenge and long term psychological adjustment following homicidal loss. It is part of a broader study project in which the relation between violent loss, Complicated Grief and psychological interventions are studied (Van Denderen, De

Keijser, Huisman, & Boelen, 2016). To this aim, the linkage was examined between revenge and symptoms of psychopathology, in particular PTSD and complicated grief, as well as its linkage with indices of positive functioning, including social functioning, self-efficacy and constructive coping. People who experience positive emotions after bereavement are more likely to develop long-term plans and goals, which in turn predict better psychological well-being (cf. Fredrickson, 2001) and a more forgiving response to the person who has wronged them is associated with greater mental and physical health (Schultz, Tallman, & Altmaier, 2010). Individuals with strong feelings of revenge may well experience fewer positive emotions, fail to adjust optimally and therefore experience lower psychological well-being. The results of the current study can aid the development of interventions to reduce levels of dispositional and situational revenge and try to improve adjustment after severe victimization.

Research questions

We predicted that revenge will be positively associated with PTSD and complicated grief, and negatively with positive functioning (Hypothesis 1). Although we expected a positive and fairly strong correlation between feelings of revenge towards the perpetrator (situational revenge) and dispositional revenge (Berry et al., 2001), we predicted that situational revenge would be more strongly correlated with PTSD, complicated grief, and positive functioning than dispositional revenge (Hypothesis 2). We explored to what extent both dispositional revenge and situational revenge scores are associated with socio-demographic and offense-related factors, such as (i) gender, (ii) age, (iii) the relationship between participant and the victim, (iv) the relationship between participant and the perpetrator, (v) time since loss and (vi) the current outcome of the juridical process of the perpetrator. Following earlier findings (Ghaemmaghani, Allemand, & Martin, 2011), men and younger participants were expected to report higher levels of revenge than women (Hypothesis 3a) and older individuals (Hypothesis 3b). Following previous studies, we predicted that dispositional and situational revenge would not be related to time since loss (Orth, 2004; Stuckless, 1996, Hypothesis 4), and to the outcome of the juridical process (Orth, 2004, Hypothesis 5). Finally, we tested the hypothesis that homicidally-bereaved individuals would not report more dispositional revenge than individuals who had not experienced homicidal loss, but that they would experience more situational revenge, than individuals who experienced milder forms of interpersonal transgressions (Hypothesis 6).

Method

Participants & Recruitment

The data presented in this paper was collected in the context of an on-going research program on psychopathology following homicidal loss (Van Denderen et al., 2016). A cross-sectional questionnaire survey among 331 spouses, family members, and friends of homicide victims in the Netherlands was conducted. Participants were 18 years or older and had to understand the Dutch language. The 331 participants

are related to 246 different homicide victims. Demographic characteristics of the sample can be seen in Table 1.

Table 1. Socio-demographic and Offense-related Characteristics of the Homicide Sample.

| Category | Subcategory | % or <i>M</i> | <i>SD</i> |
|--------------------------------------|--|---------------|-----------|
| Sex | Female | 65.9% | |
| Age participant (years) | | 52.6 | 15.5 |
| Time since loss (years) | | 6.9 | 6.5 |
| Perpetrator is | Convicted | 60% | |
| | Not found by the police | 7.3% | |
| | Discharged from conviction | 16.9% | |
| | The legal process is not completed yet | 4.2% | |
| Participant is ... of the victim | Spouse | 7.6% | |
| | Parent | 47.4% | |
| | Child | 12.4% | |
| | Sibling | 15.7% | |
| | Indirect family member | 8.5% | |
| | Other (friend, acquaintance) | 5.7% | |
| Perpetrator is... of the participant | (Ex)-spouse | 4.2% | |
| | Parent, child or sibling | 5.7% | |
| | Indirect family member | 9.4% | |
| | Other (friend, acquaintance) | 26.2% | |
| | Unknown | 50.8% | |
| Member of a support organization | | 58.3% | |

Note. Percentages do not always count to 100% due to missing values.

Participants were recruited via (1) Victim Support the Netherlands ($n = 136$), a governmental organization that offers practical and legal advice to homicidally-bereaved families, such as help to arrange the funeral and advice in dealing with the media; (2) a website providing information about grief after homicide ($n = 23$), and (3) three support organizations for homicidally-bereaved individuals in the Netherlands ($n = 172$). Participants from this last group had actively sought the support of peers in a support organization. The groups meet monthly and have a non-caregiving, non-professional and non-commercial character. From all members of support organizations for homicidally-bereaved individuals in the Netherlands, one out of five participated in this study. With regard to age, time since loss and male/female distribution, participants were similar to non-participants (*i.e.* members of support groups which did not participated in this study). Data collection took place between June 2011 and March 2013. Cohabiting participants received paper questionnaires individually addressed. Questionnaires were sent minimally six months after the homicide. Anonymity was guaranteed by a unique code on the questionnaires. Questionnaires were stored separately from the addresses. MvD was the only person having access to both questionnaires and addresses. For privacy reasons, participants contacted by Victim Support the Netherlands received the questionnaires from their case manager (Van Denderen et al., 2016). The study was approved by the Ethical Commission Psychology board of the University of Groningen.

Comparison Groups

To test whether victims of severe interpersonal violence (*i.e.* homicide) reported higher levels of situational revenge than, and similar levels of dispositional revenge to, victims of relatively mild interpersonal transgressions, we compared the current sample of homicidally-bereaved individuals with samples described in previous studies. The comparison group for dispositional revenge consisted of 151 university students (81% women; mean age 27 years, SD 8.97), who completed the Vengeance Scale (described below), while bearing in mind that they had experienced minor transgressions such as being cut off in traffic and being treated unfairly by other students (Stuckless & Goranson, 1992). The comparison groups for situational revenge were obtained from the study by McCullough et al. (1998). For two of the four samples they described, the kind of transgression the participants had experienced was not reported: therefore, we excluded those two samples. The two remaining samples were university undergraduates ($n = 239$; 55% female, mean age 19 years, SD not reported), who had experienced interpersonal transgressions at some point in their life (*e.g.* being left by a parent), and psychology students ($n = 74$; 62% female, mean age and SD not reported) who had been betrayed or hurt in a close relationship in the previous four months (*e.g.* through sexual infidelity). Participants were instructed to think of a specific person who hurt them significantly and to complete the revenge subscale of the Transgression Related Interpersonal Motivation Scale (described below; McCullough et al., 1998).

Measures

Demographic and Homicide-related Information

Participants received a questionnaire with socio-demographic- and offense-related questions, such as the juridical status of the perpetrator.

Posttraumatic Stress Symptoms

Symptoms of PTSD were measured with the Dutch version (Arntz, 1993; Engelhard, Arntz, & Van den Hout, 2007) of the PTSD Symptom Scale, Self-Report version (PSS-SR: Foa, Cashman, Jaycox, & Perry, 1997). Its seventeen items address the DSM-IV (APA, 2000) items for PTSD (*e.g.*, "In the past week, did you have bad dreams or nightmares about the traumatic event?"). Respondents rate the frequency of symptoms on 4-point scales (0 = not at all, 3 = five or more times per week/almost always). The alpha in this sample was .93.

Complicated grief

Complicated grief severity was measured using the 19-item Dutch version (Boelen, Van den Bout, De Keijser, & Hoijtink, 2003) of the Inventory of Complicated grief (ICG: Prigerson et al., 1995). Items are rated on 5-point scales (0 = never, 4 = always). In this sample, Cronbach's alpha was .92. Examples of items are "I have the feeling that part of me has died with him or her" and "I feel tense, irritable or shocked since his or her death".

Dispositional revenge: Vengeance Scale

Dispositional revenge was measured using the Dutch translation (De Keijser, Boelen, Van Denderen, & Gerlsma, in prep.) of the Vengeance Scale (Stuckless & Goranson, 1992). Twenty items address attitudes toward personal vengeful responses to perceived wrongdoing (e.g., “It is important for me to get back at people who have hurt me”). Items were answered on a 7 point Likert scale (1 = disagree strongly, 7 = agree strongly). Total scores were calculated over the 20 items (after reverse coding some items); higher scores indicate more positive attitudes towards revenge. Cronbach’s alpha in this study was .90.

Situational Revenge: the Transgression Related Interpersonal Motivation Scale

The Revenge subscale of the Transgression Related Interpersonal Motivation Scale (McCullough et al., 1998; Dutch version: Gerlsma et al., 2013) was used to measure *situational revenge*, the motivation to seek revenge, or to see harm come to the offender, following a specific transgression. The scale consists of 5 items (e.g., “I wish that something bad would happen to him/her”, “I’ll make him/her pay”) rated on 7-point scales (1 = disagree strongly, 7 = agree strongly) with higher scores reflecting higher levels of situational revenge. In this study, Cronbach’s alpha was .84.

Positive functioning

Positive functioning was measured with the Positive Outcome Scale (POS, Appelo, 2005; Appelo & Harkema-Schouten, 2003). Its 10 items represent social functioning (e.g. “I function adequately with social contacts”), self-efficacy (“I have control over my own life”), and constructive coping, all considered to be important indicators of positive functioning (Veenhoven 1994, 1997), . Participants rated their agreement with each item on 4-point scales (1 = totally not, 4 = yes, totally). In the current sample, Cronbach’s alpha was .93.

Statistical Analyses

We calculated the correlations between dispositional and situational revenge and the adjustment measures, and tested whether situational revenge was a stronger correlate of adjustment than dispositional revenge using Steigers Z method. We used multivariate regression analysis to examine the relation between revenge and adjustment, taking into account the interrelations between the adjustment measures, with complicated grief, PTSD, and positive functioning serving as dependent variables and both types of revenge as independent variables. Next, we performed univariate regressions with the three dependent variables separately. We examined the extent to which both types of revenge varied as a function of socio-demographic and offense-related factors. To this end, t-tests were used for dichotomous variables (sex) and correlations for continuous variables (age and time since loss). We used Analysis of Variance (ANOVA) to test differences in revenge scores between different participant-victim relationships (the participant was a (i) spouse; (ii) parent; (iii) child; (iv) sibling; (v) indirect family members; or (vi) friend/acquaintance of the victim) and between

different participant-perpetrator relationships (the perpetrator was an (i) (ex)-spouse; (ii) direct family member (parent, child or sibling); (iii) indirect family member; (iv) other, (colleague, friend, business partner, or acquaintance); or (v) someone unknown to the participant). The ANOVAs were followed by multiple comparisons using Bonferroni correction. ANOVAs were also used to assess the association of both revenge types with juridical status (i.e. perpetrator was: (i) convicted; (ii) not found; (iii) discharged from conviction, or (iv) the legal process is not completed yet). To examine whether homicidally-bereaved individuals differed in both types of revenge from a sample of participants which had experienced minor transgressions (McCullough et al., 1998; Stuckless & Goranson, 1992), we used Welch's t-test for unequal sample sizes and unequal variances. For respondents with missing items, sum scores were calculated based on the mean score of the observed items. Participants with more than 50% of missing items on a scale were excluded from the analyses.

Results

Descriptive analyses

In the current sample, 58% of the participants were members of a support group. Although we did not predict a difference in revenge levels between members and nonmembers, we wanted to control for possible differences. Because time since loss was significantly longer for members than for non-members ($t(302) = -10.4, p < .001$), we used time as a covariate. There was no difference in dispositional revenge ($F(1, 320) = 3.13, p = .08$) and situational revenge scores ($F(1, 284) = .713, p = .39$) between members and non-members.

Participants reported a mean score of 68.4 ($SD = 22.2$) on dispositional revenge, and 21.8 ($SD = 7.8$) on situational revenge. Table 2 presents a correlation matrix for the main variables in the study. Correlations between dispositional and situational revenge, and between the adjustment scores were large. Because adjustment measures were strongly correlated, we performed a multivariate analysis to take the dependencies into account while examining the effects of revenge. These results are presented in Table 3. After the multivariate analysis, univariate regressions were performed as follow-ups, in order to investigate and explain the results found in the multivariate analysis.

Table 2. Pearson correlations between Dispositional Revenge, Situational Revenge, PTSD, Complicated Grief and Positive Functioning.

| | Situational revenge | PTSD | Complicated Grief | Positive functioning |
|-----------------------|---------------------|----------|-------------------|----------------------|
| | <i>r</i> | <i>r</i> | <i>r</i> | <i>r</i> |
| Dispositional revenge | .64 | .23 | .39 | -.24 |
| Situational revenge | | .24 | .37 | -.24 |
| PTSD | | | .71 | -.72 |
| Complicated Grief | | | | -.59 |

Note. All correlations were significant at the $p < .01$ level (two-tailed).

Hypothesis Testing

The correlations between (1) dispositional and situational revenge, and (2) indices of PTSD, complicated grief, and positive functioning were all small to medium, ranging from $r = .23$ to $r = .39$ (all $ps < 0.005$) and, as expected, positive for complicated grief and PTSD, and negative for positive functioning. Situational revenge was more strongly correlated with PTSD than dispositional revenge, although not significantly so (using Steiger’s Z test: $z = 1.8, p = .42$).

Table 3 summarizes outcomes of the multivariate regression model with dispositional revenge and situational revenge predicting the three indices of adjustment. The model yielded a percentage of explained variance of 18%. Both dispositional and situational revenge explained 4% of variance in the adjustment measures, when controlling for the shared variance between both types of revenge.

Table 3. Summary of Regression Analyses Predicting Outcome Measures.

| DV† | IV† | B | SE B | β | R ² ‡ | ΔR ² When Entered as Final Step |
|--|-----------------------|--------|---------|-------|------------------|--|
| <i>Multivariate tests with three DVs</i> | | | | | | |
| Complicated grief PTSD | Total model | | | | .18*** | |
| | Dispositional revenge | | | | .04* | |
| Positive functioning | Situational Revenge | | | | | .04* |
| <i>Univariate tests</i> | | | | | | |
| Complicated grief | Total model | | | | .17** | |
| | Dispositional revenge | 0.15** | 0.05 | 0.24 | .03** | |
| | Situational Revenge | 0.39** | 0.13 | 0.22 | | .03** |
| PTSD | Total model | | | | .07*** | |
| | Dispositional revenge | 0.07 | 0.04 | 0.12 | | .01 |
| | Situational Revenge | 0.27* | 0.13 | 0.16 | | .02* |
| Positive functioning | Total model | | | | .07*** | |
| | Dispositional revenge | -0.04 | 0.02 | -0.13 | | .01 |
| | Situational Revenge | -0.14* | 0.06 | -0.16 | | .02* |

Note. † DV indicates dependent variable (Complicated grief, PTSD, Positive functioning), IV indicates independent variable (Dispositional revenge, situational revenge).

‡ For the multivariate tests, the value is computed as $1 - \Lambda$ (with Wilks’ Λ , the proportion unexplained dispositionalized variance in multivariate regression).

Significance levels: * $p < .05$, ** $p < .01$, *** $p < .001$.

The univariate models for each adjustment variable separately showed that the effects of both types of revenge found in the multivariate model were almost completely due to complicated grief. The percentage explained variation in complicated grief was 17%, only 1% lower than the explained variation in the multivariate model. Inspection of the standardized coefficients β and the values of ΔR^2 showed that both types of revenge explained an equal amount of 3% variance in complicated grief. The univariate models predicting PTSD and positive functioning also showed that situational revenge, but not dispositional revenge, explained a

significant amount of variance in outcomes. The univariate analyses yielded similar results and the same conclusions as the multivariate model. This shows that the high intercorrelations between the adjustment measures did not conceal any information that cannot be found with univariate regressions.¹

In Table 4, mean scores for dispositional revenge and situational revenge are presented for different subgroups of participants, categorized according to socio-demographic and offense-related characteristics. Situational revenge scores differed significantly as a function of the relationship between participant and perpetrator ($F(4, 264) = 5.39, p < .001$). Post hoc comparisons showed that participants reported significantly ($p < .05$) less situational revenge when the perpetrator was a direct family member, than an indirect family member, a friend, colleague or acquaintance, or someone unknown to the participant (see Table 4). Dispositional and situational revenge did not differ as a function of participants' gender, relationship with the victim and juridical status of the perpetrator.

Table 4. Associations Between Revenge and Socio-demographic and Offense-related Factors.

| Category | Subcategory | Dispositional revenge | | Situational revenge | |
|--------------------------------------|---|-----------------------|-----------|---------------------|-----------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Sex (<i>N</i> total) | Male <i>N</i> = 113 | 70.75 | 23.82 | 21.47 | 8.04 |
| | Female <i>N</i> = 218 | 67.22 | 21.21 | 22.04 | 7.64 |
| Perpetrator is | Convicted <i>N</i> = 202 | 67.02 | 21.06 | 21.51 | 7.38 |
| | Not found by the police <i>N</i> = 24 | 67.57 | 19.32 | 21.50 | 7.80 |
| | Is discharged from conviction <i>N</i> = 14 | 75.71 | 30.11 | 24.15 | 10.10 |
| | The legal process is not completed yet <i>N</i> = 56 | 70.42 | 25.99 | 23.57 | 7.96 |
| Participant is ... of the victim | (ex)Spouse <i>N</i> = 29 | 67.95 | 20.29 | 23.82 | 8.39 |
| | Parent <i>N</i> = 159 | 69.61 | 22.02 | 22.31 | 7.86 |
| | Child <i>N</i> = 42 | 66.84 | 22.36 | 21.27 | 7.97 |
| | Sibling <i>N</i> = 54 | 66.31 | 22.79 | 21.73 | 6.97 |
| | Indirect family member <i>N</i> = 28 | 69.26 | 22.41 | 22.10 | 7.58 |
| | Friend/colleague/acquaintance <i>N</i> = 19 | 67.40 | 20.70 | 19.19 | 7.95 |
| Perpetrator is... of the participant | (ex)Spouse <i>N</i> = 14 | 67.93 | 20.11 | 17.00 | 4.24 |
| | Direct family member (parent, child or sibling) <i>N</i> = 19 | 64.57 | 18.09 | 15.13 | 7.82 |
| | Indirect family member <i>N</i> = 31 | 70.04 | 20.56 | 25.63 | 6.50 |
| | Friend/colleague/acquaintance <i>N</i> = 87 | 66.70 | 22.28 | 22.87 | 8.18 |
| | Unknown <i>N</i> = 168 | 69.47 | 23.32 | 21.74 | 7.36 |

Other socio-demographic and offense-related variables (not included in Table 4) which were not significantly related to revenge were time since loss (dispositional revenge ($r(323) = .02, p = .78$), situational revenge ($r(287) = -.08, p = .20$)) and age

¹ To allay further concerns regarding the dependency of the three adjustment measures, we examined the effect of combining the three measures into one measure of 'bereavement outcome' by means of a weighted factor score. A regression analysis with 'bereavement outcome' as dependent variable and dispositional and situational revenge as independent variables yielded a R^2 of 9.8%, 8% lower than when PTSD, complicated grief and positive outcome were not combined as one single measure of bereavement outcome. To conclude, to use the three outcome measures separately is more informative than combining them into one single bereavement measure.

(dispositional revenge $r(318) = -.01, p = .81$). Age was only negatively correlated with situational revenge $r(285) = -.12, p < .05$).

Finally, we examined whether levels of dispositional revenge in our homicidally-bereaved sample (*i.e.* $M = 68.4, SD = 22.2$) differed from the level of dispositional revenge found in a comparison sample consisting of 151 students who had experienced relatively mild interpersonal transgressions, as reported by Stuckless and Goranson (1992) (*i.e.* $M = 64.95, SD = 20.8$). This was not the case: $t(308) = 1.65, p = 0.09$. To compare the level of situational revenge in the present sample with comparison samples from the study by McCullough et al. (1998) we had to transform our situational revenge scores from a seven point scale to a five point scale, using linear transformation. The homicidally-bereaved sample showed a significantly higher mean score ($16.23, SD = 5.2$) than that for McCullough et al.'s sample of university undergraduates exposure to interpersonal transgressions ($M = 8.68, SD = 4.5; t(527) = 17.75, p < .001; d = 1.56$), and also their sample of psychology students who had been betrayed or hurt in a close relationship ($M = 8.99, SD = 5.1; t(362) = 10.78, p < .001; d = 1.41$). These effect sizes by far exceeded Cohen's (1988) convention for a large effect ($d \geq .80$).

Discussion

As predicted by Hypothesis 1, both dispositional and situational revenge were positively associated with PTSD and complicated grief, and negatively associated with positive functioning. Hypothesis 2 was not confirmed: situational revenge was not more strongly correlated with the outcome measures than dispositional revenge. Correlations showed that indices of revenge were more strongly related to complicated grief than to PTSD and positive functioning. Hypothesis 3a was not confirmed: males and females did not differ in dispositional and situational revenge scores. Hypothesis 3b was however confirmed: younger participants reported significantly more situational revenge than older participants, but not more dispositional revenge. As predicted by Hypothesis 4 and in accord with earlier research (Orth, 2004), both types of revenge were unrelated to time since loss. We also found that participants reported less situational revenge when the perpetrator was a direct family member. This suggests that closeness of the relationship with the perpetrator has a diminishing effect on situational revenge (Harris-Hendriks, Black, & Kaplan, 1993; Horne, 2003; Rynearson, 1984). The juridical status of the perpetrator was found to be unrelated to both dispositional and situational revenge, confirming Hypothesis 5. This accords with previous research, in which punishment severity did not predict feelings of revenge in a sample of victims of sexual violence and robbery, several years after the trial (Orth, 2004). According to the "retributive justice theory" (cf. Kant, 1780/1965; Mooij, 1998), justice is restored when the perpetrator suffers an equal amount of psychological pain as the victim or - in this context - the bereaved individual. This could be accomplished by bereaved individuals themselves (through acts of retaliation) or through government, by legal punitive sanction (Kunst, 2011).

However, our findings are not in line with the notion that punishment satisfies the need for revenge. The last hypothesis was also confirmed. Homicidally-bereaved individuals did not differ significantly from a comparison group of students exposed to minor transgressions in terms of dispositional revenge. However, the level of situational revenge in our sample was significantly higher than scores observed in comparisons groups of students confronted with relatively mild transgression. This indicates that homicidally-bereaved individuals are not more vengeful in general but are more vengeful toward the murderer of their loved one, than students are towards their offenders. Thus, the severity of the offence seems to be a determining factor in developing situational revenge.

Limitations and Directions for Further Research

The current study has several limitations. First, the measure of positive functioning we used has not been used and validated in other countries. The concept of positive functioning – as assessed by the Positive Outcome Scale – is reminiscent of the concept of *resilience*: the ability of individuals to maintain healthy levels of psychological and physical functioning while exposed to a traumatic event (Bonanno, 2008). However, positive functioning is a broadly defined construct so that it would be interesting for future studies to further explore indices of positive functioning and resilience among homicidally-bereaved individuals, using well-validated measures. Second, in terms of the severity of the transgression and age, student samples are not optimal comparison groups. As a consequence, we cannot necessarily conclude that homicidally-bereaved individuals are more motivated to take revenge than the general population or victims of severe crimes. We recommend that other researchers have examined revenge in response to transgressions in victims of more severe crimes, and not only in student samples (McCullough, Fincham, & Tsang, 2003; McCullough & Hoyt, 2002) and individuals from the general community who had experienced mild transgressions (Ghaemmaghani et al., 2011).

A third limitation arises because participants were mostly recruited from support organizations, so that generalization of the current findings to homicidally-bereaved people who have no contact with support organizations should be made with caution. A fourth limitation is the cross-sectional nature of the data. We could not examine the time course of the main variables, for example whether individuals with high levels of dispositional revenge are more likely to develop high levels of situational revenge after homicidal loss. With a longitudinal study, we could examine how revenge at time 1 predicts adjustment at time 2, controlling for adjustment at time 1, since it is likely that revenge is associated with adjustment measures throughout the time since the loss. Because of the cross-sectional nature of the data, we were only able to make the assumption that revenge is driving (lack of) adjustment: either revenge comes first and triggers complicated grief and PTSD reactions or they occur at the same time.

Clinical Implications

If future studies indicate that elevated revenge is causally related to more severe

psychopathology and less positive functioning following homicidal loss, this could have clinical implications. For instance, homicidally-bereaved individuals who seek treatment for complicated grief could benefit from interventions focused on the alleviation of revenge feelings. Our results suggest that these interventions should focus on situational as well as dispositional revenge. There is some preliminary evidence that revenge feelings can be diminished by ruminating less about the transgression (McCullough et al. (2001), forgiving the perpetrator, and a search for positive meaning about the transgression (McCullough, Root, & Cohen, 2006). It would be interesting to examine the usefulness of these techniques for individuals confronted with the homicidal loss of a loved one and with complicated grief complaints.

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