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Complicated grief following job loss: Risk factors for its development and maintenance

JANSKE H. W. VAN EERSEL[1] iD TOON W. TARIS[2] iD and PAUL A. BOELEN[1,3] iD

[1]Department of Clinical Psychology, Utrecht University, Utrecht, the Netherlands
[2]Department of Social, Health and Organizational Psychology, Utrecht University, Utrecht, the Netherlands
[3]ARQ National Psychotrauma Centre, Diemen, the Netherlands

Increasing evidence shows that job loss can lead to symptoms of complicated grief (CG). However, little is known about which factors relate to the development and maintenance of CG symptoms following job loss. This study aimed to examine risk factors for the development and maintenance of job loss-related CG symptoms. For this study 485 Dutch workers who had lost their job were recruited (239 men and 246 women), with an average age of 50.2 years. A subsample of 128 participants also completed questionnaires at a six-month follow-up. We conducted correlational and multiple regression analyses (MRA) to examine the influence of the former work situation, coping strategies, and negative cognitions on job loss-related CG symptoms. MRA results showed that belief in an unjust world was related to job loss-related CG symptoms, cross-sectionally and longitudinally. Further, there was a significant relationship between CG symptoms following job loss and a preference for maladaptive coping over adaptive coping styles and a low level of self-esteem. This effect remained stable over time. These findings can inform the development of interventions for and early detection of job loss-related CG symptoms.

Key words: Cognitions, coping, grief, job loss, unemployment.

Janske H. W. van Eersel MSc, Vatenstraat 7, 5388 KL Nistelrode, the Netherlands. E-mail: info@janskevaneersel.nl

INTRODUCTION

The impact of job loss can be extensive, even if not followed by a long period of unemployment (Gowan, 2014). Job loss may lead to a decrease in psychological, physical, and social well-being (e.g., McKee-Ryan, Song, Wanberg & Kinicki, 2005; Norström, Virtanen, Hammarström, Gustafsson & Janlert, 2014). From a Conservation of Resources perspective, the primary loss of employment and secondary loss of resources (e.g., income, status, and self-esteem) can produce different levels of stress depending on how threatening the event is appraised by the individual, how many resources there are available to deal with this loss, and how much an individual has invested in their lost job (Hobfoll, Tirone, Holmgreen & Gerhart, 2016). Moreover, mounting evidence shows that job loss can lead to symptoms of complicated grief (CG; e.g., Archer & Rhodes, 1995; Brewington, Nassar-McMillan, Flowers & Furr, 2004; Papa, Lancaster & Kahler, 2014). Attachment to the lost job, losing a sense of self, and disruption of one's identity appear to play an important role in this phenomenon (Papa & Lancaster, 2016). It requires reorganization of self-schemata, the search for meaning, and reconstruction of fundamental assumptions about others, the world and the future (Harvey & Miller, 1998). CG is characterized by separation distress combined with difficulty accepting the loss, "moving on," and finding meaning in life, causing persistent suffering and impairments in functioning (Prigerson, Horowitz, Jacobs, Parkes, Aslan & Goodkin, 2009; Shear, Simon, Wall, Zisook, Neimeyer & Duan, 2011).

Currently, little is known about which factors relate to the development and maintenance of CG symptoms following involuntary job loss. This knowledge is important for the identification of people suffering from these problems as well as for the development of interventions for this group. Many people, including professionals as well as those who have lost their jobs, appear to be unaware that CG symptoms can occur after involuntary job loss. Therefore, these symptoms could remain unrecognized or misdiagnosed (e.g., as depression). This is unfortunate because bereavement research has shown that CG symptoms often do not diminish over time without adequate treatment (Shear, Frank, Houck & Reynolds, 2005). In order to fill this gap, the overarching aim of the present study was to examine possible risk factors for CG symptoms following job loss. Three categories of risk factors were taken into account, both cross-sectionally and longitudinally: characteristics of the former work situation, coping strategies, and negative cognitions.

Former work situation

Specific work-related variables might influence the impact of involuntary job loss. It can be argued that *full-timers* invest more energy and time in their job than *part-timers* and therefore dismissal could have more impact on them. In a related vein, the number of *years of employment* could be connected with the development of job loss-related CG symptoms. For example, the more time, energy, and social capital individuals have invested in their job, the more likely it is that this job plays a central role in their self-concept. Apparently, no studies have investigated the relationship between number of years of employment, work hours per week, and job loss-related CG symptoms.

In their meta-analysis, McKee-Ryan *et al.* (2005) found that the duration of unemployment was negatively associated with mental health. They speculated that accumulating stress could be the

cause of this, due to a depletion of coping resources and mounting tension and anxiety since "time (and financial resources) is running out." In contrast, Papa and colleagues (2014) found that with more *time passed*, job loss-related CG symptoms were less severe. As for *financial difficulties,* Papa and Maitoza (2013) found that this variable was associated with more severe symptoms of depression and anxiety, but not with CG symptoms.

Coping strategies

Coping is involved in the development and maintenance of CG symptoms (cf. Folkman & Lazarus, 1990). Bereavement research established a positive relationship between the preference for avoidant coping styles and the development and maintenance of CG symptoms (e.g., Morina, 2011; Nazali & Yildrim, 2017). Maladaptive coping styles combined with negative appraisal of the job loss lead to diminished well-being during unemployment (Gowan, 2014). As for individuals who have lost their jobs, people who reported higher levels of self-esteem, perceived control, and optimism experienced greater levels of mental health than otherwise similar individuals who used more maladaptive coping strategies for stressful life events (McKee-Ryan *et al.*, 2005; Wanberg, 2012). Papa and Maitoza (2013) showed that a preference for avoidant coping styles was associated with a higher level of job loss-related CG symptoms.

Negative cognitions

Many studies (e.g., Boelen, van den Hout & van den Bout, 2006; Currier, Holland & Neimeyer, 2009; Ott, Lueger, Kelber & Prigerson, 2007) found an association between self-esteem and the experienced level of CG. Loss events potentially affect one's self-view, especially if the loss is linked to a central domain of the individual's sense of self (Papa & Lancaster, 2016). Numerous studies on unemployment found that a positive self-view is a protective factor when one is confronted with job loss (e.g., Creed, Lehmann & Hood, 2009; McKee-Ryan *et al.*, 2005; Taris, 2002). Paul and Moser (2009) reported that people with lower self-esteem experienced more psychological distress when confronted with job loss.

Just world beliefs seem relevant too; people who believe in a "just" world (i.e., a world that is fair and in which people get what they deserve) strive for justice in their own actions and rectification of injustice (Dalbert, Lipkus, Sallay & Goch, 2001). This motivates them to predict a positive future for themselves and gives them a feeling of control. Belief in a just world is associated with greater well-being and more effective coping (Dalbert, 2002). Conversely, belief in an unjust world enhances the tendency to act freely and possibly in disagreement with any fairness rules. This kind of worldview increases cynicism and acting out of self-interest (Dalbert *et al.*, 2001). Although these constructs have similarities, they are not bipolar. Research has shown they are separate psychological constructs which measure different aspects of someone's world belief (Lench & Chang, 2007). Confrontation with loss may shatter an individual's basic beliefs about the world, which can lead to changes in one's sense of justice, fairness, and benevolence in the world (e.g., Janoff-Bulman,

1999; Park, 2010). Several studies found that a high belief in a just world and a low belief in an unjust world can protect an individual against the impact of loss (e.g., Currier *et al.*, 2009; Smith, Abeyta, Hughes & Jones, 2015).

The present study

In the present study, we used a prospective design to enhance our knowledge about predictors of CG symptoms following involuntary job loss. People confronted with job loss filled in questionnaires measuring background variables, psychological variables, and symptoms of CG. They completed the CG symptom list again six months later. We cross-sectionally and longitudinally explored the associations between work situation variables, coping strategies, and negative cognitions on the one hand, and the intensity of job loss-related CG symptoms on the other hand.

Cross-sectional hypotheses. For the work situation we expected that losing a fulltime job, a decrease of income, longer employment duration, less time passed since the dismissal, and a more personal reason for the dismissal (e.g., labour conflict) as compared to a more environmental reason (e.g., bankruptcy) would be associated with higher levels of CG symptoms (Hypothesis 1a). For the coping strategies we expected a preference for maladaptive coping styles above adaptive coping styles to be associated with higher levels of CG symptoms (Hypothesis 2a). Finally, for the negative cognitions we expected a low level of self-esteem, a low level of belief in a just world, and a high level of belief in an unjust world to be associated with higher levels of CG symptoms (Hypothesis 3a).

Longitudinal hypotheses. In the longitudinal analyses we controlled for the severity of job loss-related CG symptoms on Time 1 (T_1) when examining the job loss-related CG symptoms on Time 2 (T_2). For the longitudinal results, we expected to find similar results for work situation variables (Hypothesis 1b), coping strategies (Hypothesis 2b), and negative cognitions (Hypothesis 3b) as for the cross-sectional results.

METHOD

Procedure

The Ethical Review Board of the faculty of Social Sciences of Utrecht University approved this study (FETC 16-111). The recruitment of Dutch individuals who had lost their job went through three channels: (1) via an organization providing psychosocial care after job loss; (2) via meetings about the impact of the job loss for people who had lost their job; and (3) via social (media) networks. Individuals interested in participating in the study received an information letter, an informed consent form, and the survey. After signing the informed consent form, the survey was completed by 92% of the participants who had started it ($N = 557$), either using a paper-and-pencil format or an online format administered through a secured online area.

Participants who consented to be contacted for further research and who had lost their job less than twelve months ago at T_1 were asked to complete questionnaires at follow-up, T_2 six months later. They were approached by e-mail with information on the follow-up study and a link to a secured online area where they could fill out the T_2 questionnaires. In the case of no response, a reminder was sent after two weeks.

Participants

At T$_1$, 515 people started the survey. Data from thirty people were excluded from the study, because at T$_1$ they had resigned from their job themselves, worked as an intern, lost their job over a decade ago, or filled out the T$_1$ survey more than once. The remaining group ($N = 485$) consisted of 239 men (49%) and 246 (51%) women, with an average age of 50.2 ($SD = 8.8$) years, who had lost their job on average 18.0 months ago($SD = 20.2$ months). Part of this sample ($N = 288$) was used in a prior study to validate the Job Loss Grief Scale (Van Eersel, Taris & Boelen, 2019). Of the 485 participants at T$_1$, 213 participants had lost their job in the previous year and were invited to participate in the follow-up study. On hundred twenty-eight people (60%) completed the survey for the follow-up study. This group consisted of 72 men (56%) and 56 women (44%), who lost their job on average 5.1 ($SD = 3.6$) months ago. The T$_1$-T$_2$ interval ranged from 5.5 to 7.1 months ($M = 6.3$ months; $SD = 0.3$ months). Table 1 shows socio-demographic and work-related characteristics of the participants at T$_1$ and T$_2$.

Dropout analyses

Of all participants who were invited to complete measures at T$_2$, those who continued to participate at T$_2$ ($N = 128$) and those who did not ($N = 85$) were compared with independent t-tests on background and loss-related variables that were measured at T$_1$. Age was the only variable on which the responders differed significantly from the non-responders (t (211) = 3.56; $p < 0.001$), with T$_2$ non-responders being younger ($M = 45.4$, $SD = 8.7$ years) than the T$_2$ responder group ($M = 49.8$, $SD = 9.0$ years).

Measures

Demographics. Information on the background variables (e.g., gender, age, and education) and the work characteristics (e.g., length of employment, reason for dismissal, time passed since job loss; see Table 1) was collected from the participants.

Job loss grief scale (JLGS). The JLGS was used to measure job loss-related CG symptoms (Van Eersel *et al.*, 2019). Participants were instructed to keep the loss of their job in mind and to rate the extent to which they had experienced the listed thirty-three symptoms on a 5-point scale (1 = "never," 5 = "always"). For instance, "I can't accept the loss of my job" and "I feel bitter about the loss of my job." The JLGS was found to have good psychometric properties in a prior study (Van Eersel *et al.*, 2019). That is, its items were found to form a unidimensional scale ($\chi^2 = 1414.54$; $df = 484$; $\chi^2/df = 2.92$; CFI = 0.95; TLI = 0.94; RMSEA = .08), with adequate internal consistency, that were distinguishable from symptoms of anxiety and depression (attesting to the scale's discriminant validity), and associated with concurrently assessed indices of distress (attesting to the scale's convergent validity). In the present sample the internal consistency of the JLGS was excellent at both T$_1$ ($\alpha = 0.97$) and T$_2$ ($\alpha = 0.97$).

Table 1. *Characteristics of the participants*

Socio-demographics	T$_1$ CG				T$_2$ CG				T$_2$ NR
	N (%)	M	SD	r$_s$	N (%)	M	SD	r$_s$	N (%)
Gender				0.01				−0.01	
Male	239 (49)	38.43	25.71		72 (56)	25.61	23.91		37 (44)
Female	246 (51)	38.68	26.23		56 (44)	21.38	21.63		48 (56)
Education									
Low	55 (11)	36.60	27.15	−0.03	12 (9)	36.00	28.74	0.12	8 (9)
Middle	199 (41)	41.76	26.59	0.10*	51 (40)	23.53	22.25	0.01	37 (45)
High	231 (48)	36.27	24.90	−0.08	65 (51)	21.68	22.00	−0.07	39 (46)
Relationship				−0.05				−0.13	
Yes	331 (68)	37.68	25.92		94 (73)	21.76	21.77		61 (72)
No	154 (32)	40.45	26.68		34 (27)	29.29	25.45		24 (28)
Work characteristics									
Income Loss									
Reduction 0-25%	103 (22)	35.57	24.30	−0.06	26 (20)	19.62	15.21	−0.02	23 (27)
Reduction 25−50%	212 (45)	36.66	24.25	−0.06	68 (54)	23.99	23.08	−0.02	40 (47)
Reduction 50-75%	101 (22)	45.50	28.97	0.12*	22 (17)	29.86	30.77	0.06	15 (18)
Reduction 75%-100%	50 (11)	41.10	27.61	0.03	11 (9)	21.45	19.86	−0.02	7 (8)
Years of employment									
< 1 year	60 (12)	45.83	29.28	0.09*	22 (17)	31.45	28.30	0.10	9 (11)
1 − 3 years	113 (23)	34.98	23.17	−0.06	33 (26)	24.45	22.83	0.02	26 (31)
3 − 5 years	66 (14)	40.41	26.24	0.03	16 (13)	16.69	18.58	−0.08	10 (12)
5 − 15 years	122 (25)	37.48	25.61	−0.02	30 (23)	24.27	21.38	0.05	26 (31)
> 15	124 (26)	38.37	26.45	−0.01	27 (21)	20.26	21.94	−0.10	14 (16)
Reason of dismissal									
Reorganization	196 (40)	36.97	25.13	−0.05	50 (40)	20.00	19.42	−0.10	36 (42)
Bankruptcy	39 (8)	39.59	24.10	0.02	10 (8)	15.80	18.92	−0.13	5 (6)
Health complaints	45 (9)	39.80	27.43	0.01	8 (6)	31.50	19.90	0.13	7 (8)
Labour conflict	74 (15)	43.69	24.24	0.10*	21 (16)	24.62	23.11	0.04	17 (20)
Non-renewed contract	57 (12)	37.75	31.18	−0.04	16 (13)	29.13	29.44	0.06	7 (8)
Other	74 (15)	36.95	25.84	−0.03	23 (18)	28.17	26.96	0.04	13 (15)
Workhours				0.07				0.10	
Part-time	199 (42)	36.42	24.90		56 (44)	20.89	20.33		38 (45)
Full-time	274 (58)	40.32	26.83		72 (56)	25.99	24.71		47 (55)

Notes: T$_1$ CG = Time 1 Complicated Grief ($N = 485$); T$_2$ CG = Time 2 Complicated Grief ($N = 128$); T$_2$ NR = Time 2 non-responders ($N = 85$).
*$p < 0.05$.

Brief COPE. Carver's (1997) Brief COPE was used to measure coping behavior. Participants were instructed to keep the loss of their job in mind and to rate the extent to which they agreed with the scale's 28 statements (1 = "never" or "rarely," 4 = "very frequently"). Sample items were "I've been refusing to believe that it has happened" and "I've been learning to live with it." The Brief COPE consists of 14 dimensions. We wanted to reduce this number of predictor variables and were mainly interested in comparing maladaptive and adaptive coping styles. Hence, we conducted an EFA on all subscales to investigate the underlying structure. Initially five factors with eigenvalues exceeding 1 were extracted, namely 3.07 (23.7%), 2.10 (16.2%), 1.23 (9.4%), 1.14 (8.8%), and 1.07 (8.2%). The scree plot presented a break after three factors. Therefore, the EFA was repeated, restricting the number of factors to 3. The subscales religion, substance use, humour, and self-distraction had low loadings (<.40) on all three components and were removed from further analysis. The three-factor solution of the ten remaining subscales (with eigenvalues of 2.97, 2.06, and 1.21) explained 62.4% of the variance. Table 2 presents the relevant factor loadings. Based on this three-factor solution, three new coping scales were created: maladaptive coping, adaptive coping, and social coping. In the present sample the internal consistency of these three scales was good: (1) maladaptive coping ($\alpha = 0.74$), (2) adaptive coping ($\alpha = 0.81$), and (3) social coping ($\alpha = 0.78$).

Rosenberg self-esteem scale (RSES). The RSES was used to measure the subjective self-esteem of an individual (Rosenberg, 1965). Participants rated the extent to which they agreed with ten statements (0 = "totally agree," 3 = "totally disagree"). For instance, "I feel that I have a number of good qualities" and "I feel I do not have much to be proud of." In the present sample the internal consistency of the RSES was excellent ($\alpha = 0.90$).

General world beliefs. Belief in a Just World and Belief in an Unjust World (Dalbert, Montada & Schmitt, 1987) were used to measure if the world was perceived as just, predictable, and controllable. Participants rated to which extent they agreed with six statements of the Belief in a Just World and four statements of the Belief in an Unjust World listed on a 6-point scale (1 = "strongly agree," 6 = "strongly disagree"). For example, "I am confident that justice always prevails over injustice" and "A lot of people suffer an unjust fate." In the present sample the internal consistency of the Belief in a Just World ($\alpha = 0.82$) and Belief in an Unjust World ($\alpha = 0.84$) were good.

Statistical analyses

The multiple regression analyses were conducted in Mplus (Version 8; Muthén and Muthén, 1998–2017) due to its ability of handling missing values using full information maximum likelihood. The additional analyses (ANOVA, Spearman's rho) were conducted in SPSS (Version 24). We examined associations of continuous variables with symptom levels of CG at T_1 and T_2, using Pearson's correlation coefficient.

Table 2. *Brief COPE subscales factor loadings*

Subscales	Maladaptive coping	Adaptive coping	Social Coping
Denial	0.72		
Behavioral disengagement	0.75		
Self-blame	0.68		
Active coping		0.85	
Acceptance	−0.62	0.44	
Positive reframing	−0.46	0.65	
Planning		0.89	
Emotional support			−0.86
Instrumental support			−0.85
Venting			−0.63

Analysis of variance (ANOVA) and Spearman's rank correlation coefficients were used to investigate the associations of categorical and dichotomous variables with these symptom levels. For the regression analyses with categorical variables we created dummy variables in which we used the largest subgroup from that variable as reference group.

We conducted three rounds of cross-sectional analyses, testing the associations of job loss-related CG symptoms at T_1 with: (1) features of the former work situation; (2) coping strategies; and (3) negative cognitions, respectively. In each round, the univariate associations of CG symptoms at T_1 with each individual variable were examined, followed by maximum likelihood multiple regression analyses (MRA) to examine whether a particular variable explained a significant amount of variance in CG symptoms at T_1, controlling for the other independent variables from the category of variables under consideration. For the three coping scales we performed the EFA and MRA in the same analysis in Mplus. Finally, we ran a MRA in which all variables emerging as significant correlates of CG at T_1 in these distinct rounds of analyses were entered simultaneously into the regression equation.

Next, we conducted three rounds of longitudinal analyses, consecutively examining associations of: (1) work situation features; (2) coping strategies; and (3) negative cognitions measured at T_1, respectively, with CG symptoms following job loss at T_2, while controlling for CG symptom levels at T_1. Again, we calculated correlations between each individual variable with CG symptoms at T_2 and, consecutively, used maximum likelihood MRA to examine to what extent each group of variables (e.g., cognitions) predicted T_2 CG symptoms.

Finally, we conducted two final MRAs, one in which all variables emerging as significant predictors of CG at T_2 in these distinct rounds were entered simultaneously into the regression equation, and another in which the same independent variables were added controlling for CG at T_1.

The MRA models were saturated with zero degrees of freedom and a comparative fit index of 1.00, that is model tests were not informative. The associated data are freely retrievable (Van Eersel, Taris, & Boelen, 2020).

RESULTS

Cross-sectional analyses

Socio-demographic variables (age, gender, educational level, and marriage) were used as control variables. The intensity of job loss-related CG symptoms did not differ as a function of educational level, $F (2, 482) = 2.59$, $p = 0.08$. The other socio-demographic variables were also not significantly related to CG symptoms following job loss (Table 1).

Hypothesis 1a. Job loss-related CG symptoms differed as a function of the income loss groups, $F (462, 3) = 3.45$, $p < 0.05$. The groups with 50–75% income loss scored higher on CG symptoms ($M = 45.5$, $SD = 29.0$) than the groups with 0–5% ($M = 35.6$, $SD = 24.3$) and 25–50% ($M = 36.7$, $SD = 24.2$) loss of income. CG symptoms after job loss did not differ as a function of the duration of employment ($F (479, 5) = 1.54$, $p = 0.18$) and cause of dismissal ($F (478, 6) = 0.81$, $p = 0.56$). Time passed since job loss and work hours also had no significant relation with job loss-related CG symptoms. The MRA in Table 4 revealed a difference ($p < 0.01$) in the level of job loss-related CG symptoms between the group who lost 50–75% of their income versus the group who lost 25–50% of their income, partially confirming Hypothesis 1a.

Hypothesis 2a. Table 3 revealed that job loss-related CG symptoms were positively related to maladaptive coping styles

and negatively to adaptive coping styles (both $ps < 0.01$). Social coping was not significantly related to job loss-related CG symptoms. Table 4 shows that maladaptive coping, but not adaptive and social coping, was significantly associated with CG levels related to job loss, when controlling for the shared variance between the three coping variables. The overall results confirmed Hypothesis 2a.

Hypothesis 3a. As for negative cognitions, the correlations reported in Table 3 showed a negative relation between job loss-related CG symptoms and self-esteem, a negative relation with belief in a just world, and a positive relation with belief in an unjust world (all $ps < 0.01$). The MRA in Table 4 indicated that all three cognitive variables explained a significant amount of unique variance in CG symptoms after their dismissal when controlling for the overlap between these cognitive variables, confirming Hypothesis 3a.

Final model. The MRA showed a significant relationship between income loss (50–75%), maladaptive coping, self-esteem, and belief in an unjust world, on job loss-related CG at T_1 (Table 4), confirming Hypotheses 1a, 2a and 3a.

Longitudinal analyses

Consistent with the cross-sectional results, the intensity of job loss-related CG symptoms did not differ as function of educational level, $F (2, 125) = 2.01$ $p = 0.14$. The other socio-demographic variables were also unrelated to CG symptoms (Table 1).

Hypothesis 1b. Job loss-related CG symptoms did not significantly differ as function for income loss ($F (123, 3 = 0.83, p = 0.48)$), duration of employment ($F (122, 5) = 1.02, p = 0.41$), and cause of dismissal ($F (121, 6) = 0.87, p = 0.52$). The MRAs in Table 4, with work situation features as predictor variables, indicated that none of them significantly predicted CG levels related to job loss at T_2, which remained the same when controlling for CG symptoms at T_1. Hypothesis 1b was not confirmed, therefore none of the work-related characteristics were included in the final model.

Hypothesis 2b. For the coping strategies the longitudinal results replicated the cross-sectional results. Table 3 showed a significant

positive relation between job loss-related CG symptoms and at T_2 and maladaptive coping styles, a significant negative relation with adaptive coping and nonsignificant relation with social coping. The MRA with coping as predictor variable indicated that maladaptive coping predicted CG following job loss at T_2, this effect did not reach the level of significance when controlling for job loss-related CG at T_1 (Table 4). Hypothesis 2b was therefore partially confirmed.

Hypothesis 3b. Table 3 showed that job loss-related CG symptoms were negatively related to self-esteem and belief in a just world, and positively to belief in an unjust world. The MRA in Table 4 with negative cognitions as predictor variables indicated that self-esteem and belief in an unjust world predicted the level of job loss-related CG symptoms at T_2, and that belief in unjust world, but not self-esteem and belief in just world predicted CG following job loss, while controlling for CG symptoms at T_1 (Table 4). This partially confirmed Hypothesis 3b.

Final models. The MRA for CG at T_2 showed a significant relationship with maladaptive coping, self-esteem, and belief in an unjust world. However, when controlling for the effect of T_1 CG, only belief in an unjust world remained significant (Table 4). This confirmed Hypothesis 3b.

DISCUSSION

The aim of this study was to obtain better insight in the degree to which a number of possible important work situation variables, coping-related, and cognitive factors enhance the risk for the development and maintenance of job loss-related CG symptoms. Three findings stand out as especially interesting.

First, at both time points there was a significant association between belief in an unjust world and the level of job loss-related CG symptoms, which remained significant after controlling for T_1 CG symptoms. A strong belief in an unjust world explained 15% of the variance in T_2 CG symptoms, the latter appearing to be a risk factor for the development and maintenance of CG symptoms following job loss. The finding that negative cognitions (like low self-esteem and a general high belief in an unjust world) affect the risk for the development of CG symptoms following job loss, was consistent with earlier research results on bereavement (e.g.,

Table 3. *Pearson correlations for the main study variables*

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. T_1 Complicated grief	–								
2. T_2 Complicated grief	0.70**	–							
3. Age	−0.08	−0.15	–						
4. Passed time since job loss	0.06	−0.25	0.17**	–					
5. Maladaptive coping	0.73**	0.49**	−0.06	0.18**	–				
6. Adaptive coping	−0.30**	−0.18*	−0.02	−0.13**	−0.27**	–			
7. Social coping	0.05	0.12	−0.15**	−0.13**	0.07	0.33**	–		
8. Rosenberg Self-Esteem Scale	−0.53**	−0.40**	0.21**	−0.09*	−0.52**	0.43**	0.12**	–	
9. Belief in a just world	−0.26**	−0.23**	−0.03	−0.11*	−0.16**	0.19**	0.09*	0.26**	–
10. Belief in an unjust world	0.31**	0.39**	0.02	0.07	0.24**	−0.15**	−0.05	−0.26**	−0.44**

**$p < 0.01$
*$p < .05$.

Table 4. *Multiple regression analyses for Time 1 and Time 2 complicated grief, respectively*

Group of variables	T_1 complicated grief β	T_1 complicated grief z	T_2 complicated grief β	T_2 complicated grief z	T_2 Complicated grief β	T_2 Complicated grief z
Work situation						
T_1 Complicated grief					0.68**	12.75
Income loss						
Reduction 0–25%	−0.02	−0.46	−0.04	−0.53	−0.02	−0.36
Reduction 50–75%	0.14**	2.75	0.09	1.19	−0.01	−0.05
Reduction 75–100%	0.04	0.88	0.01	0.06	−0.02	−0.35
Years of employment						
< 1 year	0.11	1.91	0.06	0.73	−0.01	−0.15
1–3 years	−0.02	−0.27	−0.09	−1.00	−0.09	−1.04
3–5 years	0.04	0.74	−0.05	−0.61	−0.08	−0.39
5–15 years	0.02	0.31	−0.02	−0.21	−0.03	−0.42
Passed time since job loss	0.05	1.07	−0.08	−0.23	−0.02	−0.32
Reason of dismissal						
Bankruptcy	0.05	0.99	−0.04	−0.50	−0.07	−1.07
Health complaints	0.06	1.24	0.09	1.05	0.04	0.61
Labour conflict	0.10*	2.11	0.12	1.58	0.05	0.64
Non−renewed contract	−0.01	−0.27	0.07	0.91	0.09	1.17
Other	0.01	0.18	0.10	1.32	0.10	1.40
Work hours	0.05	0.97	0.04	0.58	0.01	0.15
Coping						
T_1 Complicated grief					0.72**	14.66
Maladaptive coping	0.92**	29.10	0.70**	7.45	−0.03	−0.21
Adaptive coping	0.06	1.12	−0.04	−0.37	−0.05	−0.46
Social coping	−0.05	−1.07	0.11	1.08	0.07	0.84
Cognitions						
T_1 Complicated grief					0.62**	9.26
Rosenberg Self−Esteem Scale	−0.46**	−12.66	−0.32**	−4.53	−0.02	−0.25
Belief Just World	−0.08	−1.85	−0.07	−0.88	−0.02	−0.23
Belief Unjust World	0.16**	3.67	0.30**	4.10	0.19**	2.73
Final model						
T_1 Complicated grief					0.61***	6.91
Income loss						
Reduction 0–25%	0.01	0.11				
Reduction 50–75%	0.09**	2.67				
Reduction 75–100%	0.02	0.66				
Maladaptive coping	0.57***	17.50	0.39***	5.10	0.03	0.28
Rosenberg Self−Esteem Scale	−0.22***	−6.17	−0.16*	−1.99	−0.02	−0.23
Belief Unjust World	0.12***	3.70	0.28***	4.34	0.20**	3.10

Notes: T_1, $N = 485$; T_2, $N = 128$;
*$p < 0.05$
**$p < 0.01$
***$p < 0.001$.

Boelen *et al.*, 2006; Currier *et al.*, 2009; Smith *et al.*, 2015) and job loss (Papa & Maitoza, 2013). The continuing influence of belief in an unjust world on job loss-related CG symptoms could be due to the fact that the financial, social, and psychological consequences of the dismissal, may become clearer over time, as do an individual's position on the labor market and his/her chances of finding a new job. If this does not correspond with the individual's expectations at the beginning of the dismissal, this might lead to higher levels of belief in an unjust world and more job loss-related CG symptoms.

A second main finding was that a preference for maladaptive coping and a low self-esteem affected the level of job loss-related CG symptoms at T_1 and T_2. This effect remained stable across time, indicating that both variables are risk factors for the development and maintenance of CG following job loss. This

confirms earlier research, showing that the use of maladaptive coping (e.g., Gowan, 2014; Jenkins, Wiklund & Brundin, 2014) can impact negatively on well-being and mental health.

Finally, a common assumption is that the duration of employment and the cause of dismissal are linked to the level of distress following job loss (e.g., McKee-Ryan *et al.*, 2005). However, our results showed otherwise, suggesting that these work features are linked to other mental issues than job loss-related CG, such as depression, or that there is another underlying reason, like how much time and energy someone has invested in their former job (human capital).

The current findings may also be considered in the light of Hobfoll's (1989) conservation of resources (COR) theory, postulating that (threatened or actual) loss of resources (e.g., valued states and conditions) may yield psychological stress.

Specially, the COR theory proposes that individuals are motivated to obtain, retain, and protect resources they value. These resources can be categorized into: (1) objects (e.g., housing, transportation); (2) conditions (e.g., marriage, employment); (3) personal characteristics (e.g., self-esteem, sense of mastery); and (4) energies (e.g., time, money) (Hobfoll, 1989). In the case of job loss, the valued resources that are lost could well include the latent functions of work distinguished by Jahoda (1981): time structure, identity, shared goals, contact with others, and purpose. Our findings that low self-esteem, maladaptive coping, and believing the world is unfair are associated with symptoms of job loss-related CG could, in part, be due to the loss, threat, and lack of available resources brought about by losing a job. Self-esteem could to be related to the identity disruption that an individual can experience following job loss (Papa & Lancaster, 2016). Maladaptive coping might be associated with a lack of available resources, causing the individual to use more avoidant coping styles to deal with the changed reality. Believing the world is unfair could be linked to the threat and loss of resources, leaving a person unsure about which of the remaining resources can be obtained, leaving them with a feeling the world is unfair and they did not deserve this. This reasoning suggests that it could be important for future research to explore the impact of job loss from this perspective, for instance, by examining which particular resource losses contribute to persistent grief following job loss in particular.

LIMITATIONS

Three main limitations of this study were the following. First, part of this study drew on a cross-sectional data set ($N = 485$). Because of the limitations of this design when it comes to causal inference (e.g., Taris, 2000), we added a second longitudinal measurement ($N = 128$). To our knowledge this is the first longitudinal study on job loss-related CG symptoms and a good start to explore which factors influence the maintenance of CG symptoms following job loss. However, since this second sample was relatively small, statistical power was limited and more research on the longitudinal aspect of job loss-related CG symptoms using larger samples is therefore needed.

Second, based on the literature we selected a number of possible relevant risk factors for the development and maintenance of CG symptoms following job loss. This selection was necessary to find a reasonable balance between our wish to explore as many factors as possible and the effort required from the participants when completing our questionnaire. However, this does not imply that all possible relevant factors that promote or hinder the development of job loss-related CG symptoms were included in this study. For example, other potential interesting variables are negative cognitions like shame or guilt, as well as positive traits like optimism. Stroebe and colleagues (2014) found that guilt-related emotions can exert CG symptoms after the loss of a loved one. Trevino and colleagues (2018) reported similar results among bereaved cancer caregivers. On the other hand, optimism can be a protective factor against CG symptoms. In the case of bereavement, Boelen (2015) reported that a higher level of optimism reduces the risk for developing CG symptoms.

Finally, the sample population contained only people with a Dutch nationality. In the Netherlands, unemployment and social benefits are relatively well arranged. After dismissal people are entitled to receive state unemployment benefits based on their previous income and the number of years they worked. This relatively favorable context could have influenced our results, because this implies that the adverse financial implications of unemployment may not be as severe in the Netherlands as they could have been elsewhere. These consequences could be more severe for countries with lower social benefits, impacting the participants much harder, which could lead to more psychological distress (Paul & Moser, 2009). However, our study showed no significant relationship between job loss-related CG symptoms at T_2 and financial stress, as did the US-based research of Papa and Maitoza (2013), whose results showed financial strain was related to symptoms of depression. Although there is no reason to assume that the basic *relationships* uncovered in the present study will not generalize to other countries, the absolute *levels* of job loss-related CG symptoms reported here may not immediately be generalized to these other contexts.

IMPLICATIONS

The results of this study provide more insight in the risk factors for the development and maintenance of job loss-related CG symptoms, which is necessary for the elaboration of interventions and methods to treat people with high levels CG symptoms following job loss. Since only maladaptive coping styles and negative cognitions (like belief in an unjust world and low self-esteem) showed significant results at both time points, it seems more effective to reduce the adverse effects of these variables than to enhance the use of adaptive coping styles.

These insights on possible risk factors for the development and maintenance of job loss-related CG symptoms indicate that therapeutic interventions, such as cognitive restructuring, should be aimed at targeting problematic cognitions about the world, the self and the job loss experience. In this respect exposure methods might help in reducing the tendency to fall back on avoidant and maladaptive coping styles, lowering the risk for the maintenance of CG symptoms following job loss.

How people experience their dismissal (e.g., as sudden or unfair) can influence their cognitions and enhance the risk for developing job loss-related CG symptoms. Therefore, employers can influence this process in the way they give notice. Involving employees earlier in the process could reduce the chance that they experience their dismissal as sudden. An exit interview could be helpful, offering an opportunity to answer pending questions, and to share achievements and appreciations. In this way employees are likely to experience more control and to use more adaptive coping styles, which has a positive impact on the risk of developing CG symptoms after job loss.

CONCLUSION

The present study provided more insight into the risk factors for the development and maintenance of job loss-related CG. The results showed that a preferred use of maladaptive coping styles, negative cognitions (e.g., low self-esteem, belief in an unjust

world) are associated with higher levels of CG symptoms following job loss at T_1 and T_2. The longitudinal results showed a significant relation between high levels of belief in an unjust world on job loss-related CG symptoms. These insights provide some directions for the development of effective therapeutic interventions for people who experience problems with CG symptoms after their dismissal.

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