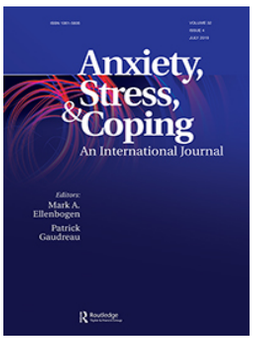

Routledge
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Anxiety, Stress, & Coping
An International Journal

ISSN: 1061-5806 (Print) 1477-2205 (Online) Journal homepage: https://www.tandfonline.com/loi/gasc20

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To cite this article: Janske H. W. van Eersel, Toon W. Taris & Paul A. Boelen (2019) Development and initial validation of the job loss grief scale, Anxiety, Stress, & Coping, 32:4, 428-442, DOI: 10.1080/10615806.2019.1619703

To link to this article: https://doi.org/10.1080/10615806.2019.1619703

Published online: 19 May 2019.

ANXIETY, STRESS, & COPING
2019, VOL. 32, NO. 4, 428–442
https://doi.org/10.1080/10615806.2019.1619703

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Development and initial validation of the job loss grief scale

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ABSTRACT

Background: Research on complicated grief (CG) symptoms following job loss is surprisingly rare. Involuntary job loss can turn someone's world upside down and can result in loss of identity, social contacts, and self-worth. In this study, we drew on the literature on major life events in conceptualizing involuntary job loss as a significant and potentially devastating life event.

Objectives: The aim of this study was to develop and evaluate an instrument that measures job loss-related CG symptoms, the Job Loss Grief Scale (JLGS). The purpose of the JLGS is to foster systematic research on CG symptoms following job loss.

Design: A cross-sectional study

Methods: We recruited Dutch workers who had lost their job, 130 men and 158 women with an average age of 49.6 years. To examine the psychometric properties of the JLGS and its associations with other concepts we conducted correlational and confirmatory factor analyses.

Results: CFA revealed that the JLGS was a one-dimensional instrument, and that CG symptoms were distinguishable from depression and anxiety symptoms.

Conclusion: The JLGS is a reliable and valid instrument to measure job loss-related CG symptoms. The availability of the JLGS could stimulate systematic research on the antecedents and consequences of involuntary job loss.

ARTICLE HISTORY
Received 14 October 2018
Revised 15 April 2019
Accepted 23 April 2019

KEYWORDS
Job loss; grief; validation study; unemployment; coping

Introduction

Employment is a key element in life that goes beyond basic psychological, social, and economic needs (Martela & Pessi, 2018). According to Jahoda (1981), employment not only results in earning an income; it also imposes time structure during the day, implies regularly shared experiences and contacts with people outside the family, links individuals to goals and purposes that transcend their own, defines aspects of personal status and identity, and enforces activity. Pratt and Ashforth (2003) stated that the meaning of work is overall a process of finding purpose in one's existence by trying to answer four questions: from a role perspective, "What am I doing?"; from a membership perspective, "Where do I belong?"; from an identity perspective, "Who am I?"; and from the perspective of meaning, "Why am I here?" In the absence of employment, answering these questions may sometimes be difficult, which may explain the disruptive impact of unemployment and why having a bad job is still often preferred over being unemployed (Jahoda, 1981).

Jobs end for many reasons, either by choice (e.g., resignation) or involuntary (e.g., due to dismissal, bankruptcy, reorganization, or ending of temporary contracts). Much unemployment research has

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focused on the association of involuntary unemployment with dimensions of well-being, for example, mental health problems, depression, anxiety, psychosomatic symptoms (e.g., Norström, Virtanen, Hammarström, Gustafsson, & Janlert, 2014; Paul & Moser, 2009), increased risk of substance abuse, self-harm (Eliason & Storrie, 2009), circulatory system diseases, mental illness, and suicide and suicide attempts (Browning & Heinesen, 2012). To obtain more insight into the psychological consequences of and specific ways of coping with involuntary job loss, it is relevant to consider job loss as a major life event rather than unemployment as a state. The current lack of validated instruments that specifically focus on job loss-related outcomes makes it hard to solidly research the effects of job loss as such an event. Therefore, the aim of this study was to develop and validate an instrument to measure complicated grief (CG) symptoms connected with job loss. Below, we first discuss the conceptualization of involuntary job loss as a major life event and the connection between job loss and grief. Then we introduce and evaluate a novel instrument that was designed to assess job loss-related CG symptoms, the Job Loss Grief Scale (JLGS).

Job loss as a major life event

In this paper "job loss" refers to involuntary job loss (e.g., due to dismissal, reorganization, bankruptcy, health problems, non-renewed contract) and where a return to one's former job was not possible. Major life events, like the death of a loved one, illness, dismissal, moving out, and marriage (Holmes & Rahe, 1967) impact heavily on everyday life and demand a high investment of resources over a significant period of time (Myers, 2005). Such events may cause stress and can negatively impact on a person's physical and psychological well-being (Miller & Rahe, 1997). The impact and perception of a particular life event differs across individuals, as does the way people cope with these events (Myers, 2005).

Miller and Rahe (1997) argued that dismissal from work belongs to the top-5 of most stressful life events. Dealing with involuntary job loss mostly involves a confrontation with secondary losses, like financial security, status, social contacts, structure, identity, and sense of self (cf. Jahoda, 1981). In the view of job loss as a separation event with specific consequences instead of looking at all the broad psychological consequences of being unemployed, there appear to be similarities with the loss of a person. The disruption of one's identity, self-schemata, relationships, and roles can lead to reactions of grief (Papa & Lancaster, 2016). Although one might argue that involuntary job loss is a psychological trauma that causes posttraumatic stress-like symptoms (e.g., anxiety, irritability, hypervigilance) or depression-like symptoms (e.g., dysphoria, worthlessness, blaming oneself), following Papa and Lancaster (2016), Papa and Maitoza (2013), Brewington, Nassar-McMillan, Flowers, and Furr (2004), and Archer and Rhodes (1993), we conceptualized job loss as a loss that may yield typical symptoms of grief, including separation distress, yearning for what is lost, a sense of bitterness and/or numbness, and difficulties to accept the loss and its implications (cf. Prigerson et al., 2009).

Job loss and grief

Major loss can be defined as a reduction of resources, tangible and intangible, in which a person has made a significant emotional investment (Harvey & Miller, 1998). Grief is a range of emotional responses, a result of attachment, triggered by the separation of the loss.

Bowlby (1982) claimed that attachment to others is the core human goal, which is fundamental in grief and that explains the resistance and disruption that occurs after separation. In addition, Shear and Shair (2005) stated that it is important to look what exactly got lost, and which basic needs stayed unfulfilled since the separation. Loss comprehends more than the disruption of regulatory systems (Papa & Maitoza, 2013). It influences daily routines, sleep patterns (Shear & Shair, 2005) and on an existential level it leads to a violation of assumptive worldviews (Currier, Holland, & Neimeyer, 2009; Park, 2010), constructing meaning (Neimeyer, Baldwin, & Gillies, 2006), and identity continuity (Papa, Lancaster, & Kahler, 2014).

Research on grief following bereavement has contributed to a better understanding, conceptualization and measurement of uncomplicated and complicated grief after the loss of a loved one. This has also led to increasing evidence that in a minority of bereaved people, grief does not diminish over time but, instead, turns into persistent, distressing, and disabling grief reactions (Bonanno et al., 2007; Horowitz et al., 1997; Prigerson et al., 1995a; Shear et al., 2011). This type of grief, known as complicated grief (CG[1]), is characterized by separation distress, difficulty accepting the loss, and preoccupation with thoughts and images of what was lost causing persistent suffering and impairments in functioning (Prigerson et al., 2009). Several validated instruments are available that measure CG symptoms following bereavement loss (e.g., Boelen & Smid, 2017; Boelen, van den Bout, de Keijser, & Hoijtink, 2003; Prigerson et al., 1995b). However, research on CG responses following other major life events involving loss such as job loss, is surprisingly rare. Harvey and Miller (1998) argue that different kinds of loss experiences have much in common: the reduction of physical, psychological and symbolic resources, the search for meaning, hope and agency, and development of new identity that incorporates the loss. Although research has been done on adjustment after non-bereavement losses, such as natural disasters (e.g., Johannesson, Arinell, & Arnberg, 2015) and chronic illness (e.g., McLaughlin et al., 2005; Roos & Neimeyer, 2007), previous research primarily focused on symptoms of depression, anxiety, and traumatic stress rather than on symptoms of CG.

Like other major life events involving loss such as bereavement, involuntary job loss can turn someone's world upside down and can result in loss of identity, social contacts and self-worth (Antczak, 1999). Fundamental assumptions about life and the world must be re-evaluated and life stories reviewed (Brewington et al., 2004). These consequences of job loss can fuel symptoms of grief and CG. From the bereavement research it is known that only a minority of the people who lose someone they love, develop CG symptoms (Prigerson et al., 2009). It is conceivable that this also holds for job loss. For instance, some people may view their dismissal as an opportunity to reflect on their career identity and alter its direction (Gowan, 2012; McArdle, Waters, Briscoe, & Hall, 2007). Taking all this into account, it seems plausible that in the case of involuntary job loss, a minority of those who have lost their jobs can experience CG symptoms related to this loss.

Only few researchers have examined grief symptoms after involuntary job loss. Archer and Rhodes (1993) used semi-structured interviews and found that grief-like reactions occurred with some participants who lost their job, especially those who felt more attached to their former occupation. They also found that the severity of grief reactions was unrelated to the length of time since the job was lost. In a follow-up study, Archer and Rhodes (1995) found that the intensity of the grief reactions was associated with the loss of important aspects of the self, like the value of work in one's life. Brewington et al. (2004) measured symptoms of grief following job loss by using the Grief Experience Inventory-Loss Version (GEI-LV; Sanders, Mauger, & Strong, 1985). They compared people who had experienced involuntary job loss with a bereavement group and found similar scores on most of the GEI-LV subscales. Finally, Papa and Maitoza (2013) proposed that grief is a response to a disrupted self and that, therefore, non-bereavement losses affecting the self-view, like job loss, can cause grief as well. Their study showed that CG, depression, and anxiety are distinguishable symptom clusters in their job loss sample. Papa et al. (2014) also showed that symptoms of CG, major depression, and posttraumatic stress were distinct symptom clusters in the case of job loss, and that CG severity was strongly associated with the centrality of the loss to one's identity.

These studies confirmed that involuntary job loss can result in grief and even CG symptoms. The contribution of these studies was limited by a number of methodological limitations. That is, the samples used in these studies were small – varying from only 38 participants in Archer and Rhodes' (1995) study to 73 participants in the Papa and Maitoza (2013) report – and researchers used different instruments to measure grief following job loss, meaning that no cumulative evidence for the usefulness and/or validity of these measures is available. For example, Papa and Maitoza (2013) adjusted the Prolonged Grief-13 scale (PG-13; Prigerson, Vanderwerker, & Maciejewski, 2008) to measure CG symptoms after job loss. Although this questionnaire showed good internal

consistency ($\alpha = .89$), they did not further validate this version of the PG-13. Moreover, the number of participants ($N = 73$) was too small to thoroughly pursue that goal.

Research on job loss-related CG symptoms is important because bereavement-related grief research has shown that CG symptoms may aggravate other physical and mental disorders (Shear et al., 2011). More importantly, general interventions (e.g., focused on depressive symptoms) are less effective than grief-directed interventions in reducing CG symptoms (Shear, Frank, Houck, & Reynolds, 2005). Through the current lack of a valid instrument for job loss-related CG symptoms, these symptoms often remain unrecognized or misdiagnosed (e.g., as depression) and untreated or treated with general, potentially less effective interventions.

The present study

At present no instruments are available that are specifically designed to measure CG symptoms following involuntary job loss. The present study filled this gap by developing and validating a self-report questionnaire tapping these symptoms. The availability of such an instrument could stimulate systematic research on the antecedents and consequences of job loss and would aid practitioners and care takers in identifying and monitoring CG symptoms among people confronted with job loss.

We based this new instrument, the Job Loss Grief Scale (JLGS), on the 29-item Dutch Version of the Inventory of Complicated Grief-Revised (ICG-R, formerly known as the Inventory of Traumatic Grief; Boelen et al., 2003). Since the experience of job loss-related CG symptoms is a relatively underresearched concept, we decided to use the (relatively extensive) ICG-R as a starting point for the JLGS, because the ICG-R measures many different putative markers of CG and has strong, well-tested psychometric properties. Based on the known psychometric properties of the Dutch Version of the ICG-R, we expected the JLGS to be a unidimensional instrument (Hypothesis 1) with a high internal consistency and temporal stability (Hypothesis 2). Job loss-related CG symptoms may overlap and, hence, be mixed up with symptoms of depression or anxiety. In the case of bereavement, a number of studies showed that CG differs from depression, anxiety, and PTSD (Boelen, van de Schoot, van den Hout, de Keijser, & van den Bout, 2010; Boelen & van den Bout, 2005; Golden & Dalgleish, 2010). In the case of job loss, with respect to the discriminant validity of the JLGS, we expected that items tapping CG symptoms following job loss and items tapping depression and anxiety symptoms would fall into three different symptom clusters (Hypothesis 3).

Concerning the convergent validity of the JLGS, we expected that higher levels of CG symptoms would be associated with higher levels of depression and anxiety symptoms (Hypothesis 4a). From bereavement research it is known that CG symptoms are associated with a lower quality of life (Boelen & Prigerson, 2007; Prigerson et al., 1995a; Silverman et al., 2000) and a preferred use of avoidant coping (e.g., denial) above approach-focused coping (e.g., acceptance) (Boelen & van den Bout, 2010; McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Papa & Maitoza, 2013). In line of these findings, we expected elevated job loss-related CG symptoms to correlate with a lower quality of life (Hypothesis 4b) and with increased avoidant coping and decreased approach-focused coping (Hypothesis 4c). Further, earlier research has indicated that the suddenness of the loss, feeling unprepared for the loss (Barry, Kasl, & Prigerson, 2002; Hebert, Dang, & Schulz, 2006), and an inadequate notice of dismissal (Brewington et al., 2004) are risk factors for the development of CG symptoms. Accordingly, we expected a positive correlation between elevated job loss-related CG symptoms and the experience of the dismissal as unexpected, unfair (Janoff-Bulman, 1999), and as occurring beyond one's control (Creed, Lehmann, & Hood, 2009) (Hypothesis 4d).

For practical reasons (e.g., the time required to fill out the questionnaire), it would be conducive for practitioners and researchers to have a short instrument at their disposal. Therefore, we also present a provisional brief version of the JLGS, the JLGS-short form (JLGS-SF). To evaluate the psychometric properties of this JLGS-SF, the same analyses were conducted as for the full JLGS. If the short form is valid, this should be evident from a similar pattern of results as obtained for the full JLGS.

Method

Participants and procedure

The study was approved by the Ethical Review Board of the faculty of social sciences of Utrecht University (FETC 16-111). Dutch individuals who had experienced involuntary job loss were recruited through three channels: (1) via an organization providing psychosocial care and help in finding work, (2) via meetings about the impact of the job loss organized by the researchers for people who had lost their job, and (3) via social (media) networks. Individuals from all three groups received a short explanation (either in person or in writing) about the research. People interested in participating received an information letter, an informed consent form, and the survey. Those who chose to participate filled out the informed consent form and the survey, either using paper-and-pencil or in a secured online area. This took approximately 15 min. After signing the informed consent form, the survey was completed by 92% of the people who started it ($N = 557$).

From this ongoing research program on consequences of job-loss, data from 300 randomly selected participants were used for the current study, since this number was sufficient to conduct the statistical analyses for this study, in particular the confirmatory factor analysis (MacCallum, Widaman, Zhang, & Hong, 1999). Data of participants not included in the present study were included in additional studies of our research program. Only participants who involuntary lost their job were included, hence participants who had resigned from their jobs ($N = 12$) were excluded. The remaining group ($N = 288$) consisted of 130 men (45%) and 158 women (55%), with an average age of 49.6 years ($SD = 8.9$ years). Their level of education varied from 34 people with a primary education (12%), 118 people with a secondary education (41%), to 136 people with a college or university education (47%); 93 participants (32%) were in a relationship and 195 participants (68%) were single. They lost their job due to: reorganization ($n = 107$, 37.3%), bankruptcy ($n = 25$, 8.7%), health complaints ($n = 26$, 9%), labor conflict ($n = 47$, 16.3%), economic reasons ($n = 11$, 10.1%), non-renewed contract ($n = 29$, 3.8%), and other reasons ($n = 43$, 14.9%). The duration of their employment varied: <1 year ($n = 35$, 12.2%), 1–3 years ($n = 64$, 22.2%), 3–5 years ($n = 41$, 14.2%), 5–15 years ($n = 74$, 25.7%), 15–25 years ($n = 46$, 16%), and >25 years ($n = 28$, 9.7%). The average passed time since the job loss was 17.1 months ($SD = 19.7$ months).

From these 288 participants, 33 participants were randomly selected and asked to complete the JLGS for a second time to evaluate the test-retest stability of the questionnaire. The test-retest interval ranged from 5 to 18 days ($M = 10.5$, $SD = 3.6$ days).

Measures

Job loss grief scale (JLGS)

As noted, the JLGS was based on the ICG-R (Boelen et al., 2003). Specifically, the items from the ICG-R were adapted by the researchers to refer to job loss. For example, the item "I feel bitter over's death" became "I feel bitter about the loss of my job." Four self-constructed items were added to the original 29 items. One of these items focused on coping, asking about undertaking activities as a distraction from the job loss. This item was added because it measures avoidant coping in a way that seemed common among people who experience job loss. Three further items were added because they reflected grieving responses that were potentially important following job loss but that were not adequately tapped by the items of the ICG-R. These items were "I go out of my way to avoid being reminded of the loss of my job," "I think about the loss of my job all the time" and "Memories about the loss of my job upset me." Five practitioners working in the field of grief and psychology reviewed the alterations, which led to several minor changes in the item wordings. Differences of opinion regarding the adaptation of these items were discussed until consensus was reached. When completing the JLGS the participants

were asked to keep the loss of their job in mind and to rate the extent to which they had experienced the thirty-three grief reactions represented in the items during the preceding month on a 5-point scale, ranging from 1 ("never") to 5 ("always"). Table 1 and the appendix present all item wordings.

Table 1. CFA loadings of the JLGS and the JLGS-SF, CFA loadings of the JLGS, anxiety, and depression scale, and CFA loadings of the items JLGS-SF, anxiety, and depression scale.

	CFA		CFA			CFA		
Items JLGS	JLGS	SF	JLGS	An	De	SF	An	De
The loss of my job feels like a personal disaster.	.80	.80	.80			.81		
I think about my job so much that it is hard for me to do the things I normally do.	.79	.78	.79			.78		
Memories about my job upset me.	.76		.75					
I can't accept the loss of my job.	.81	.82	.79			.78		
I feel a strong longing for my job.	.62		.59					
I feel drawn to places and things associated with my job.	.44		.43					
I can't help feeling angry about the loss of my job.	.78		.76					
I barely belief I lost my job.	.74		.72					
I feel stunned and dazed over the loss of my job.	.81	.84	.80			.81		
Ever since the loss of my job, it's hard for me to trust people.	.78		.79					
Ever since the loss of my job, I feel distant from the people I care about.	.78		.81					
I have pain in different places in my body since I lost my job.	.64		.65					
I go out of my way to avoid being reminded of my job.	.70		.70					
I feel that life is empty and meaningless without my job.	.78		.78					
I think about my job all the time.	.77		.75					
I imagine I still have my job.	.55		.55					
I feel like I have become numb since the loss of my job.	.86	.86	.86			.86		
I feel it is unfair that others have a job and I don't.	.66		.65					
I feel bitter about the loss of my job.	.82	.83	.80			.80		
I feel envious of others who do have a job.	.48		.48					
I feel like the future holds no meaning of purpose without my job.	.75		.75					
I feel lonely since the loss of my job.	.71		.72					
I feel like my life can only be meaningful with my old job.	.77		.76					
I feel a part of myself vanished by the loss of my job.	.80	.77	.81			.80		
I feel that the loss of my job has smashed my view of the world.	.83	.81	.84			.84		
I have lost my sense of security, safety and control.	.79		.81					
I have felt on edge, jumpy or easily startled since the loss of my job.	.80	.79	.83			.87		
My social functioning has been seriously weakened as a result of the loss of my job.	.79		.81					
My sleep has been bad since the loss of my job.	.71		.72					
I go out of my way to avoid being reminded of the loss of my job.	.78		.78					
To avoid thinking about the loss of my job, I spend more time watching TV, behind the computer and/or sleeping.	.68		.69					
I think about the loss of my job all the time.	.78		.76					
Memories about the loss of my job upset me.	.84	.82	.83			.81		
Items Anxiety DASS-21								
Dry mouth				.61			.63	
Breathing difficulty				.69			.71	
Trembling				.73			.75	
Worried about panic				.82			.82	
Feeling close to panic				.88			.87	
Awareness of heart beat				.73			.71	
Feeling scared				.89			.90	
Items Depression DASS-21								
Couldn't experience positive feelings					.83			.84
Difficult to do normal things					.72			.73
Nothing to look forward to					.85			.83
Down-hearted and blue					.88			.89
Unable to become enthusiastic about things					.83			.84
Worthlessness					.85			.85
Meaningfulness					.85			.84

Note: CFA = Confirmatory Factor Analysis, JLGS = Job Loss Grief Scale; SF = Job Loss Grief Scale Short Form; An = Anxiety; De = Depression; DASS-21 = Depression Anxiety Stress Scale.

Demographics

We assessed background characteristics (e.g., age, gender, education) and characteristics of the loss experience (e.g., reason of job loss, time that had passed since job loss, length of employment).

Job loss statements

Six self-developed statements assessed particular characteristics of the job loss, including perceived suddenness, injustice, and lack of control over the dismissal. We expected these characteristics to be associated with higher levels of CG symptoms. The six statements were: (1) "My employer has spoken to me about my approaching dismissal," (2) "Before my dismissal there were signs of my approaching dismissal (e.g., my workload was cut down, the direction of the company was altered, the behavior of my employer changed, the advice was given to go look for another job)," (3) "My dismissal came totally unexpected to me," (4) "My consent to my dismissal felt voluntary," (5) "My dismissal feels unfair," (6) "I said goodbye in a way that felt appropriate to me." Participants were instructed to rate the extent to which they agreed with these statements on a 4-point scale (ranging from "totally agree" to "totally disagree").

Depression anxiety stress scale (DASS-21)

Depression and anxiety symptoms were measured with the DASS-21 (Lovibond & Lovibond, 1995). The participants were instructed to rate the extent to which they had experienced the twenty-one symptoms listed during the preceding week on a 4-point scale (ranging from "applies never or rarely" to "applies always or frequently"). For this study we used the 7-item depression and 7-item anxiety subscales to evaluate the discriminant and convergent validity of the JLGS. In the present sample the composite reliability (CR) for depression (.99) and anxiety (.99) were excellent. The average variance extracted (AVE) for both depression (.79) and anxiety were good (.82).

Brief COPE

Coping behavior was measured using subscales from the Brief COPE (Carver, 1997). Participants were asked to focus on the loss of their job and to rate the extent to which they agreed with the twenty-eight statements listed on a 4-point scale (ranging from 1 = "never or rarely" to 4 = "very frequently"). Two subscales of the Brief COPE were used to establish the convergent validity of the JLGS: denial and acceptance. In the present sample, the CRs for denial (.98) and acceptance (.96) were excellent, and the AVEs for denial (.87) and acceptance (.81) were good.

Short form health survey 8 (SF-8)

The eight-item SF-8 was derived from the Medical Outcomes Study Short Form 36 (Crouchley & Daly, 2007). It measures physical and mental functioning in everyday life used to indicate quality of life. Participants were instructed to rate the extent to which they agreed with the seven questions listed on a 5-point scale and one question listed on 6-point scale about their mental and physical health over the last four weeks. The lower their score was, the better quality of life they experienced. In the present sample the CR was excellent (.99) and the AVE was good (.81).

Statistical analyses

The analyses were conducted in Mplus (Version 7; Muthén & Muthén, 1998–2017). Items of JLGS and the DASS-21 were assumed to be ordinal and marked as categorical. To investigate the unidimensionality of the JLGS (Hypothesis 1), JLGS item scores were subjected to a confirmatory factor analysis (CFA). The goodness-of-fit was evaluated with the χ^2-value, the ratio of the χ^2 and the number of degrees of freedom, the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA). Lower values of χ^2 and χ^2/df ratio indicate better fit

(Hoelter, 1983), and CFI and TLI values of >.90 and a RMSEA of <.08 indicate acceptable fit (Bentler, 1990; Hu & Bentler, 1999).

For the internal consistency and temporal stability of the JLGS (Hypothesis 2), the CR and AVE were computed. CR measures the overall reliability of a collection of heterogeneous but similar items. AVE measures the variance in the indicators captured by the common factor. The CR value should be equal or above .70 and AVE should equal or exceed .50 (Hair, Anderson, Tatham, & Black, 1998). The test-retest stability was computed using data from the participants who also participated in the follow-up wave. For the discriminant validity, a CFA was conducted to test if the JLGS items could be distinguished from the DASS-21 items tapping depression and anxiety symptoms (Hypothesis 3). To test Hypotheses 4a, 4b, 4c, and 4d, we conducted correlational analyses.

We selected the 10 items from the JLGS with the highest factor loadings to develop a provisional short form of the JLGS (JLGS-SF). To examine the psychometric properties of the JLGS-SF we conducted the same analyses as for the JLGS.

Results

Factor structure of the JLGS

The one-factor model with all 33 items loading on a single latent factor yielded acceptable model fit, $\chi^2 = 1651.78$, $df = 495$; $\chi^2/df = 3.34$; CFI = .93; TLI = .93; RMSEA = .09. The high value for RMSEA appeared to be due to several unexpectedly high correlations among some item pairs. Therefore, these eleven specific item pairs were allowed to correlate, resulting in substantially better fit, $\chi^2 = 1414.54$; $df = 484$; $\chi^2/df = 2.92$; CFI = .95; TLI = .94; RMSEA = .08. Thus, this model was acceptable. Table 1 shows all item factor loadings. Thirty items had factor loadings higher than .60. The lowest loading was .44, indicating that there was no need to remove any items.

Internal consistency and temporal stability of the JLGS

The CR of the JLGS was .99, pointing at an excellent internal consistency. The AVE from JLGS was good (.74). The test-retest correlation for the total score was $r = .77$, $p < .001$.

Discriminant validity of the JLGS

The CFA revealed a good fit for the three-factor model with symptoms of CG, depression, and anxiety loading on three distinct, but correlated latent factors. Fit indices were: $\chi^2 = 2117.09$; $df = 1020$; $\chi^2/df = 2.08$; CFI = .95; TLI = .95 and RMSEA = .06. There were strong correlations between the CG factor and the anxiety factor ($r = .73$; $r^2 = .53$) and between the CG factor and the depression factor ($r = .76$; $r^2 = .58$), and between the depression factor and the anxiety factor ($r = .79$; $r^2 = .62$). The shared variance (r^2) was lower than the AVE's of the JLGS (.74), DASS-21 anxiety (.76) and DASS-21 depression (.83); this indicates that discriminant validity passed the Fornell-Larcker criterion (Farrell & Rudd, 2009; Fornell & Larcker, 1981). Table 1 presents the CFA factor loadings of the JLGS, DASS-21 anxiety, and DASS-21 depression items.

Convergent validity of the JLGS

There were significant relationships ($p < .001$) between job loss-related CG symptoms, depression ($r = .71$), anxiety ($r = .63$), and quality of life ($r = .58$), confirming Hypotheses 4a and 4b. Symptom levels of CG were associated with a preference for avoidant coping styles; there was a positive association between the JLGS scores and denial ($r = .61$, $p < .001$; assessed with the Brief COPE) and a negative association between the JLGS scores and acceptance ($r = -.43$, $p < .001$; assessed with the Brief COPE). This supported Hypothesis 4c. There was a small but significant relationship ($p < .001$)

between CG symptoms, the suddenness of the dismissal (job loss statement 3; $r = -.14$), the perceived unfairness (job loss statement 5; $r = -.29$), and the lack of control connected with the job loss (job loss statement 4 and 6; $r = .21$, $r = .39$). The absence of control had the strongest relationship with the level of CG symptoms, which partially confirmed Hypothesis 4d.

Descriptive statistics

The mean JLGS score for the total group ($N = 288$) was 38.07 ($SD = 25.67$). There was no significant difference between the average scores of males ($M = 37.99$, $SD = 26.52$) and females ($M = 38.67$, $SD = 25.00$; $t = -.22$, $p = .82$,). We also examined if JLGS scores differed as a function of age, educational level, relationship status, duration of employment, cause of dismissal, and time passed since the job loss. None of these variables were significantly related to the JLGS score.

Psychometric properties of the JLGS-SF

The ten items with the highest factor loadings were selected and combined in the JLGS-SF. To examine the psychometric properties of the JLGS-SF, we first conducted a CFA to test whether a one-factor model fit the data. This model yielded marginally acceptable model fit, $\chi^2 = 138.94$; $df = 35$; $\chi^2/df = 3.97$; CFI = .98; TLI = .98 and RMSEA = .10. The high value for the RMSEA appears to be due to some unexpectedly high correlations among three of item pairs. Therefore, these specific items were allowed to correlate, resulting in substantially better fit, $\chi^2 = 75.79$; $df = 32$; $\chi^2/df = 2.37$; CFI = .99; TLI = .99 and RMSEA = .07. This demonstrates that in the current sample, the JLGS-SF is a unidimensional scale. All items had factor loadings well above .70; 7 items had factor loadings >.80. Table 1 presents all item factor loadings. The CR of the JLGS-SF was excellent (.99) and the AVE was good (.81). The test-retest correlation of the total score was .82, $p < .001$, which confirmed a good temporal stability of the JLGS-SF.

For assessing the discriminant validity of the JLGS-SF an additional CFA was conducted. The CFA revealed a good fit for the three-factor model with symptoms of CG, anxiety and depression forming distinct correlated factors: $\chi^2 = 520.22$; $df = 246$; $\chi^2/df = 2.11$; CFI = .97; TLI = .97 and RMSEA = .06. There was a strong correlation between CG and anxiety ($r = .72$; $r^2 = .52$), and CG and depression ($r = .76$; $r^2 = .58$) and anxiety and depression ($r = .79$; $r^2 = .62$). R^2 was below the AVE's of the JLGS-SF (.82), DASS-21 anxiety (.77) and DASS-21 depression (.83), therefore meeting the Fornell-Larcker criterion. Table 1 presents all factor-loadings. The correlation analyses for the convergent validity of the JLGS-SF showed similar results as for the JLGS (depression $r = .68$, anxiety $r = .61$, quality of life $r = .58$, denial $r = .63$, acceptance $r = -.42$, job loss statement 3 $r = -.18$, job loss statement 4 $r = .27$, job loss statement 5 $r = -.34$, and job loss statement 6 $r = .40$; all p's $< .001$).

Discussion

The aim of this study was to develop and validate an instrument for the measurement of job loss-related CG symptoms, the JLGS. Earlier research on this topic relied on different methodologies (e.g., interviews and various unvalidated questionnaires) which made a more systematic research approach difficult (e.g., Archer & Rhodes, 1995; Brewington et al., 2004; Papa & Maitoza, 2013), because it is unclear if the same concept was assessed across studies. The JLGS helps to overcome this obstacle. The results showed excellent psychometric properties of the JLGS. The conducted CFA confirmed that the JLGS was a unidimensional scale (Hypothesis 1). The test-retest analysis showed a good temporal stability (Hypothesis 2).

The CFA examining the discriminant validity of the JLGS showed a clear distinction between the symptom clusters of CG, anxiety, and depression (Hypothesis 3), which corresponded well with the results from Papa and Maitoza (2013). This confirmation was important for establishing that job loss-related CG symptoms can be differentiated from depression and anxiety symptoms, meaning

that general interventions for addressing job loss-related CG symptoms may not be very effective (Shear et al., 2005).

The descriptive results showed that gender, age, educational level, relationship status, duration of employment, cause of dismissal, and time elapsed since job loss had no significant effect on the level of CG symptoms following job loss. This was in line with earlier research findings in the area (Archer & Rhodes, 1993; Brewington et al., 2004). In the meantime, the job loss statements showed a small, but significant correlation between the job loss experience, in particular suddenness, unfairness, and lack of control, and the level of CG symptoms, which corresponds with earlier results (Brewington et al., 2004; Janoff-Bulman, 1999; Papa & Maitoza, 2013). The confirmation of these hypotheses indicated that the way people lose their jobs influences the level of CG symptoms a person experienced afterwards. It appeared that the more someone feels the dismissal was sudden, unfair, and beyond one's own control, the greater the risk of developing CG symptoms.

The short version, the JLGS-SF, showed similar results regarding the reliability and validity. The correlations between both scales for the convergent validity were almost identical. Although the JLGS-SF was not validated in an independent sample, these results suggest that practitioners and researchers may use this scale for rough screening or monitoring purposes.

Study limitations

Four main limitations of this study need to be considered. First, the JLGS was based on an existing bereavement-focused scale, the ICG-R (Boelen et al., 2003), which might influence its content validity. This implies that experiencing CG symptoms due to involuntary job loss was conceptualized as a phenomenon that was very similar to CG symptoms due to bereavement. Since there was no indication that CG symptoms related to job loss were substantially different from CG symptoms related to bereavement (Brewington et al., 2004; Papa & Maitoza, 2013; Prigerson et al., 2009), it seemed justified to use the ICG-R as a starting point. The ICG-R has been thoroughly tested and has excellent psychometric properties. Therefore, this instrument seemed an acceptable starting point for the development of the JLGS.

Second, there are many factors that influence the process of job loss. We excluded the people who resigned from their jobs under the assumption that they made their choice voluntarily. However, people can resign for different reasons, like finding a new job, financial benefits, labor conflict, health complaints or even social pressure from their environment or the management. This could imply that not all resignations are equally voluntarily. The same can be argued for dismissal. In some cases, the work relation has become so complex that dismissal feels like a relief for both sides. The freedom to choose is connected to the level of control someone experiences. Lack of control, suddenness, and injustice seemed risk factors for development of job loss-related CG symptoms. Of the present sample, 81 participants (28%) claimed that their dismissal felt voluntarily, even though the reasons given for their job loss varied from labor conflicts, bankruptcy, health problems to economic reasons. Asking participants for the reason they had lost their job only seemed to catch half the story. It may be difficult to discover the truth about these topics because of role of social desirability, shame and guilt. In this study there was no significant effect between the reason for the job loss and the JLGS score. Still, it is interesting to further explore if the level CG symptoms can be influenced by the degree in which the reason for job loss was experienced as personal or environmental and trying to catch the other half of the story.

Third, the sample population consisted of people holding the Dutch nationality and 48% of the sample was highly educated. Earlier studies on the impact of job loss showed ambivalent results concerning the possible negative influence of a lower education, lower socioeconomic status, and blue-collar function (among others, Berchick, Gallo, Maralani, & Kasl, 2012; Norström et al., 2014; Paul & Moser, 2009). As for grief, there seems to be little evidence that CG symptoms vary as a function of education, culture or socioeconomic status (Burke & Neimeyer, 2012). The results of the present study showed nonsignificant associations between educational level and function on the one

hand and the experienced job loss-related CG symptoms on the other. However, it might be possible that people with higher education and white-collar jobs have invested more time, energy, and money to become experts in their work field, which can influence the level of CG symptoms following job loss. In future research it would be interesting to explore if there is a positive relationship between job loss-related CG symptoms and the nature and degree of resources people invested in their jobs.

Finally, this study is based on cross-sectional design which means that causal inferences are not warranted. However, in spite of this limitation, this study is an important beginning of a more systematic approach regarding the exploration of CG symptoms following job loss. Future research should explore the possible antecedents and consequences of job loss-related CG symptoms more fully, preferably using longitudinal or prospective designs. Longitudinal designs may also be useful to examine the temporal dynamics of CG symptoms, e.g., to see whether there is a natural course for the duration and possible decrease of CG symptoms after job loss, and if a moment can be established when the experience of such symptoms requires psychological interventions.

Study implications

In this study the JLGS was presented as a valid and reliable instrument for the measurement of job loss-related CG symptoms. This instrument may be used for different purposes. First, it allows researchers to systematically study longitudinal effects of job loss-related CG symptoms and the impact on well-being and other aspects of psychological functioning, especially the risk and protective factors regarding development of CG symptoms. Second, the JLGS could provide practitioners as well as people confronted with involuntary job loss with a practical instrument to measure job loss-related CG symptoms for screening and monitoring purposes. In this way the JLGS helps practitioners to detect and recognize CG symptoms as early as possible, specifically to make them aware that CG symptoms can occur following job loss. A final implication is that eventually organizations, employees, and healthcare insurance companies may benefit from a growing knowledge base on the impact of job loss, e.g., to inform the development of options for care for employees confronted with job loss to prevent CG symptoms.

Conclusion

The current study presented a novel instrument – the JLGS – that enables a reliable and valid measurement of CG symptoms following job loss. CG symptoms can be distinguished from conceptually related concepts such as anxiety and depression symptoms. The occurrence of CG symptoms does not depend on demographic background variables such as age, gender or education. However, the JLGS scores seem to be contingent upon particular circumstances of job loss, like suddenness and perceived injustice. Both the full, 33-item version and a short, 10-item version are provided. We expect that the availability of this instrument will boost research on the occurrence, antecedents, and consequences of symptoms of CG following job loss.

Note

1. Over the years the terminology to describe maladaptive grief symptoms has changed many times: Traumatic Grief (Prigerson et al., 1999), Prolonged Grief Disorder (Prigerson et al., 2009), Complicated Grief (Shear et al., 2011), Persistent Complex Bereavement Disorder (Boelen & Prigerson, 2012). In this study we choose to use the term complicated grief, because it gives the most neutral description for maladaptive grief symptoms.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix

Werkverlieslijst [Job loss grief scale]

1. Dat ik geen baan meer heb, voel ik als een persoonlijke ramp of verwoestende ervaring
2. Ik denk zoveel aan mijn baan dat het moeilijk voor me is de dingen te doen die ik normaal doe
3. Herinneringen aan mijn baan maken me van streek
4. Ik kan het verlies van mijn baan niet aanvaarden
5. Ik voel een sterk verlangen naar mijn baan
6. Ik voel me naar plaatsen en dingen toegetrokken die verband houden met mijn baan
7. Ik kan er niets aan doen, maar ik ben boos over het verlies van mijn baan
8. Ik kan nauwelijks geloven dat ik geen baan meer heb
9. Ik voel mij verbijsterd of verdoofd over het verlies van mijn baan
10. Sinds ik geen baan meer heb, vind ik het moeilijk om mensen te vertrouwen
11. Sinds ik geen baan meer heb, heb ik het gevoel dat ik niet meer om anderen kan geven of voel ik afstand tot de mensen om wie ik geef
12. Ik heb pijn op verschillende plaatsen in mijn lichaam sinds ik geen baan meer heb
13. Ik doe alles om maar niet aan mijn baan herinnerd te worden
14. Ik vind het leven leeg en betekenisloos zonder mijn baan
15. Ik denk voortdurend aan mijn baan
16. Ik doe alsof ik mijn baan nog heb
17. Ik voel mij alsof ik verdoofd ben sinds ik geen baan meer heb
18. Ik vind het niet eerlijk dat anderen een baan hebben en ik niet
19. Ik voel mij bitter gestemd over het verlies van mijn baan
20. Ik ben jaloers op andere mensen die wel een baan hebben
21. Ik heb het gevoel dat de toekomst geen betekenis of doel heeft zonder baan
22. Ik voel me eenzaam sinds ik geen baan meer heb
23. Ik heb het gevoel dat mijn leven alleen maar met mijn oude baan zinvol kan zijn
24. Ik heb het gevoel dat een deel van mij samen met het verlies van mijn baan verloren is gegaan

25. Ik heb het gevoel dat door het verlies van mijn baan, mijn beeld van de wereld is stuk geslagen
26. Ik ben het gevoel van veiligheid, vertrouwen of controle kwijt
27. Ik voel me gespannen, prikkelbaar of schrikachtig sinds het verlies van mijn baan
28. Mijn functioneren in sociaal opzicht of op andere belangrijke levensgebieden, is ten gevolge van het verlies van mijn baan ernstig verzwakt
29. Ik slaap slecht sinds het verlies van mijn baan
30. Ik doe alles om maar niet aan het verlies van mijn baan herinnerd te worden
31. Om niet aan het verlies van mijn baan te hoeven denken, besteed ik meer tijd achter de pc, aan tv kijken en/of slapen
32. Ik denk voortdurend aan het verlies van mijn baan
33. Herinneringen aan het verlies van mijn baan maken me van streek

Note: Bold items are included in the Job Loss Grief Scale Short Form.