WORKING THROUGH JOB LOSS

CHARACTERISTICS AND CONSEQUENCES OF COMPLICATED GRIEF FOLLOWING JOB LOSS

Janske van Eersel

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Characteristics and consequences of complicated grief following job loss

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Het doorwerken van baanverlies:
Kenmerken en gevolgen van gecompliceerde rouwklachten na baanverlies

(met een samenvatting in het Nederlands)

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The significant problems we face
cannot be solved at the same level of thinking
we were at when we created them.

Albert Einstein

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CHAPTER 1

General introduction

The first ideas for this research project took shape in 2015 after I finished a two-year course on loss and grief counselling, discovering that there was still no satisfying answer as to whether it was possible for people to experience complicated grief (CG) symptoms following involuntary job loss. Finding an answer to this question was the main reason for attending this course. During my work in the labour reintegration branch, while offering counselling to people who had lost their job or were about to lose their job, a significant number of my clients presented what I considered to be "CG-like" symptoms. In some cases, the job loss occurred years earlier and still these clients would talk about it like it happened only yesterday. Their emotions remained intense; especially feelings of anger and bitterness that even had a tendency to turn into resentment over the years. Other clients mainly seemed to dwell in sadness, a sense of powerlessness, and the belief that their life had no meaning anymore. These reactions seemed similar to some of the CG symptoms that may develop after the loss of a significant other.

Coincidentally, a few days before my graduation of the grief and loss course, I myself was made redundant from the job I loved. I worked as a reintegration coach and helped people who had lost their jobs with a variety of psychosocial problems to re-enter the labour market. The best moments of my work were when clients began to believe in themselves again and started to realise that they no longer needed me. Although I saw my job loss coming, the event had a profound impact on my psychological well-being and my identity. Losing my job felt like losing a part of myself. I was not sure who I was anymore without my lost job. It felt like I had failed my clients and I got stuck in an emotional rollercoaster of anger, sadness, and confusion. I had witnessed these reactions many times before in my clients. For me, this event gave the final push. Scientific research seemed to be the only option to move beyond all assumptions and to try answering the question: 'Is it possible to experience CG reactions after involuntary job loss?' In this introduction, current knowledge on the consequences of unemployment, the impact of job loss, and grief reactions after job loss will be discussed. Then, the research question and aims of this dissertation will be set out.

The Impact of Unemployment
In 2015 the unemployment rate of the labour force population in the Netherlands was 6.9%, which accounts for 616,000 unemployed individuals (CBS, 2021a). Of these unemployed individuals 289,000 persons (47%) had lost their job at least twelve months ago (CBS, 2021b), meaning that almost half of the unemployed of that time had already been in this position for a long time. What do we know about the psychological consequences of long-term unemployment?

One of the first researchers to study these consequences was Marie Jahoda. In the summer of 1929, the Marienthal textile factory in Gramatneusiedl (Austria) was shut down, affecting almost every family in the town and its surrounding villages with unemployment. Two years later, the situation had not changed and seemed to get worse. This is the moment when Jahoda and her colleagues started their study on the effects of long-term unemployment in the community of Gramatneusiedl (1933/2002). In their results, they portrayed the crumbling of a once vibrant community where most people stopped participating in community activities and even reading the newspaper. The despair, apathy, and hopelessness within the community increased as time passed by. Based on these findings, Jahoda (1981) developed a theory on the meaning of work, namely the "latent deprivation model". According to Jahoda, work does not only ensure a stable income (what she called the *manifest* function of work). Work also brings time-structure, a collective purpose transcending what one can achieve alone, regular social contacts outside one's family, a definition of one's place in society, and it enforces activity (i.e., the *latent* functions of work; Jahoda, 1984). Jahoda (1981) claimed that not having access to these latent functions due to unemployment is for the majority of people an experience that is worse than being frustrated by a (bad) job.

Since Jahoda many scholars have followed in her footsteps to explore the impact of unemployment on an individual level. Throughout the years, unemployment has been consistently associated with high levels of psychological distress (McKee-Ryan et al, 2005; Norström et al, 2014), physical problems (DeFrank & Ivancevich, 1986; Flatau et al., 2000), stigmatisation, and social withdrawal (Blau et al., 2013; Brand, 2015). If an individual feels unable to change the current situation and holds low expectations for the future, one is more likely to show passive and apathetic behaviour (Taris, 2002); this aligns well with findings from the Marienthal studies (Jahoda et al., 1933/2002). In general, the use of maladaptive coping strategies (e.g., denial, behavioural disengagement, or self-distraction) to deal with one's unemployment has often been linked to lower levels of mental health (McKee-Ryan et al., 2005; Wanberg, 2012). Reduction in resources, like financial strain, can increase the adverse reactions to unemployment (Creed & Klisch, 2005; Dooley, 2003). Conversely, available resources, such as high levels of social support (Brand, 2015; Dooley, 2003), optimism, hope, and self-efficacy (Chen & Lim, 2012; McKee-Ryan, 2005), can buffer the negative impact of unemployment.

Job Loss and Work Centrality
Job loss can be voluntary, at the initiative of the employee (e.g., resigning), or involuntary, at the initiative of the employer (e.g., reorganisation, or labour conflict). Involuntary job loss is considered a major life event (Miller & Rahe, 1997), yet the perception and the

way someone copes with the job loss can vary considerably between individuals (Myers, 2005). There is preliminary evidence that a stable trajectory of healthy functioning is the most common outcome for approximately 80% of the individuals facing job loss (Bonanno et al., 2011), while a significant minority of approximately 18% develops high levels of psychological distress (Galatzer-Levy et al., 2010).

A distinctive factor characterizing this minority could be high levels of work centrality, referring to the extent of general importance of work to the individual's sense of self (Walsh & Gordon, 2008). A high level of work centrality implies that someone strongly identifies with one's work role and considers it an important aspect of one's life (Bal & Kooij, 2011). Since these individuals believe work provides meaning and fulfilment, job loss and unemployment can lead to lower psychological well-being as well as identity disruption (McKee-Ryan et al., 2005). Job loss can also provoke cascading losses, such as disruption of self-schemata and social roles (Ramarajan, 2014). There is gradually increasing recognition that it can even result in grief reactions similar to those observed following the loss of a significant other (Parkes, 2000). Most scholars have examined the psychological impact of job loss by looking at variables such as depression, general health, and life satisfaction. Consequently, at present only few articles are available that report on the phenomenon grief following job loss.

Grief following Job Loss
The first scholars who addressed the concept of grief following job loss were Archer and Rhodes. In 1987 they conducted semi-structured interviews among 60 unemployed men who had lost their jobs within the last eight years, to explore the association between job loss-related grief and the attachment to the lost job (Archer & Rhodes, 1993). Following the research of Parkes (1972), they assessed grief symptoms like: preoccupation, searching, pangs, dreams, restlessness, loss of self, denial, reminders, and initial shock distress. All symptoms had to be directly related to the job loss. Based on the interview data, they constructed a 19-item grief index on which a principal component analysis was conducted. This revealed seven components; ten items loaded strongest on the first component which was considered to represent 'grief' (Archer & Rhodes, 1993). They conducted a similar study longitudinally among 38 unemployed men who had lost their jobs within the prior four weeks, finding a gradual decrease in the intensity of the grief reactions over the period of one year (Archer & Rhodes, 1995).

Second, Brewington and colleagues (2004) have studied job loss-related grief by using the subscales of the Grief Experience Inventory–Loss Version (GEI-LV; Sanders et al., 1985), assessing constructs like despair, anger-hostility, rumination, and depersonalisation. Although the GEI-LV is a validated instrument for bereavement loss,

it was not designed to measure grief reactions following job loss and information on the adjustments made by the authors is lacking. The grief scores of 66 unemployed individuals from Brewington's study were compared with a reference group of bereaved individuals from Sanders (1985). In general, the scores were similar between both groups, except for depersonalisation, on which the job loss group scored lower than the bereaved reference group. From the socio-demographics and work characteristics, only time passed since the job loss showed a significant, negative association with grief (Brewington et al., 2004).

Third, Papa and Maitoza (2013) construed grief as a reaction to identity disruption, and claimed that this disruption may occur following non-bereavement losses, causing symptoms of CG. They conducted a cross-sectional study among 73 individuals who had lost their job. CG symptoms were measured with an adjusted version of the Prolonged Grief-13 scale (Prigerson et al., 2007). The results showed that CG, depression, and anxiety symptoms form distinguishable symptom clusters; and the intensity of the CG symptoms was related to a more frequent use of maladaptive coping styles, a stronger belief in an unjust world, and low self-esteem (Papa & Maitoza, 2013). Papa and colleagues (2014) conducted a follow-up study in which a comparison was made between CG symptoms following bereavement loss (n = 151), job loss (n = 157) and divorce (n = 116). The results showed that CG, depression, and post-traumatic stress symptoms break down into three symptom clusters for all three groups, and that the intensity of CG symptoms was associated with the degree to which the loss was central to one's identity (Papa et al., 2014).

These scholars made a case for bringing grief following non-bereavement loss into the picture. Their results suggested that it is possible to experience symptoms of grief after job loss similar to the reactions of CG following bereavement loss. However, the contribution of these studies is relatively modest due to methodological limitations. First, the number of participants in these studies was limited, which could have influenced the reliability of the results. Second, across studies, job loss-related grief symptoms were measured with different instruments and methods. This impedes the possibility to compare the results across studies and makes the validity of the used instruments questionable, particularly since none of the scholars have validated the method of their choice or their adjustments of the existing instruments.

Characteristics of CG
The grief process can involve a wide range of emotions, cognitions, and behaviours, which may vary from person to person and can evolve over time (Shear, 2012). Grief is a unique experience; where one person may experience barely any emotional distress

after losing one's job, another may become overwhelmed with emotion. Acute grief reactions with (I) high levels of emotional distress that are (II) limited to a brief period following the job loss, while (III) the person remains able to function in their daily life, are considered part of healthy pathway towards recovery (Harris, 2011). When this healthy, stable trajectory gets disrupted, it can result in CG symptoms - a chronic impairing form of grief (Papa & Maitoza, 2013). Following research on bereavement loss (Prigerson et al., 2009), it is postulated that characteristics of job loss-related CG symptoms may be: difficulties to accept the loss, to 'move on' with one's life, feelings of anger, bitterness and guilt, a sense of meaninglessness, longing and yearning, intrusive or preoccupying thoughts of the loss and the circumstances before and after the loss, and identity disruption. It is conceivable that individuals who experience CG symptoms may have a tendency to incessant questioning, ruminating, or worrying about certain aspects of the loss circumstances or consequences (Archer & Rhodes, 1993) and maladaptive coping strategies to avoid reminders of the job loss (Papa & Maitoza, 2013). This will be illustrated by the example of Esther.

Esther

Esther is 42 years, married, and mother of a teenage daughter. For eight years, she has worked as a personal assistant to a high-level manager of a hospital. She supported her in the broadest sense of the word; her activities varied from organising schedules and business meetings up to buying gifts for the manager's family. Esther was, and needed to be, available to the manager 24/7, which was no problem for her as she considered work her hobby.

As the years passed by, Esther watched many colleagues come and go, often after a conflict with the manager. She, too, found it sometimes difficult to keep up with the manager's fluctuating wishes and needs. However, their relationship was fine and the collaboration went well. Until one day, when Esther suddenly found herself unable to access the manager's mail and she was called to a meeting with HR. From that moment on, things went downhill fast as the director tried to side-line and demote her. This situation resulted in a lawsuit, which Esther lost, and subsequently she was dismissed. Esther felt her world was falling apart. She did not recognise herself anymore, her self-confidence was shattered, as well as her trust in others.

At present, thirteen months after her job loss, Esther still talks about her dismissal and the lawsuit as if it was yesterday. She keeps replaying the sequences of events in her mind; wondering what she could have done differently to influence the outcome and why this has happened to her. Her anger and bitterness increase by the day due to injustice she perceives. In her thoughts, she keeps looking for ways to expose her former

manager, so others can see her ex-manager's true colours, and may be spared the pain of what was done to her. She checks her ex-manager's twitter account daily, only to be overwhelmed by negative emotions and thoughts, yet she cannot stop herself.

Esther regularly receives job offers only to turn them down, since she believes she is not ready. She fears history will repeat itself and she does not know how to trust a new manager, particularly since to this day she did not a receive a valid reason why the manager tried to demote her out of the blue. On the one hand, she feels a strong urge to keep pursuing what she thinks is justice, while on the other hand she wants to let go and pick up the pieces. Her friends and husband do not seem to understand why she is incapable to move on with her life, which makes her feel lonely and estranged.

Consequences of CG and Employability
The example of Esther portrays someone who has been suffering from CG symptoms related to the loss of her job thirteen months ago. The negative cognitions surrounding her dismissal as well as her anger, bitterness, and mistrust seem to increase with the passage of time. Based on research following bereavement loss, it appears conceivable that CG symptoms related to job loss can aggravate other psychological and physical problems, such as depression, loneliness, insomnia, headaches, and social dysfunction (Shear et al., 2011; Stroebe et al., 2007).

It also seems plausible that CG symptoms following involuntary job loss may disrupt the process of job search and reemployment. Indeed, evidence shows that a lower psychological health can slow down the process of reemployment (Olesen et al., 2013; Paul & Moser, 2009). Employability (here defined as: individual knowledge, skills, and abilities that enable a person to find and maintain employment) is an interplay between career identity, personal adaptability, and social and human capital (Fugate et al., 2004). These factors are likely to be negatively influenced by job loss-related CG symptoms leading to a decrease of one's employability.

Career identity is the assimilation of past, present, and future career experiences and aspirations into a meaningful structure of the self (Wanberg, 2012). CG symptoms may lead to identity disruption and a sense of meaninglessness, where past, present, and future experiences no longer seem to fit together (cf. Prigerson et al., 2009), consequently negatively influencing one's career identity. *Personal adaptability* refers to the willingness and ability to adjust to changes, which requires optimism, openness to learn, flexibility, personal control, and self-efficacy (Fugate et al., 2004). It is presumed that job loss-related CG symptoms can entail feelings of low self-esteem, powerlessness, and an increased use of maladaptive coping strategies (cf. Shear,

2012), which decreases one's level of personal adaptability. *Social capital* refers to one's social network, whereas *human capital* involves personal characteristics such as one's education, work experiences, skills, emotional stability, and cognitive abilities (Wanberg, 2012). It is likely that CG symptoms may affect the magnitude of one's social network. The negative cognitions and rumination as part of CG may also affect one's sense of self-efficacy, emotional stability, and cognitive abilities (cf. Stroebe et al., 2007). Taking this into account, it seems presumable that job loss-related CG symptoms may result in decreased level of career identity, personal adaptability, and social and human capital, which reduces one's chances of reemployment.

CG, Depression, and Anxiety

At present, research on CG symptoms following involuntarily job loss is sparse. Most scholars have looked at the impact of job loss on outcomes such as depression, anxiety, and quality of life (Brand, 2015; Paul & Moser, 2009; Riumallo-Herl et al., 2014). Research on bereavement loss has shown that CG, depression, and anxiety form distinct symptom clusters (Boelen & Van den Bout, 2005; Dillen et al., 2009). However, if this is also the case for emotional distress after job loss is still unknown. The exploratory factor analysis of Papa and Maitoza (2013) did provide a first indication that distinctive symptom clusters for CG, depression, and anxiety might be found after job loss. There is a need to further examine whether it is possible to experience CG symptoms following job loss, and if these symptoms can be distinguished from anxiety and depressive symptoms. This knowledge is important since CG, depression, and anxiety symptoms need to be addressed with different interventions to be able to reduce these symptoms (Shear et al., 2005). Individuals with mental health problems are less focused on searching for a new job and have a reduced likelihood of finding new employment (Carlier et al., 2014). This may imply that individuals who experience job loss-related CG symptoms have an increased risk of staying unemployed. Beyond the personal problems and suffering that this may cause to those involved, the societal costs are immense as well. To illustrate, in 2015 the Dutch government spent over 22,1 billion euros on unemployment benefits (UWV, 2015).

Research Question and Aims

Taken together, the knowledge on the characteristics and the consequences of job loss-related CG symptoms, as well as potential underlying mechanisms which might be responsible for the development and maintenance of job loss-related CG symptoms, is still very limited. Even though it seems conceivable that the consequences of job loss-related CG symptoms on individual and societal level can be severe. It is important to learn more about the characteristics, the consequences, risk factors, and potential underlying mechanisms of job loss-related CG symptoms. Focusing on the research gaps, as described in the prior sections, the following question arises:

What are characteristics and correlates of CG following job loss?

This knowledge is important to identify individuals who experience job loss-related CG symptoms and to design specific interventions to reduce these symptoms. The aim is to answer this research question in seven chapters using various research methods.

Chapter 2 involves a study to address the gap of the absence of a validated instrument to measure job loss-related CG symptoms. A novel questionnaire will be developed and validated for this aim. This instrument may enable more systematic research into characteristics, correlates, and consequences of job loss. A confirmatory factor analysis will be conducted to establish whether job loss-related CG symptoms can be distinguished from anxiety and depressive symptoms following involuntary job loss.

Chapter 3 concerns a study on potential risk factors associated with job loss-related CG symptoms. Prior research showed that the circumstances of the job loss (e.g., the degree of forewarning of the loss) were related to the intensity of the grief (Archer & Rhodes, 1993; Brewington et al., 2004). The results of Papa and Maitoza (2013) indicated that having a low level of self-esteem, viewing the world as unjust, and a tendency towards maladaptive coping strategies were associated with elevated levels of job loss-related CG symptoms. However, due to the aforementioned methodology issues, this had to be examined in more detail. On two points in time, six months apart, these potential risk factors will be studied in relation to the development and maintenance of job loss-related CG symptoms.

Chapter 4 includes a study to examine the relationship between CG, depression, and anxiety symptoms in more detail. Preliminary evidence shows these symptoms form distinguished symptoms clusters (Papa & Maitoza, 2013), however information on whether CG, depression, and anxiety symptoms following job loss can influence each other over time is lacking. Therefore, the cross-lagged relationships between CG and depressive symptoms, and CG and anxiety symptoms will be analysed, on two moments in time, six moments apart. These study results may also contribute to the knowledge about the construct validity of job loss-related CG symptoms.

Chapter 5 encompasses a study to further analyse the construct validity of job loss-related CG symptoms. In Chapter 2 a variable centred approach – confirmatory factor analysis - was conducted to examine the difference between job loss-related CG, depression, and anxiety symptoms. In addition, it is also important to use a person-centred approach to improve insight in the interrelation among job loss-related CG, depression, and anxiety symptoms. To this aim a latent class analysis will be

conducted on job loss-related CG, depression, and anxiety symptoms to examine the underlying structure of emotional distress in a sample of participants who involuntarily lost their job. Afterwards the classes will be compared for potential risk factors that could be related to class membership.

Chapter 6 includes a study which will focus on other potential risk factors for CG symptoms following job loss, namely negative cognitions. Prior research indicates that general negative cognitions on the self and the world might be related to the intensity of the grief (Archer & Rhodes, 1993; Papa & Maitoza, 2013). Cognitive behavioural therapy suggests that psychopathological reactions are associated with dysfunctional beliefs and biases that affect the way an individual integrates and responds to new information (Beck & Dozois, 2011). From this perspective, it seems conceivable that negative cognitions which are directly associated with the job loss represent a greater risk factor for job loss-related CG symptoms than general negative cognitions (e.g., low self-esteem). Hence, a novel instrument will be developed and validated to measure negative cognitions associated with the job loss. This instrument enables the exploration of the role of negative cognitions as potential risk factor for the development and maintenance of job loss-related CG symptoms.

Chapter 7 encompasses a study based on the latent and manifest deprivation theory of Jahoda (1933/2002). As addressed earlier in this introduction chapter, this theory could contribute in explaining the development of job loss-related CG symptoms, particularly the decrease in social status, identity, time structure, collective purpose, and enforced activity (i.e., the latent functions) due to the job loss. Therefore, Jahoda's theory will be examined in a daily diary study design on five consecutive days to explore the relationships between the latent functions, daily activities, and CG symptoms following job loss.

An important observation was that an integrated framework about the characteristics, the correlates, the consequences of job loss-related CG symptoms, was lacking. Such a framework is of great value in that it may aid future research on negative cognitions, avoidance behaviour, and individual characteristics associated with job loss-related CG symptoms. It can also help to identify vulnerable individuals who experience these symptoms, and it may foster the development of preventive measures and early interventions to address job loss-related CG symptoms. Accordingly, in Chapter 8, we set out to synthesise prior findings on characteristics, correlates, and consequences of job loss-related CG symptoms, to connect these with findings from our studies, and to develop a provisional heuristic cognitive-behavioural framework that seeks to explain the underlying mechanisms of job loss-related CG symptoms.

Lastly, Chapter 9 will provide a discussion of the study results and the theoretical framework, answering the research question, indicating clinical and scientific implications, and providing suggestions for future research.

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CHAPTER 2

Development and initial validation
of the job loss grief scale

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.

Objective. 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.

Method. 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.

Keywords: coping; grief; job loss; unemployment; validation study

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, reorganisation, or ending of temporary contracts). Much unemployment research has focused on the association of involuntary unemployment with dimensions of well-being, for example, mental health problems, depression, anxiety, psychosomatic symptoms (e.g., Norström et al., 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, reorganisation, 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 and colleagues (2004), and Archer and Rhodes (1993), we conceptualised 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 et al., 2009; Park, 2010), constructing meaning (Neimeyer et al., 2006), and identity continuity (Papa et al., 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 characterised 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 et al., 2003; Boelen & Smid, 2017; 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 et al., 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 et al., 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 and colleagues (2004) measured symptoms of grief following job loss by using the Grief Experience Inventory-Loss Version (GEI-LV; Sanders et al., 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 and colleagues (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 et al., 2008) to measure CG symptoms after job loss. Although this questionnaire showed good internal consistency (α = .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 et al., 2005). Through the current lack of a valid instrument for job loss-related CG symptoms, these symptoms often remain unrecognised 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 under researched 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 den Bout, 2005; Boelen et al., 2010; Golden & Dalgleish, 2010; Prigerson et al., 1996). 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 et al., 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 et al., 2002; Hebert et al., 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 et al., 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

Procedure and Participants

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 organisation providing psychosocial care and help in finding work, (2) via meetings about the impact of the job loss organised 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 minutes. 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 et al., 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: reorganisation (n = 107, 37.3%), bankruptcy (n = 25, 8.7%), health complaints (n = 26, 9%), labour 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 presents all item wordings.

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 behaviour 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*).

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

Items JLGS

The loss of my job feels like a personal disaster.

I think about my job so much that it is hard for me to do the things I normally do.

Memories about my job upset me.

I can't accept the loss of my job.

I feel a strong longing for my job.

I feel drawn to places and things associated with my job.

I can't help feeling angry about the loss of my job.

I barely belief I lost my job.

I feel stunned and dazed over the loss of my job.

Ever since the loss of my job, it's hard for me to trust people.

Ever since the loss of my job, I feel distant from the people I care about.

I have pain in different places in my body since I lost my job.

I go out of my way to avoid being reminded of my job.

I feel that life is empty and meaningless without my job.

I think about my job all the time.

I imagine I still have my job.

I feel like I have become numb since the loss of my job.

I feel it is unfair that others have a job and I don't.

I feel bitter about the loss of my job.

I feel envious of others who do have a job.

I feel like the future holds no meaning of purpose without my job.

I feel lonely since the loss of my job.

I feel like my life can only be meaningful with my old job.

I feel a part of myself vanished by the loss of my job.

I feel that the loss of my job has smashed my view of the world.

I have lost my sense of security, safety and control.

I have felt on edge, jumpy or easily startled since the loss of my job.

My social functioning has been seriously weakened as a result of the loss of my job.

My sleep has been bad since the loss of my job.

I go out of my way to avoid being reminded of the loss of my job.

CFA		CFA			CFA		
JLGS	SF	JLGS	An	De	SF	An	De
.80	.80	.80			.81		
.79	.78	.79			.78		
.76		.75					
.81	.82	.79			.78		
.62		.59					
.44		.43					
.78		.76					
.74		.72					
.81	.84	.80			.81		
.78		.79					
.78		.81					
.64		.65					
.70		.70					
.78		.78					
.77		.75					
.55		.55					
.86	.86	.86			.86		
.66		.65					
.82	.83	.80			.80		
.48		.48					
.75		.75					
.71		.72					
.77		.76					
.80	.77	.81			.80		
.83	.81	.84			.84		
.79		.81					
.80	.79	.83			.87		
.79		.81					
.71		.72					
.78		.78					

2

Table 1

Continued

Items JLGS

To avoid thinking about the loss of my job, I spend more time watching TV, behind the computer and/or sleeping.

I think about the loss of my job all the time.

Memories about the loss of my job upset me.

Items Anxiety DASS-21

Dry mouth

Breathing difficulty

Trembling

Worried about panic

Feeling close to panic

Awareness of heart beat

Feeling scared

Items Depression DASS-21

Couldn't experience positive feelings

Couldn't seem to get going

Nothing to look forward to

Down-hearted and blue

Unable to become enthusiastic about things

Worthlessness

Meaningless

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

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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).

CFA		CFA			CFA		
JLGS	SF	JLGS	An	De	SF	An	De
.68		.69					
.78		.76					
.84	.82	.83			.81		
			.61			.63	
			.69			.71	
			.73			.75	
			.82			.82	
			.88			.87	
			.73			.71	
			.89			.90	
				.83			.84
				.72			.73
				.85			.83
				.88			.89
				.83			.84
				.85			.85
				.85			.84

Brief COPE

Coping behaviour 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 one-dimensionality 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, x^2= 1651.78, *df* = 495; x^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, x^2= 1414.54; *df* = 484; x^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: x^2= 2117.09; *df* = 1020; x^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 conceptualised 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, labour 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 labour 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 et al., 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 recognise 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 organisations, 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.

ENDNOTE

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.

Author Contributions

Janske H. W. van Eersel, Toon W. Taris and Paul A. Boelen (Study design; Writing-review & editing); Janske H. W. Eersel (Data collection; Writing-original draft); Janske H. W. van Eersel and Toon W. Taris (Analysis). Paul A. Boelen and Toon W. Taris (Supervision).

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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

WerkVerliesLijst [Job Loss Grief Scale] Continued

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.

CHAPTER 3

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

ABSTRACT

Increasing evidence shows that job loss can lead to symptoms of complicated grief. However, little is known about which factors relate to the development and maintenance of complicated symptoms following job loss. This study aimed to examine risk factors for the development and maintenance of job loss-related complicated grief (JLCG) 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 JLCG symptoms. MRA results showed that belief in an unjust world was related to JLCG symptoms, cross-sectionally and longitudinally. Further, there was a significant relationship between JLCG symptoms 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 JLCG symptoms.

Keywords: cognitions; coping; grief; job loss; unemployment

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 et al., 2005; Norström et al., 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 et al., 2016). Moreover, mounting evidence shows that job loss can lead to symptoms of complicated grief (e.g., Archer & Rhodes, 1995; Brewington et al., 2004; Papa et al., 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 reorganisation of self-schemata, the search for meaning, and reconstruction of fundamental assumptions about others, the world and the future (Harvey & Miller, 1998). Complicated grief is characterised by separation distress combined with difficulty accepting the loss, "moving on", and finding meaning in life, causing persistent suffering and impairments in functioning (Prigerson et al., 2009; Shear et al., 2011).

Currently, little is known about which factors relate to the development and maintenance of job loss-related complicated grief (JLCG) symptoms. 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 JLCG symptoms can occur after involuntary job loss. Therefore, these symptoms could remain unrecognised or misdiagnosed (e.g., as depression). This is unfortunate because bereavement research has shown that complicated grief symptoms often do not diminish over time without adequate treatment (Shear et al., 2005). In order to fill this gap, the overarching aim of the present study was to examine possible risk factors for JLCG symptoms. 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 JLCG 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 JLCG symptoms.

In their meta-analysis, McKee-Ryan and colleagues (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*, JLCG 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 JLCG symptoms.

Coping Strategies

Coping is involved in the development and maintenance of complicated grief symptoms (cf. Folkman & Lazarus, 1990). Bereavement research established a positive relationship between the preference for avoidant coping styles and the development and maintenance of complicated grief symptoms (e.g., Morina, 2011; Nazali & Yildrim, 2017). Maladaptive coping styles combined with negative appraisals 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 JLCG symptoms.

Negative Cognitions

Many studies (e.g., Boelen et al., 2006; Currier et al., 2009; Ott et al., 2007) found an association between self-esteem and the experienced level of complicated grief. 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 et al., 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 et al., 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 et al., 2015).

The Present Study

In the present study, we used a prospective design to enhance our knowledge about predictors of JLCG symptoms. People confronted with job loss filled in questionnaires measuring background variables, psychological variables, and symptoms of JLCG. They completed the JLCG 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 JLCG 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 JLCG 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 JLCG 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 JLCG symptoms (Hypothesis 3a).

Longitudinal Hypotheses

In the longitudinal analyses we controlled for the severity of JLCG symptoms on Time 1 (T_1) when examining the JLCG 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 organisation 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. One 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 < .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 JLCG 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 (χ^2= 1414.54; *df* = 484; χ^2/*df* = 2.92; CFI = .95; TLI = .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 (α = .97) and T_2 (α = .97).

Brief COPE

Carver's (1997) Brief COPE was used to measure coping behaviour. 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 (α = .74), (2) adaptive coping (α = .81), and (3) social coping (α = .78).

Table 1

Characteristics of the participants

Socio-demographics	T_1 JLCG			
	N (%)	*M*	*SD*	r_s
Gender				.01
Male	239 (49)	38.43	25.71	
Female	246 (51)	38.68	26.23	
Education				-.05
Low	55 (11)	36.60	27.15	-.03
Middle	199 (41)	41.76	26.59	.10*
High	231 (48)	36.27	24.90	-.08
Relationship				-.05
Yes	331 (68)	37.68	25.92	
No	154 (32)	40.45	26.68	
Work characteristics				
Income Loss				
Reduction 0-25%	103 (22)	35.57	24.30	-.06
Reduction 25-50%	212 (45)	36.66	24.25	-.06
Reduction 50-75%	101 (22)	45.50	28.97	.12*
Reduction 75%-100%	50 (11)	41.10	27.61	.03
Years of employment				
< 1 year	60 (12)	45.83	29.28	.09*
1 – 3 years	113 (23)	34.98	23.17	-.06
3 – 5 years	66 (14)	40.41	26.24	.03
5 – 15 years	122 (25)	37.48	25.61	-.02
> 15	124 (26)	38.37	26.45	-.01
Reason of dismissal				
Reorganisation	196 (40)	36.97	25.13	-.05
Bankruptcy	39 (8)	39.59	24.10	.02
Health complaints	45 (9)	39.80	27.43	.01
Labour conflict	74 (15)	43.69	24.24	.10*
Non-renewed contract	57 (12)	37.75	31.18	-.04
Other	74 (15)	36.95	25.84	-.03
Workhours				.07
Part-time	199 (42)	36.42	24.90	
Full-time	274 (58)	40.32	26.83	

Note. T_1 CG= Time 1 job loss-related complicated grief (*N* = 485); T_2 CG = Time 2 job loss-related complicated grief (*N* = 128); T_2 NR = Time 2 non-responders (*N* = 85). * *p* <.05.

	T$_2$ JLCG				T$_2$ NR
N (%)	M	SD	r$_s$		N (%)
			-.01		
72 (56)	25.61	23.91			37 (44)
56 (44)	21.38	21.63			48 (56)
12 (9)	36.00	28.74	.12		8 (9)
51 (40)	23.53	22.25	.01		37 (45)
65 (51)	21.68	22.00	-.07		39 (46)
			-.13		
94 (73)	21.76	21.77			61 (72)
34 (27)	29.29	25.45			24 (28)
26 (20)	19.62	15.21	-.02		23 (27)
68 (54)	23.99	23.08	-.02		40 (47)
22 (17)	29.86	30.77	.06		15 (18)
11 (9)	21.45	19.86	-.02		7 (8)
22 (17)	31.45	28.30	.10		9 (11)
33 (26)	24.45	22.83	.02		26 (31)
16 (13)	16.69	18.58	-.08		10 (12)
30 (23)	24.27	21.38	.05		26 (31)
27 (21)	20.26	21.94	-.10		14 (16)
50 (40)	20.00	19.42	-.10		36 (42)
10 (8)	15.80	18.92	-.13		5 (6)
8 (6)	31.50	19.90	.13		7 (8)
21 (16)	24.62	23.11	.04		17 (20)
16 (13)	29.13	29.44	.06		7 (8)
23 (18)	28.17	26.96	.04		13 (15)
			.10		
56 (44)	20.89	20.33			38 (45)
72 (56)	25.99	24.71			47 (55)

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 (α = .90).

General World Beliefs

Belief in a Just World and Belief in an Unjust World (Dalbert et al., 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 (α = .82) and Belief in an Unjust World (α = .84) were good.

Table 2

Brief COPE subscales factor loadings

Subscales	Maladaptive coping	Adaptive coping	Social Coping
Denial	.72		
Behavioral disengagement	.75		
Self-blame	.68		
Active coping		.85	
Acceptance	-.62	.44	
Positive reframing	-.46	.65	
Planning		.89	
Emotional support			-.86
Instrumental support			-.85
Venting			-.63

Statistical Analyses

The multiple regression analyses were conducted in Mplus (Version 8; Muthén & 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. 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 JLCG 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 JLCG 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 JLCG 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 JLCG 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 JLCG symptoms following job loss at T_2, while controlling for JLCG symptom levels at T_1. Again, we calculated correlations between each individual variable with JLCG 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 JLCG 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 JLCG at T_1.

The MRA models were saturated with zero degrees of freedom and a comparative fit index of 1.00, i.e., model tests were not informative. The associated data is freely retrievable (Van Eersel et al., 2020).

RESULTS

Cross-sectional Analyses

Socio-demographic variables (age, gender, educational level, and marriage) were used as control variables. The intensity of JLCG symptoms did not differ as a function of educational level, $F_{(2, 482)} = 2.59$, $p = .08$. The other socio-demographic variables were also not significantly related to JLCG symptoms (Table 1).

Hypothesis 1a

JLCG symptoms differed as a function of the income loss groups, $F_{(462, 3)} = 3.45$, $p < .05$. The groups with 50-75% income loss scored higher on JLCG symptoms ($M = 45.5$, $SD = 29.0$) than the groups with 0-25% ($M = 35.6$, $SD = 24.3$) and 25-50% ($M = 36.7$, $SD = 24.2$) loss of income. JLCG symptoms after job loss did not differ as a function of the duration of employment ($F_{(479, 5)} = 1.54$, $p = .18$) and cause of dismissal ($F_{(478, 6)} = .81$, $p = .56$). Time passed since job loss and work hours also had no significant relation with JLCG symptoms. The MRA in Table 4 revealed a difference ($p < .01$) in the level of JLCG 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 JLCG symptoms were positively related to maladaptive coping styles and negatively to adaptive coping styles (both ps < .01). Social coping was not significantly related to JLCG symptoms. Table 4 shows that maladaptive coping, but not adaptive and social coping, was significantly associated with JLCG levels, 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 JLCG 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 < .01). The MRA in Table 4 indicated that all three cognitive variables explained a significant amount of unique variance in JLCG symptoms 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 JLCG at T_1 (Table 4), confirming Hypotheses 1a, 2a and 3a.

Longitudinal Analyses

Consistent with the cross-sectional results, the intensity of JLCG symptoms did not differ as function of educational level, $F_{(2, 125)} = 2.01$ $p = .14$. The other socio-demographic variables were also unrelated to CG symptoms (Table 1).

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	.70**	-							
3. Age	-.08	-.15	-						
4. Passed time since job loss	.06	-.25	.17**	-					
5. Maladaptive coping	.73**	.49**	-.06	.18**	-				
6. Adaptive coping	-.30**	-.18*	-.02	-.13**	-.27**	-			
7. Social coping	.05	.12	-.15**	-.13**	.07	.33**	-		
8. Rosenberg Self-Esteem Scale	-.53**	-.40**	.21**	-.09*	-.52**	.43**	.12**	-	
9. Belief in a just world	-.26**	-.23**	-.03	-.11*	-.16**	.19*	.09*	.26**	-
10. Belief in an unjust world	.31**	.39**	.02	.07	.24**	-.15**	-.05	-.26**	-.44**

Note. JLCG = job loss-related complicated grief. ** $p < .01$; * $p < .05$.

Hypothesis 1b

JLCG symptoms did not significantly differ as function for income loss ($F_{(123, 3)} = .83$, $p = .48$), duration of employment ($F_{(122, 5)} = 1.02$, $p = .41$), and cause of dismissal ($F_{(121, 6)} = .87$, $p = .52$). The MRAs in Table 4, with work situation features as predictor variables, indicated that none of them significantly predicted JLCG levels at T_2, which remained the same when controlling for JLCG 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 JLCG 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 JLCG following job loss at T_2, this effect did not reach the level of significance when controlling for JLCG at T_1 (Table 4). Hypothesis 2b was therefore partially confirmed.

Hypothesis 3b

Table 3 showed that JLCG 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 JLCG symptoms at T_2, and that belief in unjust world, but not self-esteem and belief in just world predicted JLCG, while controlling for JLCG 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 JLCG, only belief in an unjust world remained significant (Table 4). This confirmed Hypothesis 3b.

Table 4

Multiple Regression Analyses for Time 1 and Time 2 Complicated Grief, respectively

	T_1 JLCG		T_2 JLCG		T_2 JLCG	
Group of variables	β	z	β	z	β	z
Work situation						
T_1 JLCG					.68**	12.75
Income loss						
Reduction 0-25%	-.02	-0.46	-.04	-0.53	-.02	-0.36
Reduction 50-75%	.14**	2.75	.09	1.19	-.01	-0.05
Reduction 75-100%	.04	0.88	.01	0.06	-.02	-0.35
Years of employment						
< 1 year	.11	1.91	.06	0.73	-.01	-0.15
1-3 years	-.02	-0.27	-.09	-1.00	-.09	-1.04
3-5 years	.04	0.74	-.05	-0.61	-.08	-0.39
5-15 years	.02	0.31	-.02	-0.21	-.03	-0.42
Passed time since job loss	.05	1.07	-.08	-0.23	-.02	-0.32
Reason of dismissal						
Bankruptcy	.05	0.99	-.04	-0.50	-.07	-1.07
Health complaints	.06	1.24	.09	1.05	.04	0.61
Labour conflict	.10*	2.11	.12	1.58	.05	0.64
Non-renewed contract	-.01	-0.27	.07	0.91	.09	1.17
Other	.01	0.18	.10	1.32	.10	1.40
Work hours	.05	0.97	.04	0.58	.01	0.15

Table 4

Continued

Group of variables	T_1 JLCG β	z	T_2 JLCG β	z	T_2 JLCG β	z
Coping						
T_1 Complicated grief					.72**	14.66
Maladaptive coping	.92**	29.10	.70**	7.45	-.03	-0.21
Adaptive coping	.06	1.12	-.04	-0.37	-.05	-0.46
Social coping	-.05	-1.07	.11	1.08	.07	0.84
Cognitions						
T_1 Complicated grief					.62**	9.26
Rosenberg Self-Esteem Scale	-.46**	-12.66	-.32**	-4.53	-.02	-0.25
Belief Just World	-.08	-1.85	-.07	-0.88	-.02	-0.23
Belief Unjust World	.16**	3.67	.30**	4.10	.19**	2.73
Final model						
T_1 JLCG					.61***	6.91
Income loss						
Reduction 0-25%	.01	0.11				
Reduction 50-75%	.09**	2.67				
Reduction 75-100%	.02	0.66				
Maladaptive coping	.57***	17.50	.39***	5.10	.03	0.28
Rosenberg Self-Esteem Scale	-.22***	-6.17	-.16*	-1.99	-.02	-0.23
Belief Unjust World	.12***	3.70	.28***	4.34	.20**	3.10

Note. JLCG = job loss-related complicated grief symptoms, T_1, N = 485; T_2, N = 128; * p <.05; ** p <.01; *** p <.001.

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 JLCG 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 JLCG symptoms, which remained significant after controlling for T_1 JLCG symptoms. A strong belief in an unjust world explained 15% of the variance in

T_2 JLCG symptoms, the latter appearing to be a risk factor for the development and maintenance of JLCG symptoms. 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 JLCG symptoms, was consistent with earlier research results on bereavement (e.g., 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 JLCG 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 labour 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 JLCG symptoms.

A second main finding was that a preference for maladaptive coping and a low self-esteem affected the level of JLCG 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 JLCG. This confirms earlier research, showing that the use of maladaptive coping (e.g., Gowan, 2014; Jenkins et al., 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 JLCG, 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 categorised 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 JLCG 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 JLCG symptoms and a good start to explore which factors influence the maintenance of JLCG symptoms following job loss. However, since this second sample was relatively small, statistical power was limited and more research on the longitudinal aspect of JLCG 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 JLCG symptoms. 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 JLCG 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 complicated grief 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 complicated grief symptoms. In the case of bereavement, Boelen (2015) reported that a higher level of optimism reduces the risk for developing complicated grief 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 favourable 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 JLCG 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 generalise to other countries, the absolute *levels* of JLCG symptoms reported here may not immediately be generalised to these other contexts.

Implications

The results of this study provide more insight in the risk factors for the development and maintenance of JLCG symptoms, which is necessary for the elaboration of interventions and methods to treat people with high levels of JLCG symptoms. 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 JLCG 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 JLCG symptoms.

How people experience their dismissal (e.g., as sudden or unfair) can influence their cognitions and enhance the risk for developing JLCG 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 JLCG symptoms.

CONCLUSION

The present study provided more insight into the risk factors for the development and maintenance of JLCG symptoms. 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 JLCG symptoms at T_1 and T_2. The longitudinal results showed a significant relation between high levels of belief in an unjust world on JLCG symptoms. These insights provide some directions for the development of effective therapeutic interventions for people who experience problems with JLCG symptoms after their dismissal.

Author Contributions

Janske H. W. van Eersel, Toon W. Taris and Paul A. Boelen (Study design; Writing-review & editing); Janske H. W. Eersel (Data collection; Analysis; Writing-original draft). Paul A. Boelen and Toon W. Taris (Supervision).

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CHAPTER 4

Reciprocal relations between symptoms of complicated grief, depression, and anxiety following job loss: A cross-lagged analysis

ABSTRACT

Objective. Involuntary job loss can lead to symptoms of job loss-related complicated grief (JLCG), depression, and anxiety. Information about the temporal linkage between these symptoms is limited and may have implications for the treatment of those suffering from mental health complaints after dismissal. The aim of this study was to explore the possible reciprocal relationships between symptoms of JLCG, depression, and anxiety following involuntary job loss.

Method. We recruited 128 Dutch workers who had lost their job within the past 12 months, including 72 males and 56 females with an average age of 49.8 (SD = 9.0) years. They completed questionnaires tapping JLCG, depression, and anxiety symptoms at baseline (Time 1) and a 6-month follow-up (Time 2). Several cross-lagged panel models were compared.

Results. Our analyses indicated that JLCG symptom severity following job loss at Time 1 predicted depression at Time 2, but not vice versa. Similar results were found for JLCG and anxiety symptoms.

Conclusion. Symptom-levels of JLCG predict later depression and anxiety symptoms more strongly than vice versa. This implies that screening and targeting JLCG symptoms with early interventions might protect individuals from developing depression or anxiety symptoms after their dismissal.

Keywords: anxiety; cross-lagged; depression; grief; job loss; unemployment

INTRODUCTION

Involuntary job loss is major life event (Miller & Rahe, 1997). It involves many secondary losses, such as loss of collective purpose, social contacts, status, identity, time structure, and financial security (e.g., Jahoda, 1981). The attachment to the lost job, the disruption of identity, the sense of self, relationships and social roles can lead to symptoms of grief (Papa & Lancaster, 2016). Although most people show a resilient response when facing stressful life events like bereavement, divorce, and marriage, a minority group shows a decrease in subjective well-being (Mancini et al., 2011). Meaning, identity, and basic assumptions about the self, the world, and others need to be reviewed and reconstructed in case of bereavement, as well as in non-bereavement losses like job loss, divorce (Harvey & Miller, 1998; Papa et al., 2014), and romantic break-ups (Boelen & Reijntjes, 2009).

Several studies have shown that involuntary job loss can lead to symptoms of grief, depression, and anxiety (Archer & Rhodes, 1993; Brewington et al., 2004; Papa & Maitoza, 2013). In general, these grief symptoms decrease over time. However, in some persons they remain and evolve into symptoms of job loss-related complicated grief (JLCG; Papa & Lancaster, 2016; Van Eersel et al., 2019). Research on JLCG symptoms is sparse and predominantly based on cross-sectional data. Hence, knowledge of the long-term effects of JLCG symptoms and their relationships to other mental health problems is limited.

Characteristics of JLCG symptoms include preoccupying thoughts about the lost job, disbelief or inability to accept the loss, bitterness, and a sense that life is meaningless without the former occupation. JLCG symptoms can co-occur with symptoms of depression and/or anxiety. Even though there is an overlap in symptoms between JLCG, depression, and anxiety, factor-analytic studies have shown that these symptoms form distinguishable concepts (Papa & Maitoza, 2013; Van Eersel et al., 2019). Still little is known about whether and how symptoms of JLCG, depression, and anxiety following job loss influence each other over time. It is conceivable that people who experience JLCG symptoms are at risk for developing depression or anxiety symptoms later in time, but the reverse relationship would also seem defensible. Thus, at present the temporal relationship between JLCG, depression, and anxiety connected with job-loss is still largely unclear.

Symptoms of CG and Depression

Knowledge on the relationship between JLCG and depression symptoms following involuntary job loss is limited. Jahoda (1981) argued that deprivation of the latent functions of work (e.g., time structure, identity, shared goals, contact with others, purpose) triggers

the development of depressive symptoms after job loss. Over the years, cross-sectional and longitudinal studies have revealed the potential negative impact of involuntary job loss on psychological and physiological well-being (among others, McKee-Ryan et al., 2005; Paul & Moser, 2009). However, job loss-related CG symptoms were not addressed in prior longitudinal research. For instance, in their cross-lagged analysis, Howe and colleagues (2017) found that the severity of the job loss (e.g., in terms of lost income and/or benefits) was associated with the intensity of subsequent depressive symptoms but not with the level of anxiety symptoms. Stolove and colleagues (2017) showed that people who were resilient or who were remitting from depression had a greater chance of being re-employed, compared to people who experienced chronic or emergent depressive symptoms.

To our knowledge, longitudinal studies to examine the linkage between complicated grief and depression symptoms following loss events have only focused on complicated grief symptoms following bereavement losses. Shear and colleagues (2011) stated that having a psychiatric diagnosis, especially a mood disorder, is a risk factor for the development of complicated grief following bereavement. In their cross-lagged analysis among widowers, Prigerson and colleagues (1996) found that complicated grief symptoms predicted depression at 18-month post-loss follow-up, whereas initial depression did not predict subsequent grief. Lenferink and colleagues (2019) obtained a similar result in their cross-lagged analysis: changes in the level of complicated grief symptoms had a greater impact on depression than vice versa.

The results of these sparse studies suggest that the relationship between complicated grief and depression is reciprocal. From a theoretical viewpoint, one could argue that elevated JLCG following job loss aggravates later depression because the preoccupation with the loss of the job, implicated in JLCG, could block the motivation to engage in potentially pleasurable activities, consequently fuelling depressive feelings and anhedonia. Conversely, depression following job loss could precede JLCG, such that the feelings of guilt and hopelessness implicated in elevated depression contribute to a tendency to yearn for what was lost.

Symptoms of CG and Anxiety
Research on the relationship between JLCG symptoms and anxiety is scarce as well. Some studies have shown that these concepts represent theoretically as well empirically distinct phenomena (Archer & Rhodes, 1993; Papa & Maitoza, 2013; Van Eersel et al., 2019). None of these studies explored the possible reciprocal associations between JLCG and anxiety symptoms related to involuntary job loss.

In bereavement studies, complicated grief has been found to be associated with high rates of comorbid anxiety disorders (Marques et al., 2013; Simon et al., 2007). According to Bui and colleagues (2013), pre-existing anxiety symptoms could increase the risk of complicated grief following loss elicited by a preference of maladaptive coping styles. At present, there are no prospective studies published on the relation between complicated grief and anxiety, only of post-traumatic stress disorder (PTSD) and complicated grief studies have shown that the level of complicated grief symptoms predicted PTSD symptoms later in time more strongly than PTSD predicted complicated grief after loss (Djelantik et al., 2018; Lenferink et al., 2019).

From a theoretical viewpoint, one could argue that elevated complicated grief symptoms following job loss inflates later anxiety because experiential avoidance, which is a hallmark symptom of JLCG, can also lead to avoidance in other life areas and increase anxiety symptoms. Conversely, anxiety could also precede JLCG symptoms because it interferes with elaboration of the consequences of the loss, thereby maintaining grief. This could make it harder for people to face reality and accept that their job is permanently lost, leading to an increase of JLCG symptoms.

Aim of the Study

In the present study, we build on prior studies pointing out that JLCG, depression, and anxiety symptoms are distinguishable (e.g., Papa & Maitoza, 2013; Van Eersel et al., 2019), to examine the order in which these symptoms influence each other, using cross-lagged analysis. We used data from participants who completed questionnaires measuring JLCG, depression, and anxiety symptoms within the first year after their involuntary job loss and again six months later. Our aim was to explore to which extent JLCG, depression, and anxiety symptoms at Time 1 (T_1) predicted the level of these symptoms at Time 2 (T_2). Based on prior empirical results of job loss and bereavement we explored (1) if JLCG symptoms predicted symptom-levels of depression later in time and vice versa, and (2) if JLCG symptoms predicted symptom-levels of anxiety over time and vice versa.

This is the first time the temporal relations between symptoms of JLCG, depression, and anxiety after involuntary job loss are explored. Acquiring knowledge on the reciprocal associations between these symptoms improves our understanding of the etiology of JLCG symptoms. This could enhance knowledge about which symptoms need to be dealt with first in treatment of comorbid loss-related symptoms after involuntary job loss which is imperative for developing more effective interventions and treatment methods.

METHOD

Procedure and Participants

This study was approved by the Ethical Review Board of the Faculty of Social Sciences of Utrecht University (FETC 16-111). Participants who had involuntarily lost their job were recruited through two channels: (1) workshops about the impact of the job loss for people who had lost their job (N = 15), and (2) social (media) networks (N = 198). At T_1, 213 people participated who had lost their job the previous year. All participants provided informed consent. They filled out the survey using paper-and-pencil or in a secured online area. Part of this sample from T_1 was included in another study of our research program (Van Eersel et al., 2019). After six months (T_2) the participants were invited to fill out the questionnaires again in an online format administered through a secured online area; 128 participants (60%) completed this follow-up study. The T_1 to T_2 interval ranged from 5.5 to 7.1 months (M = 6.3; SD = 0.3 months).

Dropout Analyses

The T_2 responders were compared to the T_2 non-responders using t-tests and chi-square tests on background variables (e.g., age, gender, and education), features of the job loss (e.g., time since loss, duration of employment, and cause of dismissal), and symptom scores at T_1. Outcomes, summarised in Table 1, showed that T_2 non-responders were younger (t(211) = 3.56, p < .001) and had higher depression scores (t(211) = -2.15, p < .05) than the T_2 responders.

Measures

Demographics

From all participants demographic data and characteristics of the loss of their jobs were collected (Table 1).

Job Loss Grief Scale (JLGS)

For the measurement of the JLCG symptoms, the JLGS (Van Eersel et al., 2019) was used. With their job loss in mind, participants rated the extent to which they experienced the listed 33 symptoms (e.g., "I can't accept the loss of my job", "Memories about the loss of my job upset me") during the past month on a 5-point scale (1 = *never*, 5 = *always*). A study by Van Eersel and colleagues (2019) indicated that the scale has good psychometric properties. In the present sample Cronbach's α was .97 at both T_1 and T_2.

Table 1

Characteristics of the participants at time 1

Variables	$T_{2\ responders}$	$T_{2\ non\text{-}responders}$	Significance test between groups
Age (*M* (SD))	49.8 (9.0)	45.4 (8.7)	t (211) = 3.56**
Gender (*N* (%))			χ^2 (1, *n* = 213) = 3.31
Male	72 (56.2)	37 (43.5)	
Female	56 (43.8)	48 (56.5)	
Educational level (*N* (%))			χ^2 (2, *n* = 213) = 0.54
Primary education	12 (9.4)	8 (9.4)	
Secondary education	51 (39.8)	37 (44.7)	
College or university	65 (50.8)	39 (45.9)	
Relationship (*N* (%))			χ^2 (1, *n* = 213) = 0.07
Yes	94 (73.4)	61 (71.8)	
No	34 (26.6)	24 (28.2)	
Cause *(N (%))*			χ^2 (6, *n* = 213) = 2.37
Reorganisation	50 (39.1)	36 (42.4)	
Bankruptcy	10 (7.8)	5 (5.9)	
Health complaints	8 (6.3)	7 (8.2)	
Labour conflict	21 (16.4)	17 (20.0)	
Economic reasons	3 (2.3)	1 (1.2)	
Non-renewed contract	16 (12.5)	7 (8.2)	
Other	20 (15.6)	12 (14.1)	
Length of employment (*N* (%))			χ^2 (5, *n* = 213) = 8.67
<1 year	22 (17.2)	9 (10.6)	
1-3 years	33 (25.8)	26 (30.6)	
3-5 years	16 (12.5)	10 (11.8)	
5-15 years	30 (23.4)	26 (30.6)	
15-25 years	13 (10.2)	12 (14.1)	
>25 years	14 (10.9)	2 (2.4)	
Employment (*N* (%))			χ^2 (1, *n* = 213) = 0.19
Full-time	56 (44)	38 (44.7)	
Part-time	72 (56)	47 (55.3)	
Time since job loss in months (*M* (SD))	5.1 (3.6)	5.3 (4.3)	t (211) = -0.39
Complicated Grief (*M* (SD))	34.4 (23.5)	40.1 (24.5)	t (211) = -1.12
Depression (*M* (SD))	10.5 (8.4)	13.2 (10.2)	t (211) = -2.15*
Anxiety (*M* (SD))	4.6 (5.9)	6.5 (7.2)	t (211) = -1.19

Note. T_2 = Time 2; T_2 responders (*N* = 128); T_2 non-responders (*N* = 85). * *p < .05* ** *p < .001.*

4

Depression Anxiety Stress Scales (DASS-21)

For the measurement of depression and anxiety symptoms, the DASS-21 (Lovibond & Lovibond, 1995) was used. Participants rated the extent to which they had experienced the 21 symptoms listed during the preceding week (e.g., "I felt I had no desire for anything", "I felt afraid for no reason") on a 4-point scale (1 = *never or rarely*, 4 = *always or frequently*). Henry and Crawford (2005) showed that the measure has good psychometrics. In the present sample Cronbach's α for depression was .91 at T_1 and T_2, and for anxiety was .83 at T_1 and .81 at T_2.

Statistical Analyses

Ten models were consecutively tested in Mplus version 8 (Muthén & Muthén, 1998-2017), to examine the reciprocal relationships between symptoms levels of JLCG, depression, and/or anxiety, represented by the summed score on the JLGS, the subscale of depression of the DASS-21, and the subscale anxiety of the DASS-21, respectively.

In Model 1 we looked at the auto-regressive paths of the JLCG and depression data, further allowing T_1 depression and T_1 JLCG to correlate. Model 2 extended Model 1 with the cross-lagged path between T_1 depression and T_2 JLCG. Model 3 was similar to Model 1, adding the cross-lagged path between T_1 JLCG and T_2 depression. In Model 4 we integrated Models 1 - 3, including the auto-regressive paths, the T_1 and T_2 associations between JLCG and depression, and both cross-lagged paths. Model 5 was based on Model 4, but here the cross-lagged paths were constrained to be equal to each other. Five similar models (Models 6 - 10) were examined with anxiety instead of depression.

We computed and compared the statistical fit of all models. Goodness of fit was evaluated with the x^2-value, the x^2/df ratio, CFI, and the standardised root mean square residual (SRMR), because these measures provide the most useful information for samples with less than 200 subjects (Hooper et al., 2008). Lower values of x^2 and x^2/df ratio indicate better fit (Hoelter, 1983), CFI values of > .95 are good (Hu & Bentler, 1999), and SRMR values of < .08 are acceptable (Hu & Bentler, 1999) and < .05 good (Byrne, 1998). The associated dataset is freely retrievable (Van Eersel et al., 2020).

The results reported below are based on the data from the participants who participated in both waves (*N* = 128). These results were compared to those obtained after multiple imputation of the T_2-data for those who participated at T_1, but not at T_2 (*N* = 231). Since both sets of findings were highly similar and led to identical conclusions and recommendations, for brevity we report only the findings obtained for those who participated in both waves (*N* =128). The other results can upon request be obtained from the corresponding author.

RESULTS

Table 2 summarises the fit indices for all models and presents the model comparisons. Model 1 examined the autoregressive pathways of JLCG on T_1 and T_2, and depression on T_1 and T_2. The results showed that T_1 JLCG was associated with T_2 JLCG, and that T_1 depression was associated with T_2 depression. Model 2 added the cross-lagged path of T_1 depression on T_2 JLCG to Model 1. The results indicate that depression at T_1 predicts JLCG symptoms following job loss at T_2 (β = .22, $p < .05$). Model 2 showed significantly better fit indices than Model 1. Model 3 was similar to Model 2, but examined the other cross-lagged path. The results indicated that JLCG at T_1 predicts depression symptoms at T_2 (β = .25, $p < .05$). Model 3 also improved significantly on Model 1. In Model 4 all paths were tested in a single model, which led to a fully saturated model with a perfect fit. Model 2, 3, and 4 did not differ significantly (Table 2). Model 5 examined whether the cross-lagged associations between JLCG and depression differed significantly. Table 2 shows that the chi-square increase for Model 5 compared to the fit of Model 4 was not significant, $\Delta\chi^2$ with 1 df = 2.28, $p > .05$. Thus, the cross-lagged effect of JLCG on depression did not differ significantly from that of depression on JLCG. Models 2, 3 and 5 cannot be statistically compared because they all have the same number of df, but in conjunction these models essentially indicate that JLCG and depression are reciprocally related. The results for Model 5 are shown in Figure 1. T_1 JLCG significantly predicted T_2 depression (β = .25, $p < .05$). This indicates that for every point increase of the CG sum score at T_1, the depression sum score at T_2 will be 0.25 points higher on the standardised scale, when controlling for the other parameters in the model. Conversely, a small part of T_1 depression was also significantly associated with T_2 JLCG (β = .02, $p < .05$).

A similar set of consecutive models was compared for the associations between JLCG and anxiety. Model 6 presented good fit indices (Table 2), showing significant autoregressive pathways for JLCG on T_1 and T_2, and anxiety on T_1 and T_2. Model 7 did not find a significant relation between T_1 anxiety and T_2 JLCG (β = .14, p = .07), and showed no significant improvement in fit compared to Model 6. Model 8 examined the relation between T_1 JLCG and T_2 anxiety (β = .23, $p < .05$), significantly improving on Model 6. Model 9 tested all pathways in a single model, and thus was fully saturated with a perfect fit. This model was not a significant improvement compared to Model 8.

Finally, Model 10 examined whether the cross-lagged associations between JLCG and anxiety could be constrained to be equal. Constraining these cross-lagged effects showed no significant improvement on Model 9 (cf. Table 2). Models 8 and 10

have the same number of *df* and could not be compared statistically; both models indicate a reciprocal relationship between JLCG and anxiety. T_1 JLCG appeared to explain a greater amount of the variance of T_2 anxiety (β = .23, *p* < .05) in Model 10, compared to the variance in T_2 JLCG that was explained by T_1 anxiety (β = .01, *p* < .05). Figure 2 shows the results for Model 10.

Table 2

Comparison between all models

Model	χ^2	df	χ^2/df	CFI	SRMR	$\Delta\chi^2$
Depression and job loss-related complicated grief						
M1	7.83	2	3.92	.96	.05	
M2	2.57	1	2.57	.99	.02	M1-M2: 5.26(1), *p* < .05
M3	2.75	1	2.75	.99	.02	M1-M3: 5.08(1), *p* < .05
M4	0	0	0	1.00	.00	M2-M4: 2.57(1), *ns*
						M3-M4: 2.75(1), *ns*
M5	2.28	1	2.28	0.99	0.02	M4-M5: 2.28(1), *ns*
Anxiety and job loss-related complicated grief						
M6	7.28	2	3.64	.96	.06	
M7	4.09	1	4.09	.98	.04	M6-M7: 3.19(1), *ns*
M8	1.63	1	1.63	.99	.02	M6-M8: 5.65(1), *p* < .05
M9	0	0	0	1.00	.00	M7-M9: 4.09(1), *p* < .05
						M8-M9: 1.63(1), *ns*
M10	1.46	1	1.46	.99	.02	M9-M10: 1.46(1), *ns*

Note. M = model; χ^2 = chi-squared; df = degrees of freedom; CFI = comparative fit index; SRMR = standardised root mean square residual

Figure 1

Model 5 cross-lagged associations between job loss-related complicated grief and depression
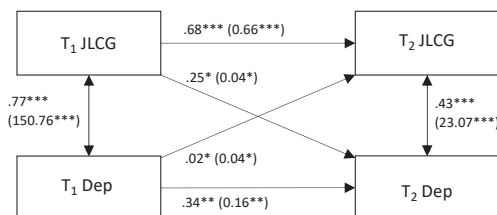
Note. JLCG = job loss-related complicated grief; Dep = depression; first estimate = standardised effect; second estimate (in brackets) = unstandardised effect. * *p* < .05; ** *p* < .01; *** *p* < .001.

Figure 2

Model 10 cross-lagged associations between job loss-related complicated grief and anxiety
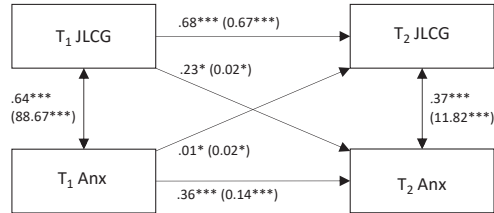
Note. CG = job loss-related complicated grief; Anx = anxiety; first estimate = standardised effect; second estimate (in brackets) = unstandardised effect. * $p < .05$; ** $p < .01$; *** $p < .001$.

4

DISCUSSION

The objective of this study was to explore the possibly reciprocal relations between JLCG, depression, and anxiety symptoms. Using two-wave panel data from 128 people who had lost their jobs, the results revealed a significant relationship between JLCG and depression at both time points for the cross-lagged pathways. Nonetheless, the effect of T_1 JLCG on T_2 depression was stronger than the effect of T_1 depression on T_2 JLCG. This indicates that a higher score on JLCG symptoms is associated with a higher score on depression symptoms, even when controlling for the stability of symptom levels of JLCG and depression on T_1 and T_2. Similar results were found for JLCG and anxiety symptoms. Again, T_1 JLCG symptoms were more strongly related with a higher score on T_2 anxiety than vice versa, which remained when controlling for the symptom stability level of JLCG and anxiety on T_1 and T_2. Based on these results, we can conclude that JLCG symptoms are associated with later depression and anxiety symptoms.

Looking at prior studies, our results correspond with the outcome of bereavement studies by Djelantik and colleagues (2018), Lenferink and colleagues (2019), and Prigerson and colleagues (1996) on complicated grief, depression, and PTSD. These findings provide the first evidence that JLCG symptoms may contribute to the exacerbation of depression and anxiety symptoms later in time.

Our findings suggest that yearning for, and preoccupation with the lost job, may block engagement in positive, valued activities (fuelling depression) and fears and worries about the future (fuelling anxiety). A possible explanation could be provided by the stress sensitization theory (Smid et al., 2015). This theory claims that individuals who are confronted with major life events are more vulnerable to developing depression

or anxiety symptoms in response to subsequent stressful events, for example due to negative appraisals about the loss (Smid et al., 2015). Job loss can yield multiple descending losses, such as loss of financial security, social contacts, and access to other potential reinforcements associated with employment (Papa & Maitoza, 2013). From this perspective, involuntary job loss can trigger certain global beliefs about the self, life or the future, and strengthen maladaptive cognitions regarding trust, esteem, and personal control. These negative schemas can produce negatively biased interpretations, depressive and anxiety symptoms, as a response to the occurrence of other stressful life events. Hence, people who experience JLCG symptoms seem to be more prone to develop depressive or anxiety symptoms when confronted with subsequent stressful life events.

Limitations

There are some limitations that need to be kept in mind while interpreting these findings. First, our sample size was relatively small (N = 128). Therefore, generalization must be done with caution, and larger-scale replication studies are in place. Second, the time between measurements was six months. Therefore, it is uncertain if different time intervals can disclose other short- or long-term cross-lagged effects of JLCG, depression, and anxiety. As a result of the time-interval dependency (Taris, 2000), it is possible that the cross-lagged effect of anxiety on JLCG needs more time to reveal itself, than of JLCG on anxiety, or JLCG on depression. Even though there are no theoretical or empirical reasons to assume this; since our findings are consistent with earlier cross-lagged studies on bereavement (Djelantik et al., 2018; Lenferink et al., 2019; Prigerson et al., 1996). Third, the current sample was restricted to participants who had lost their job during the last 12 months. The follow-up measurement took place between 6 to 18 months after the job loss, because we expected that changes in the severity of JLCG symptoms would predominantly occur within the first 18 months following the dismissal. However, the present results showed that JLCG, depression, and anxiety symptoms can still change 12 to 18 months after the job loss occurred. Therefore, it would be interesting to explore the development of JLCG, depression, and anxiety symptoms, over a longer period of time with more waves, to gain more insight in how they interact and how intertwined clusters are formed. Research with more than two assessments would also allow the application of more sophisticated statistics, such as random intercept cross lagged modelling (Hamaker et al., 2015). Finally, it would be useful for future research to study other emotional symptoms following involuntarily job loss including symptoms of adjustment disorder (Maercker et al., 2013).

Implications

Our findings suggest that reduction of JLCG symptoms in an early stage might reduce the risk for later depressive or anxiety symptoms over time. Note that the presence of depression or anxiety symptoms does not appear to predict the aggravation of JLCG symptoms later in time.

Moreover, our data provide evidence that JLCG symptoms can aggravate depression and anxiety symptoms over time. This implies that preventive interventions should focus on e.g., acceptance of the job loss or reducing the sense of meaningfulness after the job loss. Individuals could be stimulated to re-engage in meaningful social activities to reduce the risk for the development of elevated depressive symptoms. Interventions that focus on cognitive restructuring, could target the fears and worries about the future to prohibit anxiety symptoms from increasing.

Furthermore, our results indicate that psychopathological symptoms following job loss are relatively stable in time. Hence, during screening it seems useful to focus on the recognition of JLCG symptoms, next to anxiety and depression symptoms. If elevated JLCG symptoms are identified in the first year after the job loss, precautions can be made to keep the situation from becoming worse through development of depressive or anxiety symptoms. Reduction of JLCG symptoms, can prevent other mental health problems from evolving and increase well-being, and therefore enhances the chance of sustainable re-employment.

CONCLUSION

Notwithstanding the study limitations, our findings indicate that JLCG symptoms affect depressive and anxiety symptoms more strongly than vice versa. This implicates that screening and early interventions aiming JLCG symptoms might reduce the risk for later development of depressive or anxiety symptoms after the dismissal. Hence, awareness about the consequences of JLCG symptoms needs to become common knowledge among practitioners as well as people who are confronted with involuntary job loss.

Author Contributions

Janske H. W. van Eersel, Toon W. Taris and Paul A. Boelen (Study design; Writing-review & editing); Janske H. W. Eersel (Data collection; Analysis; Writing-original draft). Paul A. Boelen and Toon W. Taris (Supervision).

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CHAPTER 5

Grief reactions, depression, and anxiety following job loss: Patterns and correlates

ABSTRACT

Background. Research on grief, depression, and anxiety reactions following job loss is sparse. More insight in this matter could be important for the development of preventive and curative interventions targeting different manifestations of emotional distress following job loss, including grief reactions.

Objective. The aim of this study was to examine job loss-related grief reactions in relation to depression and anxiety symptoms.

Method. A sample of 525 Dutch workers (60% women, mean age of 50.6 years) who had lost their job was recruited. Latent class analysis was used to examine whether separate classes could be distinguished based on the endorsement of grief reactions and symptoms of depression of anxiety. We also examined factors associated with class membership.

Results. Four classes were identified, including a so-called "mixed", a "grieving", a "depressed", and a "resilient" class. Job loss circumstances and coping strategies (but not socio-demographic and work characteristics) were associated with class membership.

Conclusion. These results shed light on unique characteristics that might be targeted with specific clinical methods to increase mental health of different subgroups of individuals confronted with job loss.

Keywords: anxiety; coping; depression; grief reactions; job loss; latent class analysis

INTRODUCTION

Employment is more than just a way to make a living; it provides structure to the day, a reason to get up in the morning, goals to pursue, meaning, identity, and status (Jahoda, 1981). Hence, it is not surprising that involuntary job loss contributes to a decrease in psychological, physical, and social well-being (e.g., McKee-Ryan et al., 2005). For example, job loss has been found to be related to increases in depression (Kim & Von Dem Knesebeck, 2015), anxiety, and psychosomatic symptoms (Paul & Moser, 2009), loss of psychosocial assets, stigmatization, social withdrawal, family disruption (Brand, 2015), and increased risk of substance use (Modrek et al., 2013). A meta-analysis of longitudinal studies has shown that job loss can cause severe emotional distress (Paul & Moser, 2009). Job loss may yield transient reactions of grief (Brewington et al., 2004; Climent-Rodríguez et al., 2019; Diaz et al., 2015; cf. Lorenz et al., 2020, who focused on adjustment disorder after involuntary job loss). However, in a minority of people grief reactions following job loss can become persistently disabling and distressing[1] (Papa & Lancaster, 2016; Van Eersel et al., 2019).

Grief Reactions and Symptoms of Depression and Anxiety following Job Loss
Loss can be defined as a reduction of resources in which a significant investment has been made (Harvey & Miller, 1998). Loss of work can provoke multiple cascading losses (e.g., reduction of social contacts, status, and self-esteem), leading to elevated levels of stress. Interestingly, prior research has shown that a reduction of income following job loss was not significantly related to the intensity of job loss-related grief reactions (Papa & Maitoza, 2013; Van Eersel et al., 2020a); apparently, loss of income is not the main driver of such grief reactions. According to conservation of resources theory, the emotional distress resulting from the partial or full loss of a resource depends on a person's investment in that resource, the number of remaining resources, and the appraisal of possible threats (Hobfoll et al., 2016). Basic assumptions about the sense of self, the world, the future, and others require reconstruction to incorporate the new reality. This is the case following different kinds of losses, including bereavement, loss of bodily functions, victimization through violence (Harvey & Miller, 1998), job loss, divorce (Papa et al., 2014), romantic break-up (Boelen & Reijntjes, 2009), and natural disaster (Shear et al., 2011).

The intensity of grief reactions has been associated with disruption of a person's day-to-day life, access to meaningful activities, valuable interactions, social relationships, loss of identity, self-esteem, and self-efficacy (Papa & Lancaster, 2016). Grief reactions are characterised by separation distress combined with difficulties accepting the loss, yearning, difficulty finding meaning in life, feeling bitterness over the loss, identity

confusion, and difficulty moving on with life, causing severe distress and disability on most days (Prigerson et al., 2009). Job loss-related grief reactions can occur in conjunction with symptoms of depression and anxiety, and may also precipitate elevations of symptoms of depression and anxiety over time (Van Eersel et al., 2020b). Nonetheless, recent *variable-centred* studies have shown that depression, anxiety and grief reactions can be distinguished empirically (Papa & Maitoza, 2013; Van Eersel et al., 2019).

A variable-centred approach postulates a linear structure which is common for a homogenous population and, as a result, does not allow detecting nuances within the population, such as the existence of latent classes (Meeusen et al., 2018). However, it may be possible that different subgroups of people can be distinguished among people who have lost their jobs, based on the endorsement job-related grief reactions and symptoms of depression and anxiety. One way to study this notion is by using a *person-centred* approach which may help to improve insight in the interrelations among job loss-related grief, depression, and anxiety reactions. In addition, it is important to increase knowledge on variables related to class membership (e.g., coping style, demographics, or loss characteristics) to inform theorizing and the development of interventions targeting distress following job loss.

Latent Class Analysis

Latent class analysis (LCA) is a person-centred statistical method that identifies subgroups of individuals who share a set of common characteristics (Lanza & Cooper, 2016). As a primarily data-driven approach, it is useful to explore a data set and to determine the direction of further theory and research. Since LCA has not previously been used to study grief, depression, and anxiety reactions following job loss, we formulated our expectations concerning the characteristics of latent classes on the basis of earlier research among people confronted with bereavement loss. Several studies have used LCA to identify subgroups of bereaved people, based on symptoms of complicated grief (CG)—often also referred to as prolonged grief disorder, depression, and post-traumatic stress disorder (PTSD). For instance, Djelantik and colleagues (2017) examined CG, depression, and PTSD levels among bereaved individuals, and identified three classes: a resilient class, a CG class, and a mixed class of CG and PTSD. Lenferink and colleagues (2017) obtained similar results in their sample with disaster-bereaved individuals: a resilient class, a CG class, and a combined class of CG, depression, and PTSD symptoms. Taking these findings into account, we anticipated that a sample of job loss-related grief, depression, and anxiety reactions would dissolve in perhaps as many as four classes: a resilient class, a job loss-related grief class, a depression class, and a mixed class with job loss-related grief, depression, and anxiety.

Coping, Grief, and Resilience

In addition to examining the clustering of job loss-related grief, depression, and anxiety reactions into different classes, it was deemed relevant to explore which variables are related to class membership. LCA studies on emotional responses to bereavement loss have shown that the resilient pattern (i.e., low levels of distress) is the most common response (Bonanno et al., 2008; Lenferink et al., 2018). Resilience can be described as the ability to maintain relatively stable, healthy levels of functioning when confronted with a potentially highly disruptive event (Bonanno, 2004). In the case of job loss, Galatzer-Levy and colleagues (2010) found that 82% of the participants of their study experienced no long-term effects on life satisfaction in response to their unemployment. Individuals with a resilient response to job loss tended to use more adaptive coping strategies than people with higher levels of emotional distress, while this latter group of people appeared to use maladaptive coping strategies relatively often (Sojo & Guarino, 2011). Coping refers to the effort a person undertakes to manage the demands of a situation, when these demands are appraised as taxing or even exceeding the person's capability to control, reduce, or tolerate the stressful conditions (Folkman & Lazarus, 1988). In several studies, the use of maladaptive coping strategies has been linked to diminished well-being during unemployment (Brand, 2015; Gowan, 2014; McKee-Ryan et al., 2005) and persistent job loss-related grief reactions (Papa & Maitoza, 2013; Van Eersel et al., 2020a). Therefore, it was considered conceivable that following job loss, different forms of coping were associated with membership of different classes characterised by different symptom patterns.

The Present Study

The current study aimed to identify: (1) subgroups of individuals who involuntary lost their job, and (2) predictors of subgroup membership. Specifically, the first aim was to examine whether subgroups of individuals could be identified, based on their levels of grief, depression, and anxiety reactions following job loss. Based on the results from LCA studies on bereavement cited above and factor analyses of job loss-related grief (Papa & Maitoza, 2013; Van Eersel et al., 2019), we expected that various subgroups would emerge with distinct and differentiated symptom profiles (e.g., high grief, low depression, low anxiety or low grief, high depression, low anxiety).

The second aim was to investigate socio-demographic and loss-related characteristics associated with the subgroup membership. Little is known about the correlates of subgroups of persons characterised by different patterns of grief, depression, and anxiety symptoms following job loss. However, Brewington and colleagues (2004) found that the *abruptness* of the loss, *feeling unprepared* for this loss, and an *inadequate notice of dismissal* were risk factors for developing grief symptoms following job loss.

These findings can be linked to Janoff-Bulman's (1999) theory that postulates that after experiencing stressful life events, people tend to hold on to their basic assumptions that the world is fair, predictable, and controllable. Events that disrupt these assumptions, such as involuntary job loss, can lead to emotional distress and problems.

Finally, there is some evidence that maladaptive coping strategies are associated with job loss-related grief (Papa & Maitoza, 2013), depressive symptoms (Hasselle et al., 2019), and diminished well-being during employment (Gowan, 2014). This might be due to maladaptive coping yielding a decrease in available resources, which can force a person to fall back on avoidant coping strategies to deal with the changed reality (Hobfoll et al., 2016). In our study, we anticipated that participants in the relatively more disturbed classes would experience their job loss as more unexpected and more unjustified, and that they would endorse a higher use of maladaptive coping strategies and a lower use of adaptive and social coping strategies.

METHOD

Procedure and Participants

The study was approved by the Ethical Review Board of the Faculty of Social Sciences of Utrecht University (FETC 16-111). The data collection took place between 2016 and 2019. During this period unemployment rates in the Netherlands decreased from 6.0% in 2016 to 3.2% in 2019 (CBS, 2020). Dutch individuals who had involuntarily lost their job were recruited via two channels: (1) meetings on the impact of the job loss, and (2) social (media) networks. Potential participants received a short explanation (either in person or in writing) of the goals and general content of the study. If they were interested, the researcher handed out the information letter or they could click on a link to read this letter online. After reading the information letter, people decided whether they wanted to participate in the study. Informed consent was obtained from all participants (N = 592). After signing the consent form, 88% completed the survey either using paper and pencil (n = 44) or by completing an online questionnaire in a secured online area (n = 481). The 'paper and pencil' group was recruited via meetings on the impact of job loss, and the 'online' group via social (media) networks. Groups did not differ in terms of the variables assessed in the study, except for educational level (χ^2 (df = 2, n = 525) = 18.6, p < .001). In the online group more people held a college or university degree (59%) than in the paper-and-pencil group (29%). A part of the data on grief reactions, depression, and anxiety was used in other parts of our research program (Van Eersel et al., 2019, 2020a).

The data from people who did not complete the grief, depression, and anxiety questionnaires (*N* = 37) or who resigned voluntarily from their job (*N* = 30) were excluded. The participants in the final sample for this study (*N* = 525) were on average 50.6 (*SD* = 9.0) years old and included 211 men (40%) and 314 women (60%). Their level of education varied, with 48 people having completed primary education only (9%), 182 people having completed secondary education (35%), and 295 people holding a college or university degree (56%). Table 1 presents all socio-demographics and work characteristics.

Measures
Socio-demographics
The following socio-demographic data and work characteristics were collected from all participants: gender, age, educational level, income reduction, years of employment, and time passed since the job loss (Table 1).

Job Loss Grief Scale (JLGS)
For the measurement of persistent job loss-related grief reactions, the validated 33-item JLGS (Van Eersel et al., 2019) was administered. With their job loss in mind, participants rated the extent to which they experienced the reactions listed (e.g., "I can't accept the loss of my job" and "Memories about the loss of my job upset me") during the previous month on a 5-point scale (0 = *never* to 4 = *always*). Because of the sample size and in an attempt to reduce the complexity of the analysis, only the ten items included in the short version of the JLGS (i.e., the Job Loss Grief Scale–Short Form, JLGS-SF) were used in the analysis. A prior study (Van Eersel et al., 2019) showed that the JLGS-SF possessed good psychometric properties, similar to the extended JLGS. For instance, the items formed a unidimensional scale (x^2= 75.79; *df* = 32; x^2/df = 2.37; CFI = .99; TLI = .99; RMSEA = .07), that could be distinguished from symptoms of anxiety and depression, thus supporting the scale's discriminant validity. In the present sample Cronbach's α for these ten items was .94.

Depression Anxiety Stress Scale (DASS-21)
For the measurement of depression and anxiety symptoms, the DASS-21 (Lovibond & Lovibond, 1995) was used. Participants rated the extent to which they had experienced the twenty-one symptoms listed during the preceding week (e.g., "I had nothing to look forward to", "I felt afraid for no reason") on a 4-point scale (0 = *never or rarely* to 3 = *always or frequently*). In the present sample Cronbach's a for depression was .93 and for anxiety it was .88.

Table 1

Socio-demographic and loss-related characteristics plus symptom-levels across classes

Variables	Total (*N* = 525)	Class 1: mixed (*n* = 87)
Socio-demographic		
Gender (*N* (%))		
Men	211 (40.2)	30 (34.5)
Women	314 (59.8)	57 (65.5)
Age *(M (SD))*	50.6 (9.0)	48.8 (9.2)
Education (*N* (%))		
low	48 (9.1)	5 (5.7)
middle	182 (34.7)	40 (46.0)
high	295 (56.2)	42 (48.3)
Work		
Income reduction (*N* (%))		
0-25%	139 (27.4)	15 (17.4)
25-50%	198 (39.1)	31 (36.0)
50-75%	111 (21.9)	28 (32.6)
75-100%	59 (11.6)	12 (14.0)
Years of employment (*N* (%))		
<1 year	65 (12.4)	18 (20.7)
1-3 years	117 (22.3)	13 (14.9)
3-5 years	68 (13.0)	9 (10.3)
5-15 years	142 (27.0)	25 (28.7)
>15 years	133 (25.3)	22 (25.3)
Passed time since job loss (*M (SD)*)	21.6 (21.1)	21.1 (19.1)
Loss circumstances *(M (SD))*		
Perceived suddenness and no suitable farewell	10.3 (3.7)	11.1 (3.8)
Perceived injustice	6.0 (1.8)	6.4 (1.8)
Coping		
Maladaptive coping (*M (SD)*)	10.6 (3.5)	14.6 (3.4)
Adaptive coping *(M (SD))*	23.1 (4.5)	20.6 (3.8)
Social coping (M (SD))	14.5 (3.6)	14.5 (3.3)
Symptom-levels		
Grief (*M (SD)*)	12.9 (9.4)	27.2 (5.5)
Depression (*M (SD)*)	6.0 (5.2)	13.8 (3.7)
Anxiety (*M (SD)*)	3.3 (3.9)	9.1 (4.5)

Note. Grief = job loss-related grief; dep = depression; anx = anxiety. * *p* < .01. ** *p* < .001.

	Class 2: grief (n = 134)	Class 3: depressed (n = 67)	Class 4: resilient (n = 237)	Significance test for differences between groups
				x^2 (3, N=525) = 2.71
	51 (38.1)	31 (46.32)	99 (46.9)	
	83 (61.9)	36 (53.7)	138 (43.9)	
	50.7 (8.4)	49.6 (7.0)	51.4 (9.7)	F(3,501) = 1.95
				x^2 (6, N=525) = 7.80
	10 (7.5)	8 (11.9)	25 (10.5)	
	44 (32.8)	22 (32.8)	76 (32.1)	
	80 (59.7)	37 (55.2)	136 (57.4)	
				x^2 (9, N=507) = 13.80
	44 (33.6)	18 (28.6)	62 (27.3)	
	47 (35.9)	27 (42.9)	93 (41.0)	
	22 (16.8)	12 (19.0)	49 (21.6)	
	18 (13.7)	6 (9.5)	23 (10.1)	
				x^2 (12, N=525) = 17.85
	14 (10.4)	12 (17.9)	21 (8.9)	
	24 (17.9)	15 (22.4)	65 (27.4)	
	19 (14.2)	7 (10.4)	33 (13.9)	
	41 (30.6)	17 (25.4)	59 (24.9)	
	36 (26.9)	16 (23.9)	59 (24.9)	
	19.4 (18.4)	25.0 (27.6)	22.0 (21.2)	F(3,516) = 1.12
	11.0 (3.8)	10.5 (3.4)	9.6 (3.6)	F(3,504) = 5.18**
	6.6 (1.6)	6.0 (1.9)	5.6 (1.8)	F(3,502) = 12.16***
	11.2 (2.7)	11.2 (2.7)	8.6 (2.5)	F(3,498) = 104.94**
	23.0 (3.9)	22.3 (4.6)	24.4 (4.6)	F(3,499) = 17.31**
	15.3 (3.5)	13.3 (3.8)	14.5 (3.7)	F(3,498) = 4.10*
	17.3 (4.8)	13.2 (5.3)	5.0 (3.6)	F(3,521) = 574.31**
	4.7 (2.5)	10.9 (3.3)	2.5 (2.4)	F(3,521) = 423.75**
	2.5 (2.1)	5.0 (3.5)	1.2 (1.8)	F(3,521) = 186.11**

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Job Loss Circumstances Scale (JLCS)

A six-item questionnaire was designed for the current research to tap specific information about circumstances of the job loss, including its perceived suddenness, injustice, and lack of control over the dismissal. These items are based on the notion that a stressful life event can shatter beliefs that the world is fair and predictable (Janoff-Bulman, 1999) and prior evidence that inadequate notice of dismissal is associated with job loss-related grief (Brewington et al., 2004). The JLCS measures three different aspects, each measured with two items. "Suddenness" was assessed with items (2) "Before my dismissal there were signs of my approaching dismissal (e.g., my workload was cut down, advice was given to go look for another job)", and (3) "My dismissal came totally unexpected to me" (reversed). The "unfairness" of the dismissal was measured with items (4) "My consent to my dismissal felt voluntary" and (5) "My dismissal feels unfair" (reversed). "Lack of control" was measured with items (1) "My employer has spoken to me about my approaching dismissal" and (6) "I said goodbye in a way that felt appropriate to me". Participants rated the extent to which they agreed with each statement (1 = *totally agree* to 4 = *totally disagree*).

Exploratory factor analysis revealed that two factors had an eigenvalue that exceeded 1.00 (2.67 and 1.08, respectively). The first factor explained 44.4% and the second factor 17.9% of the variance in the six items. Four items loaded strongly on the first factor: item 1 (.85), item 2 (.84), item 3 (.78), and item 6 (.51). Below this factor is referred to as "perceived suddenness and no suitable farewell" (Cronbach's α of these items was .75). Two items loaded strongly on the second factor: item 4 (.80) and item 5 (.81). This factor is referred to as "perceived injustice". If a scale consists of two items, the alpha coefficient underestimates the true reliability of the scale, so the Pearson correlation coefficient is recommended instead (Eisinga et al., 2013). The Pearson correlation coefficient for these two items was .36 (a *medium* effect, cf. Cohen, 1988)[2].

Brief COPE

Coping behaviour was measured with Carver's (1997) Brief COPE. Participants rated the extent to which they agreed with the scale's twenty-eight statements (1 = *never or rarely* to 4 = *very frequently*). Since we were mainly interested in maladaptive, adaptive, and social coping, we followed an earlier study from this project (Van Eersel et al., 2020a) to construct these three factors from the subscales of the Brief COPE. As an index of maladaptive coping, we summed the scores of the Brief COPE subscales: denial, behavioural disengagement, and self-blame. As an index of adaptive coping, we summed the scores of the subscales: active coping, acceptance, positive reframing, and planning. Finally, as an index of social coping we summed the scores of the subscales: emotional support, instrumental support, and venting of emotions. In the present sample Cronbach's α for maladaptive coping was .75, for adaptive coping .83, and for social coping .80.

Statistical Analyses

LCA was conducted using Mplus version 8.1 (Muthén & Muthén, 1998-2017). To reduce the complexity of the analyses and in keeping with common practice, LCA was performed using dichotomised indicators of job loss-related grief, depression, and anxiety (Clogg & Goodman, 1985). For job loss-related grief, items scored as 0 = *never* or 1 = *rarely* were coded as "reaction is (largely) absent", and items scored as 2 = *sometimes*, 3 = *often*, or 4 = *always* as "reaction is (largely) present". For depression and anxiety, items scored as 0 = *did not apply to me at all* or 1 = *applied to me to some degree,* were coded as "reaction is (largely) absent", and items scored as 2 = *applied to me to a considerable degree* or 3 = *applied to me very much*, as "reaction is (largely) present".

The following indices were examined to determine the optimal number of classes: the log likelihood, the Akaike information criterion (AIC), the Bayesian information criterion (BIC), the sample size-adjusted Bayesian information criterion (SS-BIC), the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR), the Bootstrap likelihood ratio test (BLRt), and the entropy. Lower log likelihood, AIC, BIC, and SS-BIC values indicate better fit (Nylund et al., 2007); higher entropy values indicate fewer classification errors and lower bias in the determination of class membership (Van de Schoot et al., 2017). A p-value below .05 for the BLRt and the VLMR indicates a significant improvement of the fit of the model under consideration, compared to the model with one class less (Nylund et al., 2007). Nylund and colleagues (2007) recommend to rely not solely on statistical indicators for the selection of the optimal class solution; rather, the interpretability of classes, the size of classes (to avoid too few observations within a cell), and consistency with prior research also should be taken into account.

Chi-square tests and analyses of variance (ANOVAs) were conducted in SPSS version 26 to examine whether membership of a particular class was associated with socio-demographics, loss-related characteristics (e.g., age, educational level, time passed since loss, job loss circumstances) and coping. For the measure of income reduction and for the six items of the JLCS, data were missing for 18 participants (3%). There were no data missing for job loss-related grief, depression, and anxiety. To handle missing data, cases were removed pairwise for optimal use of all available data. First, for each variable, we examined whether it was associated with class membership. Next, predictors that were significant in these univariate analyses were included in a multinomial logistic regression analyses to examine which of these variables distinguished best between classes, controlling for the shared variance of these variables. The data set is freely retrievable (Van Eersel et al., 2021).

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RESULTS

Latent Class Analyses

Table 2 presents the fit indices of the solutions with one to seven classes. The log likelihood test, AIC, and SS-BIC presented results which are closely related for the 5-class solution, the 6-class solution, and the 7-class solution. The value of the BIC was practically the same for the 4-class solution, the 5-class solution, and the 6-class solution, although the BIC was the lowest for the 5-class solution. In conjunction, these results suggest that overall the 5-class solution had the best fit to the data. However, the VLMR test showed the 2-class solution to have a significantly better fit to the data than the 1-class solution, and the 4-class solution yielded a significant better fit than the 3-class solution. According to this measure, solutions with more than four classes did not improve significantly on the 4-class solution. Finally, the 5-class solution could not be interpreted meaningfully; for instance, there were two classes with almost identical grief symptoms and low scores on depression and anxiety. Therefore, the 4-class model was selected as the optimal solution. Figure 1 (and the supplementary table) present the symptom prevalence in the four classes; values > .50 were considered as indicating a high probability of item endorsement.

Table 2

Fit indices for best fit model latent class analyses

Model tested	Log likelihood	AIC	BIC	SS-BIC	Entropy	VLMR p	BLRt p
1 class	-6617.18	13282.35	13384.67	13308.49			
2 classes	-5147.70	10393.39	10602.30	10446.76	0.94	< .001	< .001
3 classes	-4823.78	9795.56	10111.05	9876.16	0.90	.08	< .001
4 classes	-4658.52	9515.05	9937.12	9622.87	0.92	< .05	< .001
5 classes	-4562.98	9373.97	9902.63	9509.02	0.89	.64	< .001
6 classes	-4499.42	9296.84	9932.08	9459.12	0.89	.21	< .001
7 classes	-4464.93	9277.85	10019.68	9467.36	0.90	.52	< .001

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; SS-BIC = sample size adjusted Bayesian information criterion (SS-BIC); VLMR = Vuong-Lo-Mendell-Rubin; BLRt = Bootstrap likelihood ratio test.

The interpretation of the four classes of this solution was fairly straightforward. The first class (16.6%) was characterised by relatively low probabilities for six anxiety symptoms and high probabilities for all job loss-related grief reactions, all depression symptoms, and one anxiety symptom ("feeling scared"), and was therefore labelled as the "mixed class". The second class (25.5%) evidenced comparatively low probabilities

for all depression symptoms, all anxiety symptoms, and three job loss-related grief reactions ("feeling numb", "partly vanished", and "shattered view of the world"), as well as relatively high probabilities of seven job loss-related grief reactions. It was therefore labelled as the "grieving class". The third class (12.8%) was characterised by relatively low probabilities of all anxiety symptoms, three depression symptoms, and most job loss-related grief reactions, and high endorsement of four depression symptoms ("could not seem to get going", "nothing to look forward to", "down-hearted and blue", and "worthlessness") and two job loss-related grief reactions ("personal disaster" and "feeling on edge or jumpy"). Consequently, it was named the "depressed class". Finally, the fourth class (45.1%) was characterised by low probabilities of endorsement of all items and was labelled "resilient class". Note that the scores of the members of these four classes were compared between classes, rather than with an external criterion. For instance, the "depressed class" was given this label because individuals in this class reported relatively high levels of depressive symptoms as compared to the other three classes. However, this does *not* imply that the members of this class are clinically depressed, but only that their scores on this set of symptoms were *comparatively* high vis-à-vis those of the other three classes. Similar reservations apply to the labels of the other three classes. Figure 1 (and the supplementary table) present the probabilities of endorsement of the symptoms for all four classes.

Predictors of Class Membership: Univariate Analyses
Information on socio-demographical variables, loss-related variables, and indices of the coping strategies of all classes is presented in Table 1. The means of the socio-demographic and work variables did not differ significantly across classes, except for circumstances of the job loss. These differed across all classes on both aspects assessed by the Job Loss Circumstances Scale: the degree to which the job loss was experienced as "unexpected without a suitable goodbye" and as "unfair". Post-hoc analyses showed that members of the mixed and the grieving classes had higher scores on the index for "unexpected without a suitable goodbye" from the Job Loss Circumstances Scale, compared to the resilient class. Post-hoc analyses indicated that participants in both the mixed and grieving class considered their job loss significantly more often as unfair, compared to the resilient class.

Maladaptive coping differed between groups (Table 1); post-hoc analyses revealed significant differences between almost all classes, except between the grieving and depressed class. Further, all classes differed on adaptive coping; post-hoc analyses showed that the resilient class scored significantly higher than all other classes, with the grieving class scoring significantly higher than the mixed class. Further, social coping also differed between classes; post-hoc analyses revealed that the grieving

class employed significantly more social coping strategies than the depressed class. With respect to differences in overall job loss-related grief reactions (i.e., the summed JLGS scores), post-hoc analyses indicated significant differences among all four classes, with the mixed class having the highest JLGS total score, followed by the grieving class, then followed by the depressed class, and with the lowest JLGS score reported by the resilient class. Similar findings emerged when looking at the summed depression items of the DASS-21, where the mixed class had the highest score followed by the depressed class, the grieving class, and the resilient class. Finally, for the total scores on the anxiety items of the DASS-21, all classes differed significantly as well. Again, Table 1 shows that the mixed class represented the highest score with the depressed class as runner-up, followed by the grieving class, and the resilient class again had the lowest score.

Predictors of Class Membership: Multinomial Logistic Regression Analysis

A multinomial logistic regression analysis was conducted to examine which of the variables that were significantly associated with class membership in the univariate analyses, were still associated with class membership after controlling for the shared variance between variables. Total scores for job loss-related grief, depression, and anxiety were not included in these analyses. Table 3 summarises the outcomes of this analysis. Class membership was differentiated by job loss circumstances; participants who experienced their dismissal as unjustified were more likely to be assigned to the grieving class than to the resilient or depressed classes.

Class membership also differed as a function of coping (Table 3). The use of maladaptive coping strategies was more strongly endorsed in the mixed, the grieving, and the depressed classes compared to the resilient class; the mixed class showed the highest effect (exp (B) = 1.97) compared to the resilient class. In comparison to the depressed and grieving classes, the mixed class showed a significant higher endorsement of maladaptive coping.

The use of adaptive coping was more strongly endorsed by participants included in the resilient class, compared to the mixed, the grieving, and the depressed classes. The strongest significant effect was found for the mixed class as compared to the grieving class (exp (B) = 0.92), with the mixed class making less use of adaptive coping strategies. A similar result was found in comparison to the depressed class, with the mixed class having a lower endorsement of adaptive coping relative to the depressed class. Finally, social coping was more strongly employed by the grieving class compared to the depressed and the resilient classes. Compared to the mixed class, the depressed class showed the strongest effect (exp (B) = 1.18) and a lower endorsement of social coping.

Figure 1 *Probability estimates of item endorsement for all participants and for the four-class solution*
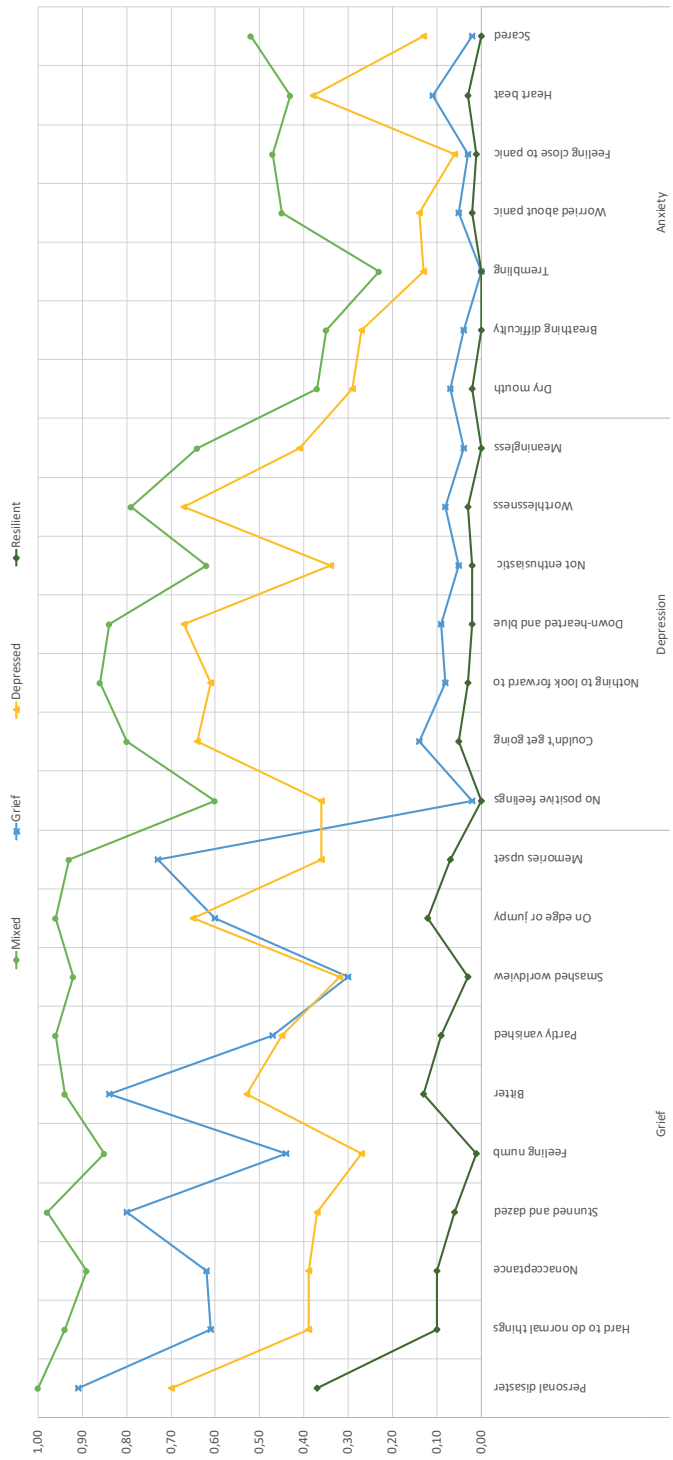
Note. The associated Table can be found as supplementary file.

Table 3

Multinomial logistic regression predicting class membership

Variables	B	SE (B)	Exp (B)	95% confidence interval		p
Class 1 (mixed) vs Class 4 (resilient)						
Perceived suddenness and no suitable farewell	-.034	.050	0.967	0.876	1.067	.501
Perceived injustice	.187	.104	1.205	0.983	1.479	.073
Maladaptive coping	.678	.065	1.970	1.733	2.239	**.000**
Adaptive coping	-.176	.043	0.838	0.771	0.912	**.000**
Social coping	.049	.052	1.050	0.948	1.162	.349
Class 2 (grief) vs Class 4 (resilient)						
Perceived suddenness and no suitable farewell	.005	.037	1.005	0.935	1.081	.893
Perceived injustice	.332	.082	1.394	1.186	1.638	**.000**
Maladaptive coping	.332	.050	1.394	1.264	1.537	**.000**
Adaptive coping	-.093	.032	0.911	0.855	0.971	**.004**
Social coping	.092	.038	1.096	1.017	1.182	**.017**
Class 3 (depressed) vs Class 4 (resilient)						
Perceived suddenness and no suitable farewell	-.007	.047	0.993	0.905	1.090	.887
Perceived injustice	.087	.096	1.091	0.904	1.317	.363
Maladaptive coping	.368	.059	1.444	1.288	1.620	**.000**
Adaptive coping	-.070	.038	0.932	0.865	1.005	.068
Social coping	-.070	.049	0.933	0.847	1.027	.156
Class 1 (mixed) vs Class 3 (depressed)						
Perceived suddenness and no suitable farewell	-.027	.055	0.973	0.873	1.085	.626
Perceived injustice	.100	.113	1.105	0.885	1.379	.379
Maladaptive coping	.310	.063	1.364	1.204	1.544	**.000**
Adaptive coping	-.106	.046	0.899	0.822	0.984	**.021**
Social coping	.118	.058	1.125	1.005	1.260	**.041**
Class 2 (grief) vs Class 3 (depressed)						
Perceived suddenness and no suitable farewell	.012	.048	1.012	0.920	1.112	.808
Perceived injustice	.245	.103	1.278	1.044	1.564	**.018**
Maladaptive coping	-.036	.055	0.965	0.866	1.075	.515
Adaptive coping	-.023	.040	0.977	0.904	1.056	.561
Social coping	.161	.051	1.175	1.064	1.298	**.001**

Table 3

Multinomial logistic regression predicting class membership

Variables	B	SE (B)	Exp (B)	95% confidence interval		*p*
Class 1 (mixed) vs Class 2 (grief)						
Perceived suddenness and no suitable farewell	-.039	.047	0.962	0.878	1.055	.408
Perceived injustice	-.145	.103	0.865	0.707	1.057	.157
Maladaptive coping	.346	.056	1.413	1.267	1.576	**.000**
Adaptive coping	-.083	.040	0.920	0.851	0.995	**.036**
Social coping	-.043	.049	0.958	0.870	1.054	.374

Note. Values in bold indicate a significant difference between the compared classes.

DISCUSSION

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The aim of this study was to use LCA to examine whether subgroups could be identified among people who involuntarily lost their jobs, based on different patterns of endorsement of reactions of grief, depression, and anxiety. The first main result was that four classes were identified: (I) a mixed class characterised by endorsement of most of the items representing grief, depression, and anxiety reactions, (II) a grieving class, (III) a predominantly depressed class, and (IV) a resilient class. These findings indicate that people confronted with involuntary job loss can be distinguished in terms of the dominance of particular emotional reactions, rather than by a graded severity of a general post-loss response. This accords with the notion that these reactions represent multiple dimensions rather than one single dimension of job loss-related distress. The emergence of a class characterised by elevated grief (but not depression and anxiety) aligns with earlier findings that job loss-related grief reactions can be distinguished from depression and anxiety symptoms after involuntary job loss (Papa & Maitoza, 2013; Van Eersel et al., 2019).

We did not find a class that mainly displayed anxiety symptoms. According to Osman and colleagues (2012) the items of the DASS-21 have stronger associations with the general distress dimension than with the domain-specific dimensions: depression, anxiety, and stress. This implies a possible lack of sensitivity of the DASS-21 when it comes to distinguishing between depression and anxiety symptoms. The anxiety items of the DASS-21 mainly represent symptoms of physiological hyperarousal, such as "I experienced trembling" and "I experienced breathing difficulty". It might be possible that such physical symptoms are more commonly observed following bereavement loss or psycho-trauma than after job loss.

A second main finding was that a distinct class could be identified that was characterised by the presence of job loss-related grief reactions, but not by elevated reactions of depression and anxiety. This indicates that job loss-related grief is distinct from depressive and anxiety symptoms following job loss which accords with earlier variable-centred research (Papa & Maitoza, 2013; Van Eersel et al., 2019). However, the first item of the job loss grief scale ("The loss of my job feels like a personal disaster") was found to be endorsed across all classes and, as such, does not appear to make a relevant distinction among the classes. Two items ("I feel bitter about the loss of my job" and "I have felt on edge, jumpy or easily startled since the loss of my job") appeared to be strongly associated to depression and did not clearly distinguish between the depressed and grieving classes. Items that were related to grief and that were distinctive for depression and anxiety symptoms are: "I think about my job so much that it is hard for me to do the things I normally do", "I can't accept the loss of my job", and "I feel stunned and dazed over the loss of my job". These symptoms are characteristic of elevated job loss-related grief among those exposed to job loss.

A third main finding was that the resilient class comprised approximately half of the sample (45%). From prior research on bereavement loss, it is known that the majority of people confronted with loss shows no or very few symptoms of distress (Bonanno et al., 2008). The size of the resilient class in the present study suggests that the same applies to job loss. This is in line with prior research (Galatzer-Levy et al., 2010) in which the majority of the people showed a resilient response after job loss, while a minority developed long-term increased levels of emotional distress (e.g., depression or anxiety symptoms).

A fourth main finding was that class membership was unrelated to most of the socio-demographic variables and work characteristics, including the time passed since dismissal. However, other variables, including aspects of an individual's experience of his/her dismissal were associated with class membership. If the dismissal was considered as unfair, sudden, involuntary, and when there was no opportunity for an appropriate goodbye to the former job, there was lower probability of being assigned to the resilient class. Note that due to the cross-sectional design of this study no conclusions can be drawn concerning the causal direction of the association between job loss circumstances and class membership. Multinomial regression analyses revealed that, in comparison to the resilient and the depressed class, endorsement of experiencing the dismissal as unfair increased the chance of being assigned to the grieving class. This accords with prior findings that an inadequate notice of dismissal (Brewington et al., 2004) and believing that the world is unfair (Papa & Maitoza, 2013) can be a risk factor for the development of grief reactions following job loss. The feeling

of unfairness might also be fuelled by the loss event itself. This event can shatter an individual's basic beliefs about the world, others, and the self, which can subsequently change one's sense of justice and fairness in general (Janoff-Bulman, 1999; Park, 2010). It would be interesting to further explore the linkage between the perceived degree of unfairness of dismissal and the intensity of emotional distress following job loss over time in longitudinal research, to examine the temporal relationship between job loss circumstances and class membership.

A final main finding was that endorsement of maladaptive coping strategies was highest in the mixed class and lowest in the resilient class, whereas endorsement of adaptive coping strategies was highest in the resilient class and lowest in mixed class. These findings agree with prior research findings showing that maladaptive coping strategies were associated with elevated job loss-related grief reactions (Papa & Maitoza, 2013; Van Eersel et al., 2020a). However, social coping strategies were endorsed strongest in the grieving class and the least in the depressed class. Considering results from bereavement research (Burke et al., 2010), this could imply that people who mainly experience grief symptoms might have the tendency to reach out to others, where are as people who mainly experience depressive symptoms tend to withdraw from others.

A tendency towards maladaptive coping strategies, and relatively higher levels of job loss-related grief, depression, and anxiety might be provoked through a lack of available resources to deal with the changed reality. According to the conservation of resources theory, emotional distress tends to increase when valuable resources are threatened, like in the case of job loss (Hobfoll, 1989). Weak resources (e.g., in terms of money, self-esteem, or social network) make it more difficult to handle stressful events, which can lead to a vicious cycle of further depletion of resources and more stress. In an attempt to maintain resources and minimise the net loss, individuals tend to employ (and possibly drain) other resources to help them in the short run and, as a result, make themselves more vulnerable in the long run (Hobfoll et al., 2016). In future research, it would be interesting to examine the direction of the relationship between maladaptive coping, job loss-related grief, depression, anxiety within the theoretical framework of the conservation of resources theory.

Limitations

The main limitations of this study are the following. First, although we can measure job loss-related grief reactions, much remains unknown about this phenomenon. There are commonalities between grief reactions following bereavement, job loss, divorce (Papa et al., 2014), romantic break-ups (Boelen & Reijntjes, 2009), and natural disaster (Shear et al., 2011). It is also known (and in line with the current study) that job-loss related grief

reactions can be distinguished from depression and anxiety symptoms after dismissal (Papa & Maitoza, 2013; Van Eersel et al., 2019). However, more longitudinal research combined with clinical interviews is necessary to fully comprehend this phenomenon and to provide a solid time-frame during which these job loss-related grief reactions may reflect a "normal" adjustment process and when such reactions become signs of disturbed adjustment. In spite of this limitation, the present study contributes to our limited knowledge about job loss-related grief reactions and on the impact that involuntary job loss can have on an individual's well-being and mental health.

Second, we have only examined a limited number of possible predictors of class membership: general sociodemographic variables, work characteristics and coping strategies. It would be interesting to further explore other possible predictors, like negative cognitions about the loss event, the self, others, the future and the world. Since these types of cognitions (negative a priori beliefs or negative beliefs activated by the job loss) could be related to the intensity someone experiences grief reactions, depression, and anxiety following involuntary job loss (Papa & Lancaster, 2016). The JLCS has not been validated in independent studies, hence the outcomes based on this scale should be considered with caution.

Finally, this study was conducted in the Netherlands, where unemployment benefits are relatively well arranged. Some studies indicate that there is no significant relation between income reduction and job loss-related grief reactions (Papa & Maitoza, 2013; Van Eersel et al., 2020a). However, other studies have shown that higher unemployment benefits were related to higher mental health due to lower financial strain and lower time pressure (Wanberg et al., 2020). It is conceivable that the limited income reduction in the present sample did not lead to a substantial increase of financial strain due to specific contextual factors (e.g., the level of unemployment benefits, the presence of savings or a partner earning a good income); that might have influenced our results for the relation between income reduction and class membership. Future research may include specific contextual factors (e.g., financial strain, unemployment benefits, and breadwinnership) to gain more insight into the associations of these factors with reactions of job loss-related grief, depression, and anxiety.

Implications

The results of this study suggest that both the extent to which individuals experience their dismissal as unfair, and higher use of maladaptive coping strategies are associated with more intense reactions of job loss-related grief, depression, and anxiety or combination of these reactions. This is in line with the research of Ricketson and colleagues (2020); in their sample a third of the people who were laid off experienced their job loss as a

negative event and described the process of dismissal as humiliating and insulting. For example, one of their participants stated not getting a farewell from the management, and although time passed by, he/she was still consumed with anger about the way it all went down.

There are often legal and regulatory issues influencing how and when employees are notified about possible redundancy and dismissal. Additionally, there is the need to control access to company resources such as computer databases, and the need to balance sharing information with keeping workers productive. Taking this into account, employers can use this knowledge to their advantage when giving notice, to reduce the level of emotional stress before, during and after the job loss. They could consider involving people more during the termination process, as far as possible within the given context of protecting company resources. Openness in communication, consistent feedback, and being respectful to each other could decrease the degree to which a person experiences the job loss as sudden or unfair. Employers might consider discussing with the person to think about an appropriate way to say goodbye to the company, their colleagues, and customers and, in doing so, provide the opportunity to the person to regain some sense of control. They could also hold an exit interview for remaining questions, closure, appreciation, and achievements.

Screening for reactions of grief, depression, and anxiety after dismissal can yield a better picture of the mental health issues experienced by this group and provides the opportunity for timely and targeted interventions. For instance, depressive symptoms require a different approach to increase positive affect (e.g., scheduling enjoyable activities, cognitive restructuring of negative views of the self and life) than job loss-related grief symptoms (e.g., enhance emotion-affect regulation, cognitive restructuring misinterpretations of the job loss). Alleviating these reactions seems necessary to increase the mental health of individuals confronted with involuntary job loss and their chance of sustainable re-employment.

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ENDNOTE

1. In other studies, 'job loss-related grief reactions' were called 'job loss-related complicated grief symptoms' to described the same phenomenon (Papa & Lancaster, 2016; Papa & Maitoza, 2013; Papa et al., 2014; Van Eersel et al., 2019, 2020a, 2020b). In this study, the term 'job loss-related grief reactions' was used to clarify that we are *not* referring to disordered grief as currently defined in DSM-5 and ICD-11 and also to emphasise that we do *not* argue that 'job loss-related grief reactions' or 'job loss-related complicated grief symptoms' should be included as a novel disorder in the existing classification systems.
2. The two JLCS scales (perceived suddenness/no suitable farewell and perceived injustice, respectively) were significantly related to job loss-related grief symptoms (r = .21 and .27), the brief cope subscale 'denial' (r = .31 and .28), and the brief cope subscale 'acceptance' (r = .15 and .15), attesting to the concurrent validity of the JLCS.

Author Contributions

Janske H. W. van Eersel, Toon W. Taris and Paul A. Boelen (Study design; Writing-review & editing); Janske H. W. Eersel (Data collection; Writing-original draft). Janske H. W. van Eersel and Paul A. Boelen (Analysis). Paul A. Boelen and Toon W. Taris (Supervision).

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Supplementary Table associated with Figure 1

Probability estimates of item endorsement for all participants and for the four-class solution

Items	Overall symptom frequency		Class 1: despondent (*n* = 87)	
	N	%	Probability	SE
Grief				
Personal disaster	345	65.7	**1.00**	**0.00**
Hard to do normal things	213	40.6	**0.94**	**0.04**
Nonacceptance	209	39.8	**0.89**	**0.04**
Stunned and dazed	231	44.0	**0.98**	**0.02**
Feeling numb	153	29.1	**0.85**	**0.04**
Bitter	260	49.5	**0.94**	**0.03**
Partly vanished	197	37.5	**0.96**	**0.03**
Smashed view of the world	148	28.2	**0.92**	**0.04**
Feeling on edge or jumpy	235	44.8	**0.96**	**0.03**
Memories upset	219	41.7	**0.93**	**0.04**
Depression				
Absence of positive feelings	79	15.0	**0.60**	**0.08**
Couldn't seem to get going	144	27.4	**0.80**	**0.05**
Nothing to look forward to	135	25.7	**0.86**	**0.05**
Down-hearted and blue	136	25.9	**0.84**	**0.05**
Absence of enthusiasm	88	16.8	**0.62**	**0.07**
Worthlessness	132	25.1	**0.79**	**0.05**
Meaningless	88	16.8	**0.64**	**0.06**
Anxiety				
Dry mouth	66	12.6	0.37	0.07
Breathing difficulty	54	10.3	0.35	0.06
Trembling	30	5.7	0.23	0.06
Worried about panic	60	11.4	0.45	0.07
Feeling close to panic	51	9.7	0.47	0.08
Awareness of heart beat	83	15.8	0.43	0.06
Feeling scared	58	11.0	**0.52**	**0.08**

Note. Values in bold indicate that members of this class had a high probability of endorsing this symptom (>.50).

Class 2: grief (*n* = 134)		Class 3: depressed (*n* = 67)		Class 4: resilient (*n* = 237)	
Probability	*SE*	Probability	*SE*	Probability	*SE*
0.91	**0.03**	**0.70**	**0.07**	0.37	0.04
0.61	**0.06**	0.39	0.09	0.10	0.02
0.62	**0.05**	0.39	0.08	0.10	0.02
0.80	**0.06**	0.37	0.10	0.06	0.02
0.44	0.07	0.27	0.09	0.01	0.01
0.84	**0.04**	0.53	0.08	0.13	0.04
0.47	0.06	0.45	0.09	0.09	0.02
0.30	0.06	0.32	0.08	0.03	0.01
0.60	**0.06**	**0.65**	**0.07**	0.12	0.03
0.73	**0.06**	0.36	0.08	0.07	0.02
0.02	0.01	0.36	0.07	0.00	0.00
0.14	0.04	**0.64**	**0.07**	0.05	0.02
0.08	0.04	**0.61**	**0.07**	0.03	0.01
0.09	0.03	**0.67**	**0.07**	0.02	0.01
0.05	0.02	0.34	0.07	0.02	0.01
0.08	0.04	**0.67**	**0.07**	0.03	0.01
0.04	0.02	0.41	0.07	0.00	0.00
0.07	0.02	0.29	0.07	0.02	0.01
0.04	0.02	0.27	0.06	0.00	0.01
0.00	0.00	0.13	0.05	0.00	0.00
0.05	0.02	0.14	0.05	0.02	0.01
0.03	0.02	0.06	0.03	0.01	0.01
0.11	0.03	0.38	0.07	0.03	0.01
0.02	0.01	0.13	0.05	0.00	0.00

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CHAPTER 6

Negative cognitions and emotional distress following job loss: Development and validation of the Beliefs about Loss Of Work (BLOW) scale

ABSTRACT

Negative cognitions following job loss can contribute to emotional distress by motivating individuals to adopt coping styles that reduce stress in the short run, while obstructing adjustment in the long run. It is unclear which specific cognitions are related to symptoms of complicated grief, depression, and anxiety following job loss. To fill this gap, this study introduces the Beliefs about Loss Of Work (BLOW) scale and examines its psychometric properties. We recruited 222 Dutch workers who had lost their job, including 70 men and 152 women, with an average age of 52.5 years. Confirmatory factor analyses revealed that a second-order eight-factor model had the best fit to the data. The BLOW scale is a reliable instrument with a good convergent and divergent validity. This instrument may stimulate research on mechanisms involved in job loss-related distress and could inform the development of interventions to reduce this distress.

Keywords: cognitions; distress; grief; job loss; unemployment

INTRODUCTION

Although most people show a resilient response when confronted with job loss (approximately 82%, according Bonanno and colleagues, 2011), a minority develop symptoms of depression, anxiety, or job loss-related complicated grief (JLCG; Papa & Maitoza, 2013; Van Eersel et al., 2019). Employment is a key element of life involving psychological and social aspects that extend beyond basic needs and the manifest function of work, i.e., economic support (Jahoda, 1981). That is, involuntarily losing a job can cause disruption of identity, status, relationships, and social roles which can fuel emotional distress, such as JLCG symptoms (Papa & Lancaster, 2016). Detachment from the job that is lost requires revision and reconstruction of basic assumptions about the self, the world, life, others, and the future (Papa et al., 2014). The consequences of job loss and the degree to which losing one's job results in problems may depend on the degree to which people hold particular beliefs regarding this event, e.g., beliefs that the world is unfair (Dalbert, 2011), that others cannot be trusted (Lindström, 2009), and that oneself is worthless (Gowan, 2012). However, as yet, the role of these and other negative beliefs in recovery from job loss could not be investigated due to the lack of a measure tapping these beliefs. The present study fills this gap by introducing and evaluating a novel instrument to measure negative cognitions associated with job loss, which is based on the Grief Cognitions Questionnaire (GCQ), an instrument to measure negative cognitions related to bereavement (Boelen et al., 2003).

Beliefs about Job Loss

Different cognitions can contribute to emotional distress following job loss. For bereavement loss, Boelen and colleagues (2003) have developed the GCQ to measure negative cognitions within different categories. It is conceivable that there is overlap in the grieving process following bereavement loss and involuntarily job loss (Papa & Lancaster, 2016; Papa & Maitoza, 2013), which could be reflected in negative cognitions triggered by such losses. It is hypothesised that relevant categories in the context of job loss include negative beliefs about the "self", the "world", "life", the "future", "self-blame", "others", "appropriateness of grief reactions", and "threatening interpretation of grief reactions". The availability of an instrument measuring these cognitions in the face of job loss would enable researchers to investigate the role of negative cognitions in job loss-related distress, including symptoms of JLCG, depression, and anxiety. In addition, it would allow practitioners to identify specific job loss-related negative cognitions that should be targeted in cognitive behavioural treatment to reduce psychological problems and emotional distress following job loss.

How exactly might such negative beliefs fuel emotional distress after job loss? First, global negative assumptions concerning the "self", the "world", "life", and the "future" may contribute to emotional problems following loss events by generating separation distress and motivating individuals to engage in coping strategies that may reduce stress in the short run, but possibly obstruct adjustment in the long run (Boelen & Lensvelt-Mulders, 2005). These types of negative beliefs have often been associated with emotional problems following bereavement loss (e.g., Currier et al., 2009; Janoff-Bulman, 1999) and unemployment (Creed et al., 2009; Paul & Moser, 2009). Negative beliefs can emerge when the altered reality is discrepant with a priori beliefs and someone is unable to accommodate these beliefs, or when the changed reality confirms negative pre-existing beliefs (Park, 2010). There is some evidence that, following involuntary job loss, low self-esteem, global belief in an unjust world, and maladaptive coping styles are associated with JLCG symptoms (Papa & Maitoza, 2013; Van Eersel et al., 2021). The basic assumption that the world is unfair enhances the tendency to act disrespectful to other people and increases cynicism (Dalbert, 2002). Accordingly, a recent study found that the belief that the world is unfair predicted JLCG symptoms six months later (Van Eersel et al., 2020).

Second, self-blame is potentially important in recovery from job loss. In the case of bereavement loss, high levels of self-blame have been found to be associated with higher levels of grief and slower recovery (Stroebe et al., 2014). As for unemployment, people who tend to blame themselves for their unemployment reported lower well-being (Pultz et al., 2019). Individuals might blame themselves for having lost their job or being unable to prevent their job loss. It can make them feel like there is something wrong with them and may underscore their flaws (Sharone, 2013), consequently fuelling feelings of depression.

Third, negative cognitions about reactions from others might influence responses to bereavement loss (Stroebe et al., 2005) and unemployment (Ślebarska et al., 2009). For instance, in the case of job loss, such negative cognitions might block engagement in social activities that could foster recovery. This could fuel feelings of detachment and bitterness.

Fourth, misinterpretations of grief symptoms as signs of personal incompetence or impending insanity are likely important. In the case of bereavement, people may interpret their grief reactions (e.g., the feeling of going crazy or believing the loss is too painful to endure) as threatening (Boelen et al., 2010; Malkinson, 2001). In the case of the job loss, a person can interpret their responses as abnormal when experiencing grief reactions, especially if these reactions persist over a longer period of time (Archer & Rhodes, 1995).

The Present Study

The aim of the current study was to introduce and evaluate the psychometric properties of a novel instrument that measures negative cognitions associated with involuntary job loss. This new instrument, the Beliefs about Loss Of Work (BLOW) scale, is based on the 38-item GCQ, a well-established instrument with adequate psychometric properties designed to measure negative cognitions following bereavement on nine subdomains (Boelen et al., 2003; Doering et al., 2021). The original GCQ subscale "cherish grief" was not included in the BLOW, as its items were deemed irrelevant to job loss. Hence, the BLOW scale was construed as containing eight subscales, tapping into four domains of negative cognitions. First, *global negative beliefs about the self, the world, life, and the future,* which require accommodation due to the job loss event and can be related to strong feelings of sadness, depression, and anxiety. Second, *cognitions on self-blame* could be associated with an increase of rumination about what the person has done wrong, which is linked to feelings of depression and guilt. Third, *negative perceptions of others* as having failed to provide the right support, could be related to more grief symptoms and posttraumatic cognitions (e.g., one's general belief the world is completely dangerous and the self is totally incompetent; Foa et al., 1999) due to stronger emotional detachment and bitterness. Finally, *negative cognitions about one's own grief reactions* could block a healthy course of grief, which can be associated with feelings of depression, guilt, and shame.

The present study used data from over 200 people who had been confronted with the involuntary loss of their job in order to conduct an evaluation of psychometric properties of the BLOW scale. We first examined the factor structure of this novel instrument. Following prior findings on the GCQ (Boelen & Lensvelt-Mulders, 2005; Doering et al., 2021), it was expected that a second-order model with eight correlated factors would fit the data well (Hypothesis 1). Second, we examined its internal consistency, which was expected to be high since the BLOW scale was developed as an analogue of the GCQ (Hypothesis 2). Third, we examined the short-term temporal stability of the BLOW scale, expecting a high correlation between test and re-test results for the BLOW subscales (Hypothesis 3).

Fourth, we tested a number of hypotheses concerning the validity of the BLOW scale. With respect to concurrent validity, we expected higher scores on all BLOW subscales to be strongly associated with JLCG, since they both tap into negative aspects of grief following job loss (Hypothesis 4). Although symptoms of JLCG, depression, and anxiety are distinguishable, these symptoms are still moderately to strongly correlated (Van Eersel et al., 2019). Hence, we also expected the BLOW subscales to be positively associated with symptom levels of depression and anxiety

(Hypothesis 5). In addition, since the BLOW scale measures negative cognitions connected with an adverse event, we expected scores on the BLOW scale to be significantly correlated with an established measure also tapping into event-related negative cognitions, namely the Posttraumatic Cognition Inventory (Wells et al., 2019; Hypothesis 6). Positive cognitions (such as optimism, hope, and resilience) are viewed as potential buffers against the negative impact of loss (Gallagher et al., 2019) and unemployment (Wanberg, 2012). Optimism plays an important role in maintaining a positive perspective, resilience in overcoming adversities, and hope in pursuing multiple pathways to attain goals, which can be source of positive emotions (Avey et al., 2011). Accordingly, with respect to the divergent validity, we expected scores on the BLOW subscales that tap into negative cognitions to be inversely associated with these positive cognitions (Hypothesis 7).

METHOD

Procedure and Participants

This study was approved by the Ethical Review Board of the Faculty of Social and Behavioural Sciences of Utrecht University (FETC 19-108). Dutch individuals who had involuntarily lost their job were recruited between October 2019 up until February 2020 through three channels: (1) social media, (2) social networks, and (3) meetings about the impact of the job loss. Information about the study was provided through posts on social media channels (e.g., LinkedIn, Facebook), the researchers shared it within their social network, and participants of the job loss meetings were informed of the study afterwards. Those who were interested read the information letter before deciding on their participation. All participants of this convenience sample signed an informed consent form (N = 249) after which 89% completed the survey in a secured online area; the remaining 11% dropped out before finishing the first questionnaire. Filling out the questionnaires took approximately 15 minutes.

Participants who did not complete the survey up to and including the BLOW scale (N = 27) were excluded. The remaining group (N = 222) consisted of 70 men (32%) and 152 women (68%), with an average age of 52.5 years (SD = 9.0 years). Their level of education varied, with 69 people (31%) having completed primary or secondary education only, and 153 people (69%) holding a college or university degree. They had lost their job due to personal reasons (e.g., illness or a labour conflict; n = 83, 37%) or situational reasons (e.g., a reorganisation or bankruptcy; n = 139, 63%). The average duration of the participant's employment in their last job was 8.6 years (SD = 9.4), the time passed since the job loss was 18 months (SD = 23.9), and at the time

of taking the survey 142 people (64%) were actively searching for a new job. At the time of this study the unemployment rate was 3% in the Netherlands, of which 31% had been unemployed for more than twelve months (CBS, 2021).

Of all 222 participants, 50 were at randomly selected and asked to fill out the BLOW scale once more to evaluate its test-retest reliability. To limit response burden, not all participants were invited to complete the BLOW scale a second time. This group consisted of 40 women (80%). The average age was 54.2 (SD = 7.3) years and 32 people (64%) held a college or university degree. Half had lost their job due to personal reasons (n = 25) and half due to situational reasons (n = 25). The average employment duration in their last job was 10.0 (SD = 10.0) years; on average 17.5 (SD = 20.8) months had passed since they had lost their job, and at the moment of completing the survey 30 people (60%) were actively searching for a job. The test-retest interval ranged from 10 to 24 (M = 14.0, SD = 2.4) days.

Measures
Demographic and Work Characteristics
Data on demographic (e.g., age, gender, education) and work characteristics (e.g., reason for job loss, time passed since the job loss, and length of employment) were collected.

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Beliefs about Loss Of Work (BLOW) scale
The BLOW scale was based on the GCQ, that taps negative beliefs following bereavement loss (Boelen et al., 2003); the items of the GCQ were adapted to refer to job loss. For example, the item "Since __ is dead, I think I am worthless" became "Since I lost my job, I think I am worthless". In line with the GCQ, the BLOW contains eight subscales: self, world, life, future, self-blame, others, appropriateness, and threatening interpretation of grief reactions. To reduce response burden and improve the ease of use, the list was shortened. For that reason, two items were selected from each subscale, based on the highest item correlations found in prior research (Boelen & Lensvelt-Mulders, 2005). In addition to the researchers, three practitioners working in the field of grief and psychology reviewed these adaptations. Several minor changes in the item wordings were made until consensus was reached. The participants were asked to which extent they agreed with the selected sixteen cognitions on a 6-point scale (1 = *strongly disagree* to 6 = *strongly agree*). Table 1 presents all item wordings.

Table 1

Confirmatory Factor Analysis of Beliefs about Loss Of Work

Items

    Since I lost my job, I think I am worthless

    Ever since I lost my job, I think negatively of myself

    Since I lost my job, I realise that the world is a bad place

    The loss of my job made me realise that we live in awful place

    My life is useless since I lost my job

    My life is meaningless since I lost my job

    I don't have confidence in the future

    Since I lost my job, I have a negative view on the future

    I should have prevented the loss of my job

    If I would have done things differently, I wouldn't have lost my job

    The people around me should give me more support

    People around me should show much more interest in me

    My reactions to my job loss are abnormal

    I do not react normally to my job loss

    If I really allow my sorrow to come, I would go crazy

    If I let go of my emotions, I would lose control

Subscales

    Factor loadings

    M

    SD

Correlations between subscales

    World

    Life

    Future

    Self-Blame

    Others

    Appropriateness

    Threatening interpretation of grief

	Self	World	Life	Future	Self-Blame	Others	Appropriateness	Threatening interpretation of grief
	.83							
	.83							
		.90						
		.80						
			.88					
			.88					
				.72				
				.88				
					.85			
					.53			
						.87		
						.89		
							.85	
							.85	
								.87
								.83
	.88	.67	.88	.94	.46	.52	.66	.77
	6.1	5.2	4.8	6.0	6.0	6.3	4.7	6.2
	3.4	3.3	2.9	3.2	3.5	3.3	2.8	3.5
	.59							
	.77	.58						
	.83	.62	.82					
	.40	.31	.40	.43				
	.45	.34	.45	.48	.24			
	.59	.44	.58	.62	.30	.34		
	.68	.51	.68	.72	.35	.40	.51	

Job Loss Grief Scale (JLGS)

JLCG symptoms were measured with the 33-item JLGS (Van Eersel et al., 2019). Participants rated the extent to which they had experienced the listed symptoms (e.g., "I can't accept the loss of my job") during the last month, with their job loss in mind (1 = *never* to 5 = *always*). To avoid overlap with JLCG symptoms and negative cognitions related to the job loss, eight JLGS items (items 10, 14, 18, 21, 23, 25, 26, and 27 in Van Eersel et al., 2019) were removed from the analyses, considering that these items represent cognitions about job loss, which would inflate the association between the JLGS and the BLOW scale. Samples of these omitted items are: "Ever since the loss of my job, it's hard for me to trust people", and "I feel that the loss of my job has smashed my view of the world". The modified version (JLGS-m) contained 25 items. In the present sample Cronbach's α for the JLGS-m was .95.

Hospital Anxiety and Depression Scale (HADS)

Anxiety and depression symptoms were measured with the 14-item HADS (Zigmond & Snaith, 1983; Dutch version: Spinhoven et al., 1997); seven items tapped into anxiety and seven into depression. Participants rated the extent to which they had experienced symptoms, such as "I still enjoy the things I used to enjoy", during the last four weeks on a 4-point scale (e.g., *definitely as much* to *hardly at all*). In the present sample Cronbach's α for anxiety was .88 and for depression it was .88.

Posttraumatic Cognitions Inventory (PTCI-9)

The PTCI-9 is a 9-item measure of traumatic cognitions (Wells et al., 2019; Dutch version: Van Emmerik et al., 2006). Participants were instructed to focus on their job loss and rate the extent to which they agreed with the statements listed (e.g., "The event happened because of the way I acted") on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). In the present sample Cronbach's α was .83.

Life Orientation Test-Revised (LOT-R)

To measure optimistic cognitions the 6-item LOT-R (Scheier & Carver, 1985; Dutch version: Ten Klooster et al., 2010) was used. Participants rated the extent to which they agreed with each item (e.g., "In uncertain times, I usually expect the best") on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). In the present sample Cronbach's α was .79.

The Brief Resilience Scale

Resilience was measured with the Brief Resilience Scale (Smith et al., 2008; Dutch version: Soer et al., 2019). Participants rated the extent to which they agreed with its six statements (e.g., "I tend to bounce back quickly after hard times") on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). In the present sample, Cronbach's α was .82.

The State of Hope Scale

The State of Hope Scale is an 8-item measure of hope (Snyder et al., 1991; Dutch version: Brouwer et al., 2008). Participants rated the extent to which they agree with the statements (e.g., "I can think of many ways to get out of a jam") on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). In the present sample, the scale's Cronbach's α was .84.

Statistical Analyses

The analyses were conducted in Mplus (Version 8; Muthén & Muthén, 1998-2017). To investigate the dimensionality of the BLOW scale, confirmatory factor analysis (CFA) was performed to compare the fit of three models: a one-factor model (M_1), an eight-factor model (M_2) in which the eight factors (corresponding with the BLOW subscales: self, world, life, future, self-blame, others, appropriateness, and threatening interpretation of grief reactions) were allowed to correlate, and a second-order eight-factor model (M_3). To evaluate the goodness-of-fit the following indices were examined: the x^2-value, the x^2/df ratio, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA), Akaike's information criterion (AIC), and the Bayesian information criterion (BIC). Lower values of x^2 and x^2/df ratio (Hoelter, 1983), AIC, and BIC (Nylund et al., 2007) indicate better fit. For CFI and TLI values of > .90 and for RMSEA values of < .08 indicate acceptable fit (Hu & Bentler, 1999). Chi-square difference tests were conducted to compare the fit of these three models that we all tested.

The internal consistency of the BLOW and its subscales was evaluated using Cronbach's alpha. The temporal consistency of the BLOW scale was evaluated with Pearson correlations. A power analysis in GPower (version 3.1; Faul et al., 2009) was conducted, based on the average power of the GCQ scales (.90; Boelen & Lensvelt-Mulders, 2005), which showed that a minimum of 44 participants was required for a reliable test-retest analysis. To examine the convergent validity of the BLOW scale, Pearson correlations were calculated between the (subscales of the) BLOW and JLCG symptoms, depression, anxiety, and posttraumatic cognitions. To examine the divergent validity, Pearson correlations were computed between the (dimensions of the) BLOW scale and optimism, resilience, and hope. The data set is freely retrievable (Van Eersel et al., 2021a).

6

RESULTS

Beliefs about Loss of Work as a Function of Socio-demographics and Loss Characteristics
The scores on the overall BLOW and its subscales were examined as a function of socio-demographic variables (age, gender, and educational level) and work characteristics (cause of dismissal, duration of employment, time passed since job loss, and active job searching). Bonferroni adjustment was applied to control for Type-1 error; a significance level of .0008 (that is, .05/63) was required. None of the socio-demographic and work characteristics were significantly related to the BLOW or its subscales. For a complete overview, additional analyses were conducted to examine the relation between the socio-demographics and loss characteristics on the one hand and JLCG, depression, anxiety, or post-traumatic cognitions on the other hand, but these yielded no significant results.

Factor Structure
As expected, CFA showed that the one-factor model M_1 did not fit the data well (AIC = 12819.14; BIC = 12982.47; χ^2 = 740.66; df = 104; χ^2/df = 7.12; RMSEA = 0.17; CFI = 0.68; TLI = 0.63). The correlated eight-factor model M_2 showed substantially better fit to the data (AIC = 12321.62; BIC = 12580.22; χ^2 = 187.13; df = 76; χ^2/df = 2.46; RMSEA = 0.08; CFI = 0.94; TLI = 0.91; $\Delta\chi^2_{(M1 \text{ vs } M2)}$ with 28 df = 553.53, p < .001). The second-order factor model M_3 had the best fit to the data (AIC = 12314.67; BIC = 12505.22; χ^2 = 220.19; df = 96; χ^2/df = 2.29; RMSEA < 0.08; CFI = 0.94; TLI = 0.92; $\Delta\chi^2_{(M3 \text{ vs } M1)}$ with 20 df = 33.06, p < .05; $\Delta\chi^2_{(M3 \text{ vs } M2)}$ with 28 df = 520.47, p < .001). All factor loadings were statistically significant, ranging from 0.53 to 0.90, with an average loading of 0.83. This indicates the items are good indicators of the eight factors, supporting Hypothesis 1.

Reliability
Cronbach's alpha for the BLOW scale was .91 and for its subscales, the alphas were .82 (self), .84 (world), .87 (life), .78 (future), .63 (self-blame), .88 (others), .84 (appropriateness), and .84 (threatening interpretation of grief), supporting Hypothesis 2.

For the test-retest stability between time 1 and time 2 the correlation for the overall BLOW scale was .88 and for its subscales it was .78 (self), .85 (world), .85 (life), .81 future), .71 (self-blame), .75 (others), .77 (appropriateness), and .68 (threatening interpretation of grief), with all p's < .001, supporting Hypothesis 3.

Table 2

Correlations of Beliefs about Loss Of Work

Subscales	JLGS - Job Loss-related Complicated Grief (modified)	HADS - Depression	HADS - Anxiety	PTCI-9 – Post-traumatic cognitions	Lot - Optimism	State of Hope	Brief Resilience
Self	.63***	.61***	.60***	.56***	-.54***	-.51***	-.48***
World	.54***	.37***	.39***	.62***	-.44***	-.27**	-.27**
Life	.60***	.57***	.52***	.53***	-.36***	-.41***	-.38***
Future	.63***	.62***	.53***	.60***	-.50***	-.51***	-.44***
Self-Blame	.31***	.22**	.23**	.51***	-.44***	-.08	-.16*
Others	.34***	.41***	.26**	.39***	-.64***	-.28**	-.28**
Appropriateness	.54***	.49***	.48***	.48***	-.51***	-.40***	-.34***
Threatening interpretation of grief reactions	.71***	.63***	.67***	.48***	-.17**	-.45***	-.48***
Total	.76	.69	.65	.74	-.63	-.51	-.50

Note. * p <.05; ** p <.01; *** p <.001.

Convergent Validity

Table 2 presents the relevant correlations, confirming a significant relation between the BLOW scale and JLCG symptoms. The subscales "self", "life", "future", and "threatening interpretation of grief reactions" were strongly related, the subscales "world", and "appropriateness" showed a moderate correlation, and the subscales "others" and "self-blame" showed a small correlation with the JGLS-m. The correlation between the JLGS-m and the total BLOW was .76, and for the subscales r ranged from .31 to .71, supporting Hypothesis 4.

All BLOW subscales were significantly correlated with depression and anxiety symptoms. The correlation for the general BLOW score and depression was .69 and for anxiety .65. The r's for the subscales ranged from .22 to .67, confirming Hypothesis 5 (see Table 2). Depression was relatively strongly associated with the overall BLOW score and its subdimensions "self", "future", and "threatening interpretation of grief reactions". For anxiety the strongest correlations were found for the overall BLOW score and its subdimensions "threatening interpretation of grief reactions" and "self".

Finally, Table 2 shows that there was a significant, moderate-to-strong relation between the BLOW total score ($r = .74$) and all subscales on the one hand and post-traumatic cognitions on the other hand, with r's ranging from .39 to .62, supporting Hypothesis 6.

Divergent Validity

The BLOW and its subscales were negatively related to optimism ($r = -.63$), hope ($r = -.50$), and resilience ($r = -.51$), supporting Hypothesis 7 (cf. Table 2).

DISCUSSION

The current study offered a first evaluation of the psychometric properties of the BLOW scale – a novel questionnaire designed to tap into the negative cognitions that are hypothesised to play a role in the development and maintenance of post-loss psychopathological symptoms. The BLOW was designed to facilitate research on the impact of involuntary job loss, negative cognitions, and JLCG symptoms. Moreover, measuring such cognitions would enable practitioners to target specific individual negative cognitions following job loss which could trigger and maintain JLCG symptoms and other emotional problems.

In general, the results indicated that the total score of the BLOW scale may be used as index of job loss-related negative thinking, in addition to the scores on the BLOW subscales. The results also showed both the overall BLOW scale and its subscales had good psychometric properties, with high internal consistencies and good temporal stabilities. Finally, the current findings indicate it is possible to draw links between negative beliefs and elevated emotional reactions to job loss. This will be discussed for each subscale.

First, high scores on the subscale's *self, life,* and *future* seem to related to a diminished sense of self and confusion about one's role in life (Papa & Lancaster, 2016), which could lead to apathy and withdrawal, making it more difficult to move on and set new goals. Interventions could be targeting restoration of one's self-confidence, exploring social roles besides being an employee, rebuilding one's identity, re-engagement in meaningful activities, and setting concrete goals to reshape the future perspective.

Second, high scores on the *world* and *self-blame* subscales seem to be related to a low sense of control (Janoff-Bulman, 1999), feelings of bitterness, and cynicism about the world (Dalbert, 2011). Interventions could be aimed at regaining one's trust in the world, increase one's sense of control, and challenge irrational assumptions about one's own role in the job loss event.

Third, a high score on the subscale *others* could indicate a feeling of emotional detachment from others, social isolation, and stigmatizing from losing one's job loss (Blau et al., 2013; Peterie et al., 2019). Interventions could be aimed at reconnecting with others, setting realistic expectations of others, and exploring one's personal need in terms of social support.

Finally, high scores on the subscales *threatening* or *inappropriate grief reactions* seem to be associated with avoidance of own's thoughts and feelings (Archer & Rhodes, 1995). Therefore, basic psychological education on the function of emotions and thoughts combined, for instance, with defusion techniques from the Acceptance and Commitment Therapy, could be a useful intervention. Overall, these negative cognitions might hinder someone from adapting to one's new life, settings goals to build a future, and engaging in meaningful activities; therefore, it is necessary to be able to refine and develop specific interventions.

Study Limitations

Several study limitations need to be mentioned. First, the cross-sectional design does not allow conclusions about the direction of the relationship between negative cognitions following job loss and JLCG, depression, anxiety, and posttraumatic cognitions. However, the present study aimed to develop and validate a new instrument for measuring job loss-related beliefs; to establish convergent and divergent validity, the temporal direction of associations with other concepts is not of particular interest. Future longitudinal research is needed to examine the predictive value of the BLOW scale regarding the development or maintenance of JLCG, depression, and anxiety symptoms. Alternatively, follow-up research could focus on testing to which extent these negative cognitions are influenced by a cognitive bias modification training in order to test the presumed causal role of these cognitions in emotional distress following job loss (Lang et al., 2012; Woud et al., 2018).

Second, the items of the BLOW were based on the GCQ (Boelen et al., 2003) a measure of negative cognitions related to bereavement loss. The domains of cognitions assessed using the BLOW were limited to those included in the GCQ. It is possible that other, non-assessed cognitions also affect emotional responses to job loss. Future research is needed to examine the possible role of such cognitions.

Finally, the sample used in this study was a convenience sample. Compared to the general population in the Netherlands, especially the number of females and highly-educated people were overrepresented. Specifically, females made up two-thirds of the sample (compared to 47% of the number of unemployed in the Netherlands in June,

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2020), and 69% of the participants held a college or university degree (compared to 26% of the unemployed in the Netherlands, CBS, 2020). Albeit gender and educational level showed no significant relation with job loss-related negative cognitions, the present sample is a convenience sample, meaning that findings presented here may not immediately be generalised to all Dutch people who involuntary lost their job. This applies especially to descriptive statistics (e.g., means and standard deviations); hence, it is not yet possible to decide upon on a cut-off score indicating the severity of the negative cognitions someone experiences following job loss. Since this was the first study to examine the psychometric properties of the BLOW scale, replication studies in more nationally representative groups are a logical next step for future research.

Study Implications

Notwithstanding these limitations, the study results indicate that the BLOW scale is a promising instrument to measure negative cognitions that can be associated emotional distress and problems after job loss. Assuming that these negative cognitions play a role in the development and maintenance of emotional distress following job loss, the current findings have clinical implications. Global negative cognitions about the self, the future, the world, and the life, which could fuel the emotional distress, could be targeted with, e.g., interventions from the Acceptance and Commitment Therapy to increase one's psychological flexibility and reduce one's cognitive fusion with undesirable beliefs. Specifically, negative beliefs about the meaning of life and future were associated with JLCG and depressive symptoms. Hence, interventions to increase the level of valuable activities and set goals for the future could be effective. Finally, the misinterpretation of one's own grief response could block a natural course of grief. Confronting the person to face the changed reality and all consequences of the job loss, or Socratic questions to challenge and validate one's beliefs about the appropriateness of their grief reactions, could be particularly helpful to correct fearful interpretations. The effectiveness of these types of interventions on the negative cognitions following job loss is an important issue for future research.

It is conceivable that these types of dysfunctional cognitions form the basis of an individual's view of the world, the self, and others (Clifton, 2020). If a person believes the world is a dangerous place to live in and that one should always keep their guard up, there is an increased chance they also possess characteristics of neuroticism (Dweck, 2017). In this line of reasoning, it is possible that the negative cognitions from the BLOW and GCQ are not only related to job and bereavement loss, but similar cognitions could also be potential risk factors in the case of other types of losses, traumas, and negative events. It would be interesting to explore this in future research, for instance, by examining responses to job loss and to other events in a single sample to investigate if similar types of cognitions influence these responses.

CONCLUSION

The BLOW scale enables a reliable and valid measurement of negative cognitions following involuntary job loss. These negative cognitions can be linked to emotional distress and were associated with JLCG symptoms, depression, anxiety, and posttraumatic cognitions. The overall BLOW scale as well as its subscales may stimulate more profound research on the impact of job loss, especially the relationship between negative cognitions and similar constructs that could cause psychological problems following job loss. Practitioners could use the BLOW to refine and develop interventions to address these negative cognitions to reduce emotional distress and prevent related emotional problems from occurring.

Author Contributions
Janske H. W. van Eersel, Toon W. Taris and Paul A. Boelen (Study design; Writing-review & editing); Janske H. W. Eersel (Data collection; Analysis; Writing-original draft). Paul A. Boelen and Toon W. Taris (Supervision).

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CHAPTER 7

Symptoms of complicated grief and depression following job loss: Can engagement in non-work activities bring relief?

ABSTRACT

The present study aimed to examine whether day-level engagement in various non-work activities can mitigate the adverse outcomes of job loss. Based on Jahoda's latent deprivation model, we hypothesised that engagement in such activities (e.g., meeting others) can fulfil five basic needs (e.g., need for time structure) and that fulfilment of these needs mitigates the negative consequences of job loss. A daily diary study was conducted on five consecutive days among 236 participants who had involuntarily lost their job, yielding 1,046 daily measures of the time spent on activities, the evaluation of these activities, and emotional distress. Multilevel regression analyses showed that the time spent on daily activities was associated with the fulfilment of the basic needs and emotional distress, yet effect sizes were small. Perceived utility of the daily activities showed more solid effect sizes with the basic needs and emotional distress. Finally, the mediation effect of the basic needs between daily activities and emotional distress could not be confirmed. The present results suggest that, in addition to stimulating individuals who experience job loss-related emotional distress to undertake certain activities, the evaluation of these activities should also be taken into account in tailor-made early interventions and preventive measures.

INTRODUCTION

Most people do not experience long-term negative effects after experiencing involuntary job loss (Bonanno et al., 2011; Gowan, 2012). Still, in a significant minority of people, involuntary job loss can lead to high levels of psychological distress (McKee-Ryan et al., 2005), symptoms of grief (Climent-Rodríguez et al., 2019), depression (Stolove et al., 2017), anxiety (Howe et al., 2017), stigmatization, and social withdrawal (Brand, 2015). Growing evidence shows that people can also develop symptoms of complicated grief following involuntary job loss (Papa & Lancaster, 2016; Van Eersel et al., 2020). Drawing on Prigerson and colleagues' (2009) conceptualization of disordered grief after bereavement, job loss-related complicated grief (JLCG) symptoms encompass separation distress as well as problems accepting the changed reality, yearning for the lost job, identity confusion, difficulties finding meaning in life, bitterness and anger, and difficulties moving on, causing severe psychological distress and affecting daily functioning. Although JLCG symptoms are related to depressive and anxiety symptoms, factor and latent class analyses have shown they tap into different concepts (Papa & Maitoza, 2013; Van Eersel et al., 2019, 2021a).

Additional negative effects of job loss include lowered self-esteem, a shattered sense of purpose, social isolation, lack of time structure, and loss of a valued societal position (Brand, 2015; Jahoda, 1981; McKee-Ryan et al., 2005). Building on this work, the present study used a daily diary design to examine whether the adverse effects of involuntary job loss can be mitigated by involvement in non-work-related activities. We assumed that engaging in such activities can fulfil several basic needs – specifically, the needs for purpose in life, affiliation, social status, time structure, and enforced activity (cf. Jahoda, 1981) – and that fulfilment of these needs can counter the adverse effects of job loss (Figure 1). In examining engagement in non-work-related activities, we focused on both the time spent on these activities and the perceived utility of these activities. In this vein, we aimed to enhance our knowledge about the processes leading to JLCG and depressive symptoms in individuals who involuntarily lost their job. Doing so was deemed relevant, since mental health problems decrease the chances of finding re-employment (e.g., Janssens et al., 2020). Additionally, such knowledge could inform the development of interventions to prevent or reduce the negative impact of job loss.

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Figure 1

Schematic depiction for each activity category in relation to the basic needs, job loss-related CG symptoms, and depression
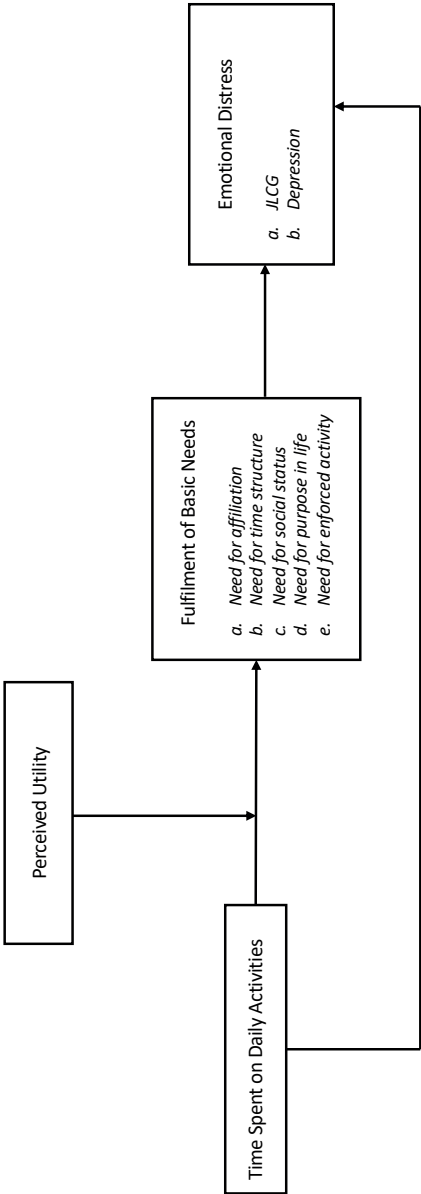
Note. JLCG = Job loss-related complicated grief symptoms. The activity categories, for which this model was tested separately, were: relaxing, social, physical, high-duty, meaningful, and job search activities.

Jahoda's Latent Deprivation Model

At the heart of the present study lies a set of assumptions that are based on Marie Jahoda's (1981) latent deprivation model (LDM). The LDM is a well-established theory that sets a useful framework to explain the negative effects of being without work. Its starting point is that engaging in employment activities can fulfil five basic personal psychological needs: the need for affiliation (Wiesenfeld et al., 2001), the need for time structure (Van Hoye & Lootens, 2013), the need for social status (Anderson et al., 2015), the need for (collective) purpose in life (Ryff & Singer, 2008), and the need for enforced activity (Sheldon et al., 1996). According to Jahoda (1984), non-work activities cannot fulfil these basic needs to the same level as paid work activities and, as a result, psychological well-being decreases when a person becomes unemployed. Indeed, Hoare and Machin (2010) found that previously unemployed people experienced higher levels of fulfilment in their need for affiliation and time structure when they were re-employed, compared to the time before they found a new job.

The LDM can be seen as a *mediation* model, since it proposes that engaging in employment-related activities can contribute to fulfilment of basic needs which, in turn, have a positive impact on mental health. Paul and colleagues (2009) tested this assumption, comparing employed people to people who were out of the labour force (e.g., students, housewives, and retirees), and unemployed people. Their results showed that the highest level of depressive symptoms was found in the unemployed group and the lowest level in the employed group. A lower level of fulfilment of the basic needs accounted for the higher level of depressive symptoms in the unemployed and out of the labour force groups, even when controlling for financial strain. Interestingly, this finding not only shows that the degree to which the basic needs can be fulfilled depends on one's status as either being employed, being unemployed or being retired; it also suggests that even within the unemployed group, there is meaningful variation in the degree to which the basic needs are met, which may depend on the degree to which one is involved in particular non-paid labour activities.

The Relation between the Latent Deprivation Model and Activities

Over the years, scholars have examined the association between well-being and involvement in various activities in the context of the LDM. For instance, Read and colleagues (2013) used a between-person design among retirees, and found that a higher level of fulfilment of the *need for purpose in life* mediated the association between engagement in meaningful leisure activities and a higher quality of life. Yang and Matz (2020) showed that, in addition to the need for purpose in life, experiencing more

fulfilment of the *need for social status* mediated the association between doing volunteer work and lower levels of depressive symptoms. Mullers and Waters (2012) found that lack of fulfilment of the *need for time structure* was associated with lower self-esteem and life satisfaction, whereas engagement in active leisure activities (e.g., sports) and doing household chores was associated with better psychological well-being.

Evidence also shows that the mental health of unemployed people is positively associated with the degree to which they have daily routines in their life, remain active, structure their time, and maintain social contacts (McKee-Ryan et al., 2005). A four-wave study by Selenko and colleagues (2011) among individuals holding different employment statuses (i.e., employed and unemployed people, and people out of the labour force) showed that less fulfilment of the basic needs of the LDM led to a decrease of psychological health over six months. Specifically, the positive relation between employment status and psychological health was mediated by the *needs for affiliation* and *time structure*, such that unemployed people who experienced less appreciation from others and a lack of time structure reported a decrease in their psychological well-being.

From the perspective of the LDM, it can be hypothesised that unfulfilled basic needs also play a role in the development and maintenance of JLCG symptoms. Most research in this area has focused on outcomes such as general mental health or depressive symptoms (Paul et al., 2009; Yang & Matz, 2020). The possible impact of unfulfilled needs on JLCG symptoms has as yet not been taken into account. This is surprising, since the intensity of these symptoms has been found to be related to the disruption in a person's day-to-day life, access to valuable activities, meaningful interactions, social relationships, loss of identity, and low self-esteem (Papa & Lancaster, 2016; Van Eersel et al., 2020, 2021b). The LDM may help us to enlighten the role of non-work-related activities and the fulfilment of basic needs in understanding why some unemployed people continue to experience a sense of grief and depression after involuntarily job loss.

Daily activities, Basic Needs, and Emotional Distress
More engagement in activities can contribute to the fulfilment of basic needs (Creed & Bartum, 2006). For example, there is some evidence that unemployed people who engage in regular volunteer work experience more fulfilment of their need for purpose in life, compared to those who do not or only occasionally volunteer (Kamerāde & Bennet, 2018). Creed and Bartum (2006) found that unemployed with more social contacts reported higher levels of well-being compared to those with few social contacts, indicating that a strong social network can mitigate the negative impact of being unemployed on well-being.

In general, unemployed individuals can spend more time on leisure and potentially enjoyable activities than employed people. However, evidence suggests that when engaging in such activities, unemployed people experience less joy than employed people and they report higher levels of sadness on an average day (Krueger & Mueller, 2012). This implies that, in addition to the time spent on these activities, the *evaluation* of these activities (e.g., in terms of their perceived utility) exerts an impact on the subjective well-being of unemployed people (Dittrich & Mey, 2015; Knabe et al., 2010).

In addition, prior research showed volunteering is particularly strongly related with the need for affiliation and social status (Creed & Bartum, 2006, Kamerāde & Bennet, 2018). However, it is unclear to what extent common daily activities (e.g., doing household chores, exercising, performing care duties, or involvement in job search activities) help to fulfil these basic needs among unemployed individuals. It is also an unresolved question to what extent fulfilment of these basic needs is associated with symptoms of JLCG within this group. Knowledge about these issues is theoretically important and might provide new directions for prevention and early interventions to reduce the emotional distress after job loss.

The Present Study

In the current study, we examined the role of fluctuations in daily activities in explaining individual differences in emotional responses to involuntary job loss. Using a diary method, we gathered data on JLCG symptoms, depression, fulfilment of the basic needs proposed in the LDM, and the activities participants engaged in, during five consecutive days. The aim of this study was threefold. The first aim was to map daily variations in the basic needs in relation to symptoms of JLCG and depression. Following Selenko and colleagues (2011), we expected negative relationships between the degree of fulfilment of the basic needs (affiliation, time structure, social status, purpose in life, and enforced activity) and symptoms of (a) JLCG and (b) depression (Hypothesis 1).

The second aim was to examine the linkage between daily fluctuations in the time spent on, and the perceived utility of daily activities in relation to the fulfilment of the basic needs. As schematically depicted in Figure 1, this was tested separately for each of the six activity categories considered in this study. We expected the amount of time spent on (a) relaxing and (b) job search activities to be *negatively* related to the fulfilment of basic needs (Hypothesis 2), and that the amount of time spent on (a) social, (b) physical, (c) high-duty, and (d) meaningful activities, would be *positively* related with the fulfilment of these needs (Hypothesis 3). In parallel with the effects of spent time, we anticipated positive relations between the perceived utility of the six daily activity types and the fulfilment of the basic needs (Hypothesis 4).

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Finally, the third aim of this study was to examine if the association between the time spent on, and the perceived utility of each of the six categories of daily activities on the one hand and emotional distress on the other hand, was mediated by the degree to which the basic needs of the LDM were fulfilled. For all activity categories we expected that the degree of fulfilment of the basic needs would mediate the association of the time spent on an activity and its perceived utility with symptoms of JLCG and depression (Hypothesis 5). Again, this was tested separately for each activity.

METHOD

Procedure and Participants
The Ethical Review Board of the Faculty of Social and Behavioural Sciences of Utrecht University (FETC 19-108) approved this study. Dutch individuals who involuntarily lost their job took were recruited via social media and social networks. People who were interested could click on a link to read the information letter and were asked whether they wanted to participate in the study. After signing an informed consent form, 236 participants (92%) continued with the study in a secured online area where they completed daily questionnaires on five consecutive days (taking approximately five minutes each day). Out of these 236 participants, 179 participants (78%) completed questionnaires on five days, 23 participants (10%) on four days, eight participants (4%) on three days, nine participants (4%) on two days, and 17 participants (7%) on one day. Twenty-six participants did not fill out the socio-demographic and work characteristics section.

Participants in the present sample were on average 52.4 years old (SD = 8.4). The sample consisted of 44 men (21%) and 166 women (79%); 73 people (35%) had attended primary and/ or secondary education only, while 137 people (65%) held a college or university degree. They had lost their job due to personal reasons (e.g., illness or a labour conflict; n = 95, 45%) or situational reasons (e.g., a reorganisation or a bankruptcy; n = 115, 55%). The average duration of employment in their lost job was 9.5 (SD = 9.8) years and the average number of contract hours per week was 32.4 (SD = 19.2). The time passed since participants had lost their job was 14.1 months (SD = 21.2), from which 25% lost their job within the last month, 50% lost their job within the last six months, and 75% lost their job within the last 18 months.

Instruments
Demographics
Data on socio-demographics (e.g., age, gender, education) and work features (e.g., reason for job loss, the length of time passed since the job loss, length of employment) were collected.

Daily Activities

At the end of each day, participants were asked to respond to the items of the daily survey. We provided participants with short descriptions of six activity categories, drawing on Sonnentag's (2001) measure of leisure activities of employed people. The categories were: (a) relaxing activities (e.g., taking a bath or spending time on social media), (b) social activities (e.g., meeting others or calling someone to chat), (c) physical activities (e.g., exercising or dancing), (d) high-duty activities (e.g., household chores or taking care of family members), (e) meaningful activities (e.g., volunteering or studying), and (f) job searching (e.g., searching for vacancies or going to network events).

For each category, participants were instructed to report whether they had undertaken any activities listed in that category (yes or no). If not, they proceeded with the items in the next category. If so, they were asked to register the time (in minutes) spent on this activity and its perceived utility (tapped using the question 'I found this useful', 1 = _strongly disagree_, 5 = _strongly agree_).

Next, six further items were included in the daily measures, all rated on a 5-point scale (1 = _strongly disagree_, 5 = _strongly agree_). _Daily depression_ was measured with a single item, 'Today I felt depressed'. _Daily JLCG symptoms_ were measured with five items from the Job Loss Grief Scale (JLGS; Van Eersel et al., 2019), namely 'Today I thought so much about my former job that it was hard for me to do the things I normally do', 'Today I felt a strong longing for my former job', 'Today I was angry about losing my job', 'Today I felt that my life could only be meaningful with my former job', and 'Today memories of losing my job upset me'. A multilevel factor analysis showed that the explained variances for the daily JLGS items were 66% on day 1, 67% on day 2, 59% on day 3, 62% on day 4, and 55% on day 5. Factor loadings across the five days ranged from .72 to .86. In the present sample Cronbach's α for the daily JLGS ranged from .89 to .91 for all five days.

Basic needs were measured with five items, namely one item for each of the five subscales of the Latent and Manifest Benefits–Shortened version (LAMB-S; Kovacs et al., 2019), rated on a 5-point scale (1 = _strongly disagree_ to 5 = _strongly agree_). The items were translated to Dutch by three experts in the field of psychology and back translated into English by the second author (cf. Brislin, 1970), which led to some minor changes in the Dutch item wordings. The items were: 'Today I felt I made a meaningful contribution to society' (need for purpose in life), 'Today I had the opportunity to meet other people' (need for affiliation), 'Today I was appreciated by those around me' (need for social status), 'Today I would have liked to have more things to do to fill the day' (need for time structure), and 'Today there was a good balance between my responsibilities and free time' (need for enforced activity).

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Statistical Analyses

Preliminary Analyses

The data collection took place from October 2019 up to March 2021. In the middle of this period the COVID-19 pandemic broke out, likely affecting the daily lives of the participants. We therefore tested if there were differences on the study variables between participants who completed the study prior to the first lockdown in the Netherlands (March 17, 2020) and those who completed the study thereafter (labelled the 'pre-covid' group, n = 114, and the 'during-covid' group, n = 122). We found no significant differences between these groups for the socio-demographics and job characteristics, except for the time elapsed since job loss: the 'pre-covid' group had been without a job longer (M = 20.9, SD = 26.2 months) than the 'during-covid' group (M = 9.3, SD = 16.3 months; t(136) = 3.67, p < .001, η^2 = .06). However, prior research has shown that time passed since job loss is not a risk factor for JLCG symptoms (Papa & Maitoza, 2013; Van Eersel et al., 2021a). The time spent on daily activities was similar for both groups, apart from high-duty activities. The 'pre-covid' group spent more time on high-duty activities (n = 359, M = 2.4, SD = 2.1 hours) than the 'during-covid' group (n = 499, M = 2.1, SD = 1.6 hours; t (641) = 2.87, p < .01, η^2 = .01). As there were only minor differences between the groups, they were combined in the analyses.

Mplus version 8.5 was used for the data analysis (Muthén & Muthén, 1998 - 2017). Since the daily measurements took place on five consecutive days for each participant, the observations were nested within participants so using multilevel analysis was warranted (Hox et al., 2018). In the present sample, the intraclass correlation coefficients (ICC) indicated that 74% of the variance in JLCG symptoms and 55% of the variance in depression symptoms could be attributed to within-person fluctuations. For the basic needs, the ICCs indicated that respectively 43% (purpose in life), 24% (affiliation), 33% (social status), 53% (time structure), and 38% (enforced activity) of the variance could be explained by within-person fluctuations. These results underline the importance of taking a multilevel approach when testing the hypotheses.

Main Analyses

For all analyses, the Bayesian estimator with at least 20,000 iterations was selected. Contrary to traditional estimation methods, Bayesian estimation can be used in small samples and for complex analyses, since this approach provides proper estimates and does not require the data to be normally distributed (Hox et al., 2018). The full dataset was used for the analyses (N = 236 participants, n = 1,046 daily measures). This sample size is sufficiently large to conduct the analyses in a *long* format (i.e., cross-sectional), but too small for analyses in a *wide* format (i.e., longitudinal; Hox et al., 2018). The data set is freely retrievable (Van Eersel et al., 2022).

Hypothesis 1 was tested in a multilevel regression analysis with the five basic needs as independent variables and JLCG symptoms and depression as dependent variables. To test Hypotheses 2 through 5, separate analyses were run for each of the six activity categories (relaxing, social, physical, high-duty, meaningful, and job search activities). Each model was built up step by step to compare the models for best fit, using the Deviance Information Criterion (DIC). Smaller DIC values indicate a better model fit (Muthén, 2010). For each of the six activity categories the base model (Model 0) included the five basic needs and JLCG and depression symptoms. The time spent on this particular activity was added in Model 1. In Model 2, the perceived utility of this activity category was added. Finally, in Model 3 the interaction between the time spent on, and the perceived utility of this activity was added (see Figure 1).

To test Hypothesis 2 through 4 multilevel regression analyses were conducted for each separate activity, with time spent on the activity, perceived utility, and the interaction effect between spent time and perceived utility as independent variables and the five basic needs as dependent variables. Hypothesis 5 was tested with multilevel regression analyses for each activity, with time spent on and perceived utility of the activity as independent variables, the five basic needs as mediators, and JLCG symptoms and depression as dependent variables (see Figure 1).

RESULTS

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Descriptive Statistics

Table 1 shows the means and standard deviations of JLCG symptoms, depressive symptoms, basic needs, and the time spent on each of the six daily activities. Considering the data from all 1,046 daily measures, participants undertook relaxing activities on 968 days (93%), social activities on 737 days (71%), physical activities on 687 days (66%), high-duty activities on 858 days (82%), meaningful activities on 475 days (45%), and job search activities on 443 days (42%).

Basic Needs, JLCG, and Depression

Table 2 shows the results of the analyses examining the associations between the fulfilment of the five basic needs and symptoms of JLCG and depression. Three of these needs, 'social status', 'time structure', and 'enforced activity', were significantly associated with JLCG symptoms. This partially confirmed Hypothesis 1a; there was a negative relation between the fulfilment of most basic needs and JLCG symptoms. With regard to depressive symptoms, all basic needs showed significant negative relationships with depression, except the need for affiliation. This largely confirmed Hypothesis 1b, stating that there was a negative relation between most basic needs and depression symptoms.

Table 1

Descriptive statistics of the study variables

	Total		Day 1		Day 2	
	N	*M (SD)*	*N*	*M (SD)*	*N*	*M (SD)*
Emotional distress						
JLCG	1046	10.5 (4.7)	227	11.2 (4.8)	209	10.6 (4.8)
Depression	1046	2.3 (1.2)	227	2.4 (1.2)	209	2.4 (1.2)
Basic needs						
Purpose in life	1046	2.7 (1.1)	227	2.6 (1.1)	209	2.7 (1.1)
Affiliation	1046	3.4 (1.1)	227	3.2 (1.2)	209	3.4 (1.1)
Social status	1046	3.6 (0.9)	227	3.5 (0.9)	209	3.7 (0.9)
Time structure	1046	3.5 (1.2)	227	3.3 (1.2)	209	3.4 (1.2)
Enforced activity	1046	3.1 (1.0)	277	3.1 (1.0)	209	3.2 (1.0)
Spent time in hours						
Relaxing activities	968	4.2 (2.7)	215	5.0 (2.9)	197	4.4 (2.6)
Social activities	737	2.8 (2.0)	165	2.8 (1.8)	152	2.7 (1.8)
Physical activities	687	1.5 (1.0)	155	1.5 (1.0)	131	1.5 (1.1)
High-duty activities	858	2.2 (1.8)	189	2.4 (2.1)	184	2.2 (1.6)
Meaningful activities	475	2.6 (2.0)	114	2.5 (1.8)	90	2.7 (2.1)
Job search activities	443	1.7 (1.3)	106	1.5 (1.0)	78	1.8 (1.3)

Note. JLCG = Job loss-related complicated grief symptoms.

Preliminary Model Testing

Before testing Hypotheses 2 through 5, Models 0 through 3 were tested separately for each of the six activity categories and were compared to determine the best-fitting model. Model 0 with the basic needs, JLCG symptoms, and depression had a good fit to the data ($p < .001$). In Model 1, the time spent on the activity was added to Model 0. Table 3 shows that, for all six activity categories, this led to increases in DIC values compared to the Model 0. In Model 2, the perceived utility of the activity was added to the variables of Model 1, which led to a decrease of DIC values across all six activities and an improvement of model fit. For Model 3, on top of the variables included in Model 2, the interaction effect between spent time and perceived utility was added, which led to some minor changes in DIC values (Table 3). For all six activities, ΔDIC was below 7, indicating no significant difference between the model without (Model 2) and with an interaction term (Model 3; cf. Cain & Zhang, 2019).

	Day 3		Day 4		Day 5
	N	M (SD)	N	M (SD)	N	M (SD)
	209	10.3 (4.7)	202	10.2 (4.5)	199	10.3 (4.4)
	209	2.3 (1.1)	202	2.4 (1.2)	199	2.3 (1.1)
	209	2.8 (1.0)	202	2.8 (1.0)	199	2.8 (1.0)
	209	3.5 (1.1)	202	3.4 (1.1)	199	3.4 (1.1)
	209	3.6 (0.9)	202	3.6 (0.9)	199	3.7 (0.8)
	209	3.6 (1.1)	202	3.5 (1.1)	199	3.6 (1.2)
	209	3.2 (1.0)	202	3.1 (1.0)	199	3.2 (1.0)
	188	4.4 (2.6)	185	3.9 (2.3)	183	3.6 (2.7)
	153	3.0 (2.3)	136	2.9 (2.2)	131	2.8 (2.1)
	137	1.5 (1.1)	137	1.5 (0.9)	127	1.5 (1.0)
	166	2.1 (1.8)	161	2.1 (1.6)	158	2.2 (1.9)
	85	2.6 (2.2)	92	2.3 (1.6)	94	2.7 (2.1)
	89	1.6 (1.3)	85	1.8 (1.7)	85	1.7 (1.2)

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Hence, Model 2 was retained for all six activity categories. Accordingly, only the main effects of the activities (time spent and perceived utility) were included in the separate models for each activity category to test Hypotheses 2 through 5.

Daily Activities and Basic Needs

Time Spent on Activities and Need Fulfilment

Table 4 shows the results for the time spent on each activity category and the degree to which the five needs are fulfilled. For *relaxing activities*, we found that the time spent on this particular activity was negatively related to three of the basic needs, namely purpose in life (β = -.09), affiliation (β = -.08), and social status (β = -.08), confirming Hypothesis 2a. For *job search activities*, there were no significant relations between the time spent on this activity and the basic needs, hence Hypothesis 2b could not be confirmed. For *social activities* significant positive relations were found between the time

spent on these activities and the needs for affiliation (β = .17), social status (β = .18), time structure (β = .08), and enforced activity (β = .09), confirming Hypothesis 3a. For *physical activities* only one significant positive relation emerged, namely that between time spent on these activities and the need for enforced activity (β = .13), partially confirming Hypothesis 3b. For *high-duty activities* also one significant positive relation was found between the time spent on this activity and the need for time structure (β = .08), partially conforming Hypothesis 3c. Finally, regarding *meaningful activities*, the time spent on these activities was associated with the needs for purpose in life (β = .21) and affiliation (β = .14), partially confirming Hypothesis 3d.

Table 2

Multilevel analyses of associations between the fulfilment of basic needs and levels of JLCG and depression

	β	*SD*	95% CI Lower 2.5%	95% CI Upper 2.5%
JLCG				
Need for purpose in life	.06	.03	-.02	.13
Need for affiliation	-.03	.04	-.10	.05
Need for social status	-.11[**]	.04	-.19	.03
Need for time structure	-.16[***]	.04	-.22	-.09
Need for enforced activity	-.09[**]	.04	-.17	-.02
Depression				
Need for purpose in life	-.10[**]	.04	-.17	-.03
Need for affiliation	-.04	.04	-.12	-.03
Need for social status	-.18[***]	.04	-.26	-.10
Need for time structure	-.19[***]	.03	-.26	-.13
Need for enforced activity	-.21[***]	.04	-.28	-.14

Note. JLCG = Job loss-related complicated grief symptoms; CI = confidence Interval. [**] *p* <.01; [***] *p* <.001.

Thus, overall, out of the 30 associations between activities and need fulfilment that were considered, 11 (i.e., 37%) provided statistically significant support for the notion that the time spent on a particular activity is related to the degree to which the five basic needs are fulfilled. These relationships can be negative (e.g., the higher the involvement in relaxing activities, the lower the need fulfilment) or positive (more involvement in meaningful, social and – to some degree – high-duty and physical activities, is associated with higher need fulfilment).

Table 3

Multilevel fit indices for Models 0-4, for six activity categories

	Number of free parameters	DIC	PPC 95% CI	PPC *p*-value
Base model (for all six activity categories)				
Model 0: Basic needs, JLCG, depression	43	20921	562 - 665	< .001
Relaxed activities				
Model 1: Base model, time	32	24190	876 – 923	< .001
Model 2: Base model, time, utility	39	20769	618 – 670	< .001
Model 3: Base model, time, utility, t˚u	46	20777	613 – 670	< .001
Social activities				
Model 1: Base model, time	32	23986	788 – 835	< .001
Model 2: Base model, time, utility	39	15768	395 – 447	< .001
Model 3: Base model, time, utility, t˚u	46	15779	391 – 450	< .001
Physical activities				
Model 1: Base model, time	32	24151	861 – 908	< .001
Model 2: Base model, time, utility	39	14835	468 – 522	< .001
Model 3: Base model, time, utility, t˚u	46	14845	465 – 522	< .001
High-duty activities				
Model 1: Base model, time	32	24190	884 – 931	< .001
Model 2: Base model, time, utility	39	18765	593 – 647	< .001
Model 3: Base model, time, utility, t˚u	46	18761	586 – 642	< .001
Meaningful activities				
Model 1: Base model, time	32	24219	849 – 896	< .001
Model 2: Base model, time, utility	39	10755	350 – 404	< .001
Model 3: Base model, time, utility, t˚u	46	10763	347 – 405	< .001
Job search activities				
Model 1: Base model, time	32	24201	880 – 925	< .001
Model 2: Base model, time, utility	39	9674	314 – 368	< .001
Model 3: Base model, time, utility, t˚u	46	9677	312 – 370	< .001

Note. JLCG = job loss-related complicated grief symptoms; t˚u = interaction effect of spent time and perceived utility of the activity; DIC = Deviance Information Criterion; PPC = Posterior Predictive Checking.

7

Utility and Need Fulfilment

Hypothesis 4 stated that there would be positive relations between the perceived utility of the six daily activity types and the fulfilment of the basic needs. In support of this assumption, there were positive significant relations between the perceived utility of *all* six activities and *all* five basic needs, with βs ranging from .07 to .30, median β = .19. Thus, if participants found the time invested in a particular activity useful, they were likely to report higher levels of need fulfilment. These findings confirm Hypothesis 4.

Table 4

Multilevel analysis of the effects of activity types on need fulfilment (Model 2)

	Activity category			
	Relaxing		**Social**	
	n=915		*n=706*	
	β	SD	β	SD
Basic needs				
Purpose in life				
spent time on activity	**-.09****	**.03**	.04	.04
utility activity	**.30*****	**.03**	**.28*****	**.03**
Affiliation				
spent time on activity	**-.08****	**.04**	**.17*****	**.04**
utility activity	**.25*****	**.03**	**.15*****	**.04**
Social status				
spent time on activity	**-.08****	**.03**	**.18*****	**.04**
utility activity	**.27*****	**.03**	**.21*****	**.04**
Time structure				
spent time on activity	-.02	.03	**.08***	**.04**
utility activity	**.19*****	**.03**	**.07***	**.04**
Enforced activity				
spent time on activity	.01	.03	**.09****	**.04**
utility activity	**.30*****	**.03**	**.21*****	**.04**

Note. $^{*} p < .05$; $^{**} p < .01$; $^{***} p < .001$.

	Activity category							
	Physical *n=658*		**High-duty** *n=822*		**Meaningful** *n=462*		**Job search** *n=422*	
	β	*SD*	β	*SD*	β	*SD*	β	*SD*
	.03	.04	.04	.03	**.21*****	**.04**	.02	.05
	.13***	**.03**	**.16*****	**.03**	**.14****	**.04**	**.10***	**.05**
	.05	.04	.03	.03	**.14****	**.05**	.05	.05
	.08*	**.04**	**.13*****	**.03**	**.19*****	**.05**	**.11***	**.05**
	.04	.04	-.03	.03	.07	.05	.01	.05
	.25***	**.04**	**.21*****	**.03**	**.20*****	**.04**	**.13****	**.05**
	.04	.05	**.08***	**.03**	.05	.05	-.05	.05
	.17***	**.04**	**.18*****	**.03**	**.13****	**.04**	**.22*****	**.05**
	.13***	**.04**	-.05	.03	.07	.05	-.01	.05
	.17***	**.04**	**.17*****	**.03**	**.19*****	**.04**	**.11***	**.05**

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Table 5

Multilevel mediation analyses between JLCG, depression, fulfilment of basic needs and daily activities

	Path
Time → JLCG	
Time → JLCG	c
Time → JLCG	c'
Time → Need for purpose in life → JLCG	a*b
Time → Need for affiliation → JLCG	a*b
Time → Need for social status → JLCG	a*b
Time → Need for time structure → JLCG	a*b
Time → Need for enforced activity → JLCG	a*b
Time → Depression	
Time → Depression	c
Time → Depression	c'
Time → Need for purpose in life → Depression	a*b
Time → Need for affiliation → Depression	a*b
Time → Need for social status → Depression	a*b
Time → Need for time structure → Depression	a*b
Time → Need for enforced activity → Depression	a*b
Utility → JLCG	
Utility → JLCG	c
Utility → JLCG	c'
Utility → Need for purpose in life → JLCG	a*b
Utility → Need for affiliation → JLCG	a*b
Utility → Need for social status → JLCG	a*b
Utility → Need for time structure → JLCG	a*b
Utility → Need for enforced activity → JLCG	a*b
Utility → Depression	
Utility → Depression	c
Utility → Depression	c'
Utility → Need for purpose in life → Depression	a*b
Utility → Need for affiliation → Depression	a*b
Utility → Need for social status → Depression	a*b
Utility → Need for time structure → Depression	a*b
Utility → Need for enforced activity → Depression	a*b
Total of all indirect paths	
Total of all paths	

Note. JLGS = Job loss-related complicated grief symptoms. * $p < .05$; ** $p < .01$; *** $p < .001$.

	Relaxing n=915	Social n=706	Physical n=658	High-duty n=822	Meaningful n=462	Job search n=422
	β	β	β	β	β	β
	-.05	-.05	-.06	.02	**-.08***	-.01
	-.05	<.01	-.02	.02	-.06	-.02
	-.01**	<.01	<.01	.01	**.02***	<.01
	.01**	**-.02****	**-.01***	<.01	**-.03****	-.01
	<.01	<.01	<.01	<.01	<.01	<.01
	<.01	**-.02***	-.01	**-.01***	<.01	.01
	<.01	**-.02****	**-.03*****	.01	-.02	<.01
	.02	**-.14*****	**-.10****	-.01	-.06	.04
	<.01	**-.08***	**-.06***	-.01	-.02	.03
	<.01	<.01	<.01	<.01	<.01	<.01
	<.01	**-.01***	<.01	<.01	-.01	-.01
	.01**	-.01	<.01	<.01	<.01	<.01
	<.01	**-.02***	-.01	**-.01***	-.01	.01
	<.01	**-.02****	**-.02*****	.01	-.02	<.01
	-.17***	**-.12****	**-.21*****	**-.13*****	**-.22*****	**-.20*****
	-.08**	**-.07***	**-.16*****	**-.07***	**-.15*****	**-.16*****
	.04***	**.03****	.01	**.02****	**.02***	**.01***
	-.03**	**-.01****	**-.01***	**-.02****	**-.04*****	**-.02***
	-.01	-.01	<.01	<.01	.01	.01
	-.03***	**-.02***	**-.02****	**-.03*****	-.01	**-.03****
	-.06***	**-.04*****	**-.04*****	**-.04*****	**-.01*****	**-.02***
	-.29***	**-.21*****	**-.22*****	**-.18*****	**-.25*****	**-.25*****
	-.14***	**-.12****	**-.12****	**-.07***	**-.16*****	**-.13****
	-.02	**-.02***	**-.01***	-.01	<.01	<.01
	-.01	**-.01***	-.01	**-.02****	-.01	**-.02***
	-.04***	-.01	**-.02***	**-.02****	-.01	<.01
	-.03***	**-.02***	**-.03*****	**-.03*****	**-.02****	**-.05*****
	-.06***	**-.04*****	**-.03*****	**-.04*****	**-.05*****	**-.01***
	-0.22***	**-0.26*****	**-0.22*****	**-0.52*****	**-.22*****	**-.12****
	-0.22***	**-0.53*****	**-0.59*****	**-0.98*****	**-.61*****	**-.39*****

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Mediation Effects

Figure 1 schematically depicts a mediation model in which the effects of involvement in particular activities on symptom levels of JLCG and depression are mediated by the degree to which five basic needs are fulfilled. Table 5 summarises the outcomes of the analyses testing the paths in the mediation and non-mediation model. To examine the effects of the basic needs as mediators, first the *direct paths in the non-mediation model* (path C in Table 5) between the time spent on, and the perceived utility of an activity category on the one hand and JLCG and depression symptoms on the other hand were tested, for each activity separately. The time spent on meaningful activities (β = -.08) was significantly associated with JLCG; the time spent on social contacts (β = -.14) and physical activities (β = -.10) was significantly associated with depression. Considering the perceived utility, it was found that the perceived utility was significantly associated both with JLCG and depression, with the standardised effect size (β) ranging from -.01 to -.06.

Considering the associations between the amount of time spent on the daily activities on the one hand and levels of JLCG and depression on the other hand, most *direct pathways in the mediation model* (path C' in Table 5) showed a small decrease of magnitude or remained the same compared to the direct path in the non-mediation model (path C). All direct paths (path C') from perceived utility to JLCG and depression showed a small decrease in magnitude compared to the direct paths in the non-mediation model (path C). This could imply a small partial mediation effect for all paths, although the standardised effects of the indirect paths (path A × B) were low ($\leq$ .06). More specifically, for the association between the time spent and JLCG via the fulfilment of basic needs, the effects varied from <.01 to .03, and only one third of the paths were significant. For the association between the amount of time spent on the activities and depression via the fulfilment of basic needs, the effects were even smaller (< .01 - .02), and only six paths (i.e., 20%) were significant. For the association between the level of perceived utility and JLCG as well as depression via basic needs, the effects sizes increased slightly (< .01 to .06) and more than two thirds of these paths showed a significant result. Still, the effect sizes were too small to confirm the expected mediation effect of basic needs (Hypothesis 5).

DISCUSSION

The aim of this study was to explore the extent to which Jahoda's (1981) LDM could account for the linkage of daily activities and symptom levels of JLCG and depression following involuntarily job loss. This was investigated using data from 236 participants, who completed questionnaires on five consecutive days, leading to 1,046 daily

measurements. Multilevel analyses were conducted to examine the degree to which the engagement in activities on the one hand (e.g., relaxing, social, and high-duty activities) was related to symptoms of JLCG and depression on the other hand and if emerging associations were mediated by the degree to which participants felt that these activities fulfilled the basic needs of the LDM.

A first main finding concerns the negative relations between most basic needs on the one hand and JLCG and depression symptoms on the other. We found that the more these needs were satisfied, the lower the levels of JLCG and depression. This is consistent with prior findings pointing at a linkage between lack of fulfilment of basic needs and emotional distress (Muller & Waters, 2012) and depression (Yang & Matz, 2020). Yet, the association between the basic needs and JLCG symptoms provides new information. Interestingly, stronger fulfilment of the 'need for purpose in life' showed a negative relation to depression, but was unrelated to JLCG symptoms. This implies there is a difference in the underlying mechanism of depression and JLCG symptoms. This is in line with prior research, which revealed depression and JLCG represent different symptom clusters (Papa & Maitoza, 2013; Van Eersel et al., 2019, 2021a).

A second main finding involves the positive and negative relationships between the *time spent* on all activities (except 'job searching') and the degree to which these activities fulfilled the basic needs. In other words, higher involvement in relaxing activities was associated with less fulfilment of the basic needs, whereas longer engagement in social, physical, high-duty, and meaningful activities was associated with higher fulfilment of the basic needs. Still, the effect sizes were relatively low, indicating that the associations between the time spent on activities and the fulfilment of basic needs was not particularly strong. In addition, the direct relation between the time spent on an activity and the level of emotional distress, also showed predominantly non-significant results and low effect sizes. This is noteworthy, since these results counteract common assumptions underlying interventions like behavioural activation, proposing that unemployed individuals should undertake healthy activities for a certain amount of time to reduce emotional distress (Martell et al., 2013; Papa et al., 2013).

Third, compared to the time spent on particular daily activities, their *perceived utility* had a more solid connection to the basic needs, with positive associations for all daily activities. This indicates that if individuals perceive particular activities as more useful, they will experience greater fulfilment of basic needs. The direct relation between perceived utility and negative symptoms also showed negative relationships. In other words, the more individuals perceived an activity as useful, the less JLCG and depression symptoms they experienced. This implies that the evaluation of an activity

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has a stronger impact on the fulfilment of basic needs and the level of emotional distress than the time that was actually spent on this activity. This is consistent with prior research among working and non-working individuals, which showed that a positive evaluation of activities was positively related to well-being (e.g., Abou-Zeid, & Ben-Akiva, 2012; Dittrich & Mey, 2015).

Finally, the mediation analyses showed positive associations between time spent and perceived utility of activities on the one hand and the fulfilment of the basic needs on the other hand, as well as negative associations between the fulfilment of the basic needs and symptoms of JLCG and depression. This is consistent with prior research (Selenko et al., 2011; Yang & Matz, 2020). However, the corresponding effect sizes in the present study were low, which indicates that the degree to which the LDM can account for the relation between daily activities and emotional distress following job loss is limited. To some degree this is unexpected, since the LDM is a well-established theory to explain negative effects of unemployment (e.g., Allan et al., 2020; Creed & Bartrum, 2006). Prior research which identified positive relations between engagement in activities, basic needs, and well-being (e.g., Hoare & Machin, 2010; Mullers & Waters, 2012) depended on questionnaires where the participants had to reconstruct their affective experience retrospectively. However, in a daily diary study participants can draw directly from their episodic memory without having to reconstruct their experience based on other information (Bakker et al., 2013). Thus, when the basic needs are measured within the moment instead of retrospectively, their relation with daily activities and emotional distress is considerably smaller than when measured retrospectively. This could suggest that the findings reported in previous research are to some degree due to memory biases.

Limitations

Several limitations of this study deserve to be mentioned. First, the data from the different days were evaluated between persons, without taking the within-person effects into account (cf. Taris et al., 2021). Specifically, the possible effects of JLCG and depression on the type of activities and the evaluation of these activities on the next day were not considered, since the current data were analysed in a *long* format instead of *wide* format. As this was the first diary study on this topic, we included different types of activities a person can undertake after job loss, in addition to JLCG and depression symptoms. In further research a selection could be made from these variables, to make the analyses less complex, to examine the influence of emotional distress on daily activities and their evaluation on the next day, or vice versa.

Second, we did not consider intrapersonal and contextual factors that might have affected the engagement in activities and symptom levels observed in this study. It seems likely that the baseline level for JLCG and depressive symptoms on which a person starts the study, can affect the daily fluctuations of emotional distress, as well as what type of activities someone undertakes. For example, depressed participants may be relatively inactive, making it difficult to detect effects of daily activities on emotional distress due to restriction of the range of the time spent on these activities. The same accounts for other factors that might influence JLCG and depression, such as maladaptive coping styles or negative cognitions about the self, life, and the world (Papa & Maitoza, 2013; Van Eersel et al., 2021b). For instance, it is conceivable that when individuals experience higher levels anger and bitterness about their job loss, they are less likely to undertake meaningful activities or less inclined to evaluate an activity as useful. Hence, for future research it would be interesting to study these types of negative cognitions to explore their influence on daily activities and emotional distress on a daily basis within persons.

Third, in the midst of the period of data collection the world was confronted with the COVID-19 pandemic. The extraordinary measures to increase physical distance (e.g., staying home) and slow the spreading of the virus had a major impact on people's daily life's (Tull et al., 2020). Although the participant groups from before and during the COVID-19 outbreak did not different significantly on important variables, it is conceivable the COVID-19 measures have influenced the way people conducted and evaluated their daily activities. For instance, the need to maintain physical distance can influence the level of emotional distress the participants experience, the choice in the undertaking of certain activities as well as the evaluation of those activities in the current study (De Haas et al., 2020).

Implications and Future Research

In general, the current results suggest that the evaluation of daily activities in terms of their perceived utility is more important than the time invested in an activity in terms of their impact on the fulfilment of basic needs and levels of emotional distress. This implies that for behavioural interventions, professionals need to consider carefully which type of activities are suitable for individual clients, where the evaluation of these activities by the client themselves should be leading to obtain the best results. For future research it would be interesting to consider different elements of the evaluation of activities, for example, whether an activity had a positive influence on someone's sense of self-efficacy or if one engaged in activities voluntarily or pressured by environmental factors. This could provide more insight in what type evaluations of activities are the strongest related to emotional distress and what type of activities should be included in tailormade early interventions or as part of personalised preventive measures after involuntarily job loss.

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In addition, the present results indicate that the relation of the basic needs with daily activities and levels of emotional distress is limited, when it is measured with short time intervals within the moment. This is noteworthy, since this is not in line with prior LDM-based findings in relation to well-being and certain activities (Mullers & Waters, 2012; Selenko et al., 2011; Yang & Matz, 2020). For future research, it would be interesting to explore if these small or even absent effects of the basic needs remain when these are studied between rather than within persons. In other words, whether the variance of the basic needs fluctuates more between persons than within a person on day-to-day basis. Finally, it is critical to assess whether these results can be replicated in other groups to verify that, despite the broad acceptance of the LDM, this theory might be less adequate in relation to complicated grief and depression symptoms following involuntary job loss.

CONCLUSION

The present daily diary study provides more insight in the linkage between daily activities and emotional distress after involuntarily job loss from the perspective of Jahoda's latent deprivation model. Although the hypothesised mediation model was not confirmed, the study results still indicate that daily activities can contribute to the fulfilment of basic needs even in the case of job loss, and that the basic needs are negatively related to emotional distress. The current results also indicated that perceived utility of an activities is of more concern than the amount of time spent on an activity in relation to levels of emotional distress. These insights highlight the significance of tailor-made behavioural interventions as well as preventive measures, where the evaluation of an activity must be decisive instead of following the general guidelines about which activities are typically supportive for a person with high levels of JLCG or depression symptoms after involuntary job loss.

Author Contributions
Janske H. W. van Eersel, Toon W. Taris and Paul A. Boelen (Study design; Writing-review & editing); Janske H. W. Eersel (Data collection; Writing-original draft). Janske H. W. van Eersel and Toon W. Taris (Analysis). Paul A. Boelen and Toon W. Taris (Supervision).

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CHAPTER 8

A cognitive-behavioural framework of job loss-related complicated grief symptoms

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ABSTRACT

In a significant minority of people, involuntarily job loss can result in symptoms of job loss-related complicated grief (JLCG). The present cognitive-behavioural framework is introduced to explain the underlying processes which may lead to the development and maintenance of JLCG symptoms. Three core processes play a central role, namely (1) negative cognitions related to the job loss and misinterpretation of one's grief reactions; (2) anxious and depressive avoidance strategies to cope with the job loss and its consequences; and (3) insufficient integration of the job loss into the autobiographical memory. These core processes are assumed to interact and reinforce each other, leading to JLCG symptoms. These core processes can be influenced by certain risk factors, including circumstances surrounding the loss, personality traits, and characteristics of the social environment. JLCG symptoms can lead to additional psychological and practical problems, such as anxiety and depressive symptoms, lower employability, and reduced likelihood of re-employment. This paper explains and illustrates the three core processes with vignettes. Implications of the model for preventive measures and psychological interventions are introduced. It concludes with suggestions for future research on JLCG symptoms.

Keywords: complicated grief; job loss; maladaptive coping; negative cognitions; vignettes

INTRODUCTION

In 2021, the unemployment rate in the Netherlands was 3.3%, which is equivalent to 306,000 individuals from a population of 17 million (CBS, 2021). Involuntary job loss is considered a major life event that can cause severe emotional distress (Brand, 2015), disruption of identity, social status and relationships (Papa & Lancaster, 2016), and a decrease in physical well-being (Norström et al., 2014). Still, the most common outcome following involuntary job loss is a stable trajectory of healthy mental functioning (Bonanno et al., 2011; Van Eersel et al., 2021a). Only a significant minority develops symptoms of depression, anxiety, and job loss-related complicated grief (JLCG; Papa et al., 2016; Stolove et al., 2017).

During the last few years research on JLCG symptoms has increased. Factor and latent class analyses have shown that symptoms of JLCG, depression, and anxiety following involuntary job loss represent distinguishable constructs (Papa & Maitoza, 2013, Van Eersel et al., 2019, 2021a). Research has also indicated that JLCG symptoms are associated with low self-esteem, maladaptive coping strategies, and a belief in an unjust world (Papa & Maitoza, 2013; Van Eersel et al., 2019, 2021a). Moreover, scholars have found a relation between JLCG symptoms and identity disruption (Papa & Lancaster, 2016). Yet, it remains unclear which underlying mechanisms lead to the development and maintenance of JLCG symptoms. It is important to learn more about the characteristics of individuals who develop JLCG symptoms to identify and treat them early in the process, and to learn which specific characteristics of JLCG symptoms the interventions need to address.

From bereavement loss research, it is known that complicated grief requires a different approach in terms of treatment than other forms of bereavement-related emotional distress, such as depression or anxiety (Shear et al., 2005). A theoretical framework is required to enable us to connect the existing knowledge about JLCG to possible underlying mechanisms, risk factors, and interventions. Therefore, the aim of this article is to introduce a cognitive-behavioural framework. This may help to provide a deeper understanding of what causes this significant minority of people to develop and maintain JLCG symptoms after involuntary job loss.

First, JLCG symptoms will be described in more detail and illustrated with a vignette. Second, important possible consequences of JLCG symptoms will be discussed. Third, a cognitive-behavioural framework will be introduced based on three core processes, and each core process will be portrayed with a vignette. Fourth, risk factors for the development and maintenance of JLCG symptoms will be reviewed in relation to this framework. Finally, clinical implications and suggestions for future research directions will be discussed.

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JLCG Symptoms

The grief process encompasses a wide array of emotions, cognitions, and behaviours. High levels of emotional distress and intense reactions of grief which persist for only a brief period after the job loss, while a person remains capable to function in all aspects of one's daily life, are considered part of a healthy grief trajectory (Harris, 2020). In the case of JLCG symptoms this healthy trajectory towards recovery gets disrupted, resulting in grief reactions that persist rather than diminish as time passes by (Papa & Lancaster, 2016; Van Eersel et al., 2020a). The job loss appears to have shattered fundamental assumptions about oneself and the world (Janoff-Bulman, 1992).

Mirroring the conceptualisation of complicated grief after bereavement loss (Prigerson et al., 2009), JLCG symptoms include difficulties accepting the changed reality, yearning for the lost job, preoccupation with memories of (circumstances surrounding) the job loss, identity disruption, problems with finding purpose, bitterness and anger, and difficulties with moving on, which, in combination, lead to severe emotional distress and affect functioning in everyday life (Van Eersel et al., 2020a). These JLCG symptoms will be illustrated in the vignette of David.

Vignette: David

David is 52 years, married and father of two boys. Both he and his wife are currently unemployed and receive social benefits from the government. For over twenty years he has been a project manager at a metal construction company. He loved this job and devoted a significant amount of time, effort, and energy to it. His customers were satisfied and he was proud of the excellent results he and his team had achieved. That is, until a colleague was promoted to be his executive manager. From David's perspective, things went rapidly downhill from that point on. He was excluded from meetings and no longer received vital information to execute his job. He felt overwhelmed and confused. This sequence of events resulted in a labour dispute and an unworkable work environment, which ultimately led to the termination of his contract.

Ten years after this event, David still feels confused, sad, and betrayed. Since then, he has held several jobs, only to lose them again due to his constant preoccupation and yearning for his lost job. He tends to compare every new job with the job he lost, which negatively affects his work performance. He missed the appreciation he used to receive from his clients and colleagues, and he longs for the prestige he gained as an expert in his field. In addition, David frequently gets overwhelmed by memories about his dismissal and the events leading up to it. In particular, the smug look on the face of his colleague when he told him the news, is etched in his memory. He continues to ruminate on those crucial moments, specifically on what he could have done differently

to prevent this dreadful end result. Consequently, in each new job, he is afraid that history will repeat itself, so he keeps colleagues at bay and finds it hard to trust others. This makes it difficult for him to demonstrate his skills and knowledge and he fails to gain the positive feedback and connection with the team he craves. Instead, his negative self-image and sense of loneliness become reinforced.

At present, each time David applies for a job, he gets emotional (e.g., sad, lost for words) when they question him regarding his lost job, and they turn him down. He feels disappointed, confused, and distraught. He finds it tough to keep faith in the future and to find purpose in life. He wants to leave the past behind, but he does not know how.

Consequences of JLCG Symptoms

The vignette of David describes someone who has been suffering from JLCG symptoms since losing his job ten years ago. As time passes by, JLCG symptoms can result in additional psychological and practical problems creating a downward spiral. For instance, there is preliminary evidence that JLCG symptoms can inflate depressive and anxiety symptoms over a six-month period (Van Eersel et al., 2020b). In general, the emotional distress that follows job loss can lead to cascading psychological and psychosomatic problems (McKee-Ryan et al., 2005; Wanberg, 2012), stigmatisation, social withdrawal (Blau et al., 2013; Brand, 2015), physical ailments (Flatau et al., 2000; Paul & Moser, 2009), sleep problems (Blanchflower & Bryson, 2020; Virtanen et al., 2013), feelings of powerless (Blustein et al., 2013; Taris, 2002), and impaired quality of life (McKee-Ryan & Maitoza, 2018; Norström et al, 2019).

According to the conservation of resources (COR) theory, the depletion of available resources, like financial means, social support, optimism, hope, and self-efficacy, plays an important role in the perceived emotional distress following job loss (Hobfoll et al., 2016). COR theory states that people are driven to obtain, retain, and protect their valued resources (Hobfoll, 1989). Valued resources in the case of job loss can be time structure, social status, identity, collective goals, and purpose (Jahoda, 1981). The level of psychological stress caused by the job loss depends on one's appraisal of this loss, the resources that are available to cope with the threat, and the resources (such as time, effort, and skills) invested in the job (Hobfoll et al., 2018).

Research has shown that individuals who experience mental health issues have a reduced chance of re-employment (Carlier et al., 2014; Janssens et al., 2020) compared to others. JLCG symptoms can diminish one's employability due to identity disruption (Papa & Lancaster, 2016), loss of self-esteem, increased use of maladaptive coping styles (Papa & Maitoza, 2013; Van Eersel et al., 2020a), and a decline in social contacts

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(Brand, 2015). The decrease of available resources and diminishing employability make it more difficult for a person (to continue) to engage in effective job search activities (Wanberg, 2012). It is conceivable that this potential downward spiral strengthens negative cognitions about one's self, one's life, and one's future, and hinders adaptive coping strategies to deal with the accumulation of problems in the current situation, making it progressively harder to face the changed reality and the consequences of one's job loss.

A Cognitive-Behavioural Framework of JLCG

Drawing on the conceptualisation of CG following bereavement loss (Boelen et al, 2006), we propose that three processes play an essential role in the development and maintenance of JLCG symptoms. First, negative cognitions about one self and the world may be reinforced or created as a result of one's job loss, and one's own grief reactions can be misinterpreted as threatening. Second, deployment of anxious and depressive avoidance strategies that may help to cope with the loss and its consequences. Third, difficulties with the integration of the loss into the autobiographical memory, may result in issues surrounding the acceptance of the changed reality. These three processes are critical to the development and maintenance of JLCG symptoms, as schematically depicted in Figure 1. They will be explained in more detail in what follows.

Negative Cognitions and Misinterpretations of Grief Reactions
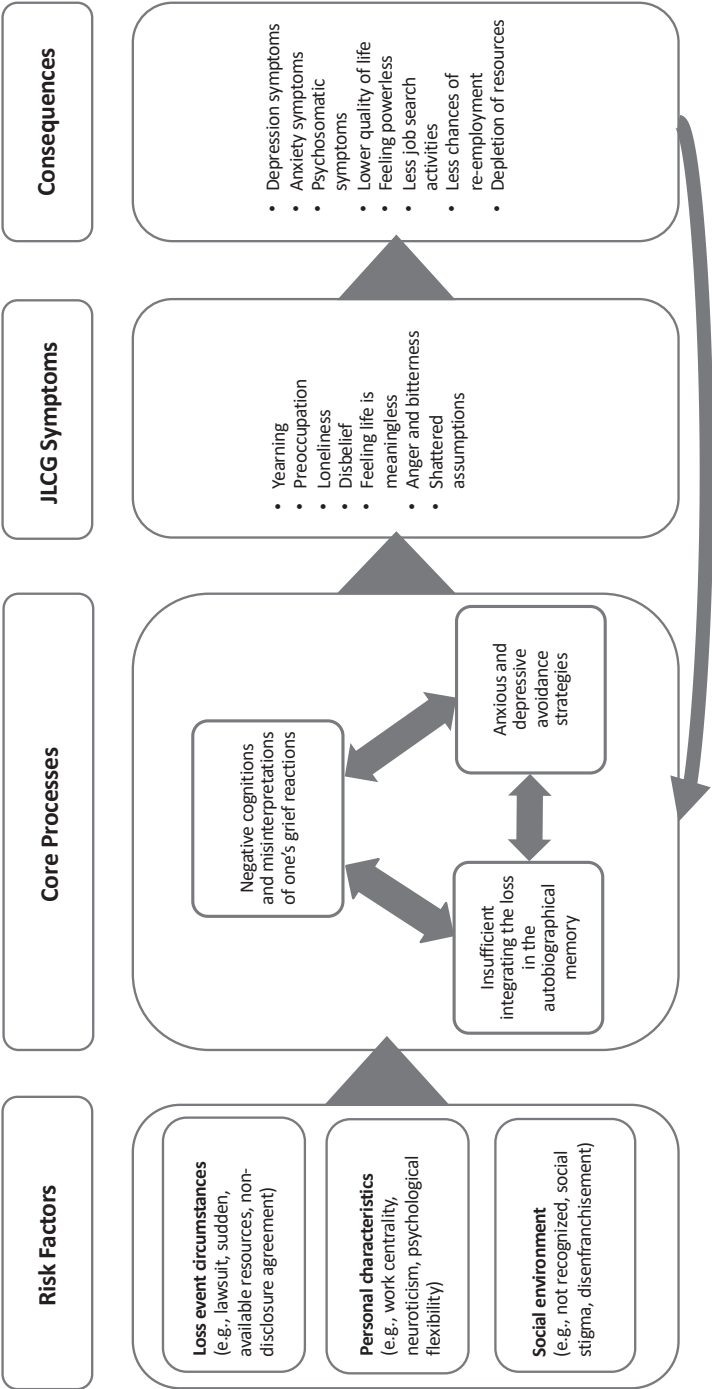
The first core process is that individuals who suffer from JLCG symptoms hold negative global cognitions related to one's job loss and misinterpret their grief reactions as threatening. These negative cognitions can hinder the loss integration into the autobiographic memory and can foster the use of maladaptive avoidance coping styles.

According to Janoff-Bulman (1992) people hold three abstract fundamental assumptions: 'the world is benevolent', 'the world is meaningful', and 'the self is worthy'. In conjunction these assumptions imply that individuals believe that the world is a good place and that they can be optimistic about their own future (Poulin & Cohen Silver, 2008). In addition, people hold specific beliefs about why particular events happen in the world to certain people (Park, 2016) and have a tendency to believe that one's level of goodness and morality determines one's fate in life (one's 'karma'; Lerner, 1980). In general, most people perceive themselves as good, moral, and capable, relative to others (Wojciszke, 2005). These fundamental assumptions enable people to comprehend the world and themselves. Yet loss and traumatic events can shatter these beliefs. Did they deserve such an event to happen to them? If so, why? Indeed, is the world really 'just' after all (cf. Janoff-Bulman, 1992)?

Figure 1

Schematic depiction of the cognitive-behavioural framework of job loss-related complicated grief symptoms

Risk Factors

Loss event circumstances (e.g., lawsuit, sudden, available resources, non-disclosure agreement)

Personal characteristics (e.g., work centrality, neuroticism, psychological flexibility)

Social environment (e.g., not recognized, social stigma, disenfranchisement)

Core Processes

Negative cognitions and misinterpretations of one's grief reactions

Anxious and depressive avoidance strategies

Insufficient integrating the loss in the autobiographical memory

JLCG Symptoms

- Yearning
- Preoccupation
- Loneliness
- Disbelief
- Feeling life is meaningless
- Anger and bitterness
- Shattered assumptions

Consequences

- Depression symptoms
- Anxiety symptoms
- Psychosomatic symptoms
- Lower quality of life
- Feeling powerless
- Less job search activities
- Less chances of re-employment
- Depletion of resources

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Involuntary job loss can shatter one's fundamental beliefs about the world. As a result, job loss and its ensuing consequences can require revision and reconstruction of views around one's self, one's life, one's future, and the world (Papa & Lancaster, 2016). It is conceivable that the magnitude of emotional distress following job loss is related to the specific fundamental assumptions that are challenged by the loss. Prior research showed that negative cognitions concerning one self, life, and future (e.g., 'My life is meaningless since I lost my job') were associated with a diminished sense of self and identity confusion (Papa & Lancaster, 2016). Further, scholars have found a negative association between lowered self-esteem and levels of JLCG symptoms (Papa & Maitoza, 2013; Van Eersel et al, 2021a). A strong global belief in an unjust world was also found to be associated with high levels of JLCG symptoms (Papa & Maitoza, 2013), even when controlling the time elapsed since the job loss (Van Eersel et al., 2021a). Rebuilding one's identity in this new reality, without the lost job, requires revision of fundamental beliefs about one's self, life, future, and the world.

The misinterpretation of one's grief reactions and experiencing them as threatening has been relatively understudied in the case of involuntary job loss. It is conceivable that individuals after the loss of their job may have a tendency to interpret their emotional distress as intolerable, the intensity of their sadness as a sign of losing control, and intrusive thoughts about the loss as a reflection of insanity. Preliminary research showed that these types of cognitions (e.g., 'If I really give in to my sorrow, I would go crazy') were strongly associated with JLCG symptoms (Van Eersel et al., 2021b). It can be postulated that individuals who endorse these types of misinterpretations grieve more intensely and exhibit more avoidance behaviour. This first core process is illustrated in the vignette of Carolyn.

Vignette: Carolyn

Carolyn is single, 51 years old, and has always focused on her career. She worked in public broadcasting for four years as a department manager. She excelled in her profession and was highly appreciated by her colleagues and directors. However, when she came back from a three-month sick leave her function was eliminated due to a reorganisation.

Before this event, Carolyn was a strong, independent woman, who enjoyed challenging projects and changes. Since the event, she has lost her faith in herself and her future. She feels that the organisation has treated her dishonestly and unfairly. Her faith in others has been crushed. For Carolyn her dismissal came out of the blue. No one from the organisation informed her on the upcoming changes. Her self-confidence and trust in her own capabilities were strongly linked to her work, and has been shattered due

to her dismissal. As time passes by, she finds it harder to believe that she is capable of doing anything work-related. She still gets regular calls for job opportunities, only she turns them down because she believes she is not ready. She is terrified that if she would get the job, she would not be able to live up to their expectations, so she will be dismissed again. From the moment she wakes up until she goes to sleep, she ruminates and worries. The prevailing thought on her mind is that she is worthless without her lost job.

Carolyn is convinced that the way she is reacting to her job loss is abnormal and a sign of weakness. As a result, she is afraid to admit to her environment how she truly feels, denying them the opportunity to correct her misbeliefs. When she is among people, she puts on a brave face and pretends everything is fine. She tries to push forward and supress her feelings, but the harder she tries, the more intense her feelings and thoughts about her job loss become (e.g., 'the world is unfair', 'if people knew how I really feel, they would think I am crazy', and 'I have become worthless'). She feels that she is stuck in a downward spiral and that there is no way out.

Anxious and Depressive Avoidance Strategies

The second core process is that individuals who experience JLCG symptoms engage in maladaptive coping strategies, which obstructs the correction of negative cognitions and misinterpretation of one's grief reactions, and blocks the integration of the loss into existing autobiographical memories.

Avoidance behaviour is not necessarily problematic and can be a healthy way of coping with loss (Stroebe & Schut, 2010). It is natural that in times of grief the mind oscillates between confronting and avoiding the altered reality (Harris, 2020; Shear, 2012). This is a way to remain connected to the lost job as well as to escape the pain of the permanence of the loss, so someone can face the painful reality at one's own pace (Stroebe & Schut, 2010). However, when avoidance strategies are employed exclusively, they can hinder the adaptive learning process of living without the lost job and can result in JLCG symptoms (Papa & Maitoza, 2013; Van Eersel et al., 2020a). In the current framework, these maladaptive coping strategies are categorised into anxious and depressive avoidance strategies.

Anxious Avoidance Strategies

Anxious avoidance strategies can involve avoidance of places (e.g., the company building), people (e.g., former colleagues), and objects (e.g., company documents, memorabilia), which can trigger thoughts or memories about the job loss. For instance, some people are convinced their emotions must be supressed at all times, because

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if they even let just a glimpse of their sadness escape, they would be overwhelmed by the emotion. This process is comparable to pressing a ball under water; the harder you push, the more counterpressure is created (Hayes et al., 2012). In order to remain in control of their emotions, they start avoiding more and more places, people, and objects, to avoid (sudden) emotional triggers of their job loss.

Anxious avoidance strategies often represent a form of 'experiential avoidance'. This refers to the tendency to supress, avoid, or disable unwanted internal experiences (e.g., emotions, thoughts, or memories), which paradoxically lead to an increase in frequency and intensity of those unwanted experiences (Hayes et al., 2012). In this vein, it seems conceivable that individuals who view their own grief reactions as threatening, are more likely to fall back on experiential avoidance behaviour and find it considerably more complex to integrate the job loss and its consequences in the autobiographical memory.

Contrary to avoiding the confrontation with the reality of the loss, individuals can also attempt to maintain a strong connection to the lost job (Smith & Delgado, 2020), for instance, by continuously talking about the circumstances surrounding the loss or seeking comfort in memories. This can be a way to avoid the reality of the job loss, since as long as someone is focused on the past, one does not have to deal with the reality of the present and the future (Stroebe & Schut, 2010).

Depressive Avoidance Strategies
Depressive avoidance strategies can be defined as inactivity and withdrawal behavioural patterns from social and recreational activities (Boelen et al., 2006; Solove et al., 2015). Individuals can fall back on this behaviour, for instance, when there is lack of psychosocial or financial resources (Holahan et al., 2005; Hobfoll et al., 2018).

Negative expectations also seem to play a crucial part in depressive avoidance strategies. Individuals who expect to be rejected by their social environment are more likely to engage in social withdrawal (Watson & Nesdale, 2012). The same applies to individuals with negative expectations about the effect of potentially helpful behaviour and one's ability to actually participate in social or recreational activities (Boelen et al., 2006). These types of negative cognitions may lead to depressive avoidance behaviour which, in turn, prevents the correction of these negative cognitions.

Depressive avoidance strategies are likely to contribute to the development and maintenance of JLCG symptoms by enhancing feelings of yearning, a sense of meaninglessness, and preoccupation with the job loss. Social withdrawal, inactivity, and apathy can hinder correction of one's global negative cognitions about one self, life and the future and, as

a result, make it more difficult to move on and set new goals (Van Eersel et al., 2021b). For instance, feelings of shame and self-blame regarding one's job loss and negative cognitions about one self (e.g., 'I am worthless, since I lost my job') are likely to intensify social withdrawal, out of fear what others might think. Depressive avoidance strategies can also lead to a reduction of perceived social support and weaken the strength of one's social network, making it harder to obtain new employment (Rözer et al., 2020). The vignette of John illustrates the role of anxious and depressive avoidance in JLCG.

Vignette: John

John is married, 60 years old and has three adult children. He worked as teacher at an elementary school for 15 years. He saw this as his calling, in particular working with children who need some extra attention to flourish. He invested much time and energy in his job and he often stayed late or worked from home to prepare the lessons for the following day. He did this with pleasure and saw it as part of his job as a teacher.

After various reorganisations and a fatal accident on school premises, the culture at the school started to change. According to John, the school started to feel unsafe and distrust among colleagues and with the principal ensued. John began to suffer from stress and anxiety symptoms. The communication with the principal became difficult and turned into a labour conflict. The organisation offered him money to terminate his contract in exchange for non-disclosure about everything that had occurred. John declined, which resulted in a lawsuit that lasted for 1.5 years. Losing his job became inevitable; this was 3.5 years ago.

At present, John avoids going to the location of the school and other places where he may meet his former principal or colleagues. This is challenging, since the school is located in a town nearby, where he used to buy the weekly groceries. At first, his wife took over this task, because driving a car became difficult for him due to concentration problems following his job loss and also due to his fear of running into former co-workers or children's parents. Last year he started to drive again, which is fine as long as he stays away from any potential emotional triggers related to his job loss.

Till this day, John still avoids working with children. Although he was excellent at his job and children as well as their parents spoke highly of him, he is afraid it could trigger memories of his job, his dismissal, and associated intense emotions. He ruminates daily about the events surrounding his job loss and the lawsuit, in which the sense of injustice prevails despite winning the lawsuit. He still misses the relationships with his former colleagues as well as the sense of purpose that came through working together on a shared goal. His negative thoughts and avoidance behaviour bind him to the past, making it hard for him to let go and move on.

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Loss Integration in Autobiographical Memory

The autobiographical database contains general information on events that have occurred in complex knowledge structures, lying at the basis of memories and schemata about one's life (Conway et al., 2004). In the case of a healthy trajectory after job loss, loss-related information (e.g., feelings, thoughts, memories) is gradually linked to the existing knowledge which enables the changed reality, without the lost job, to sink in (Boelen et al., 2006). This integration process is essential to slowly reducing high levels of emotional distress and intrusive memories.

In the case of complicated grief, the information on the permanence of the loss is insufficiently integrated into the autobiographical memory (Golden et al., 2007). As a result, the loss event can easily trigger loss-related thoughts, feelings, and emotions in the associative network of memory (Boelen et al., 2006). Due to this insufficient integration in the autobiographical memory individuals continue to feel stunned and shocked. They seem incapable of comprehending how and why this has happened to them. In general, job loss is a result of human decisions which can make it more difficult to regard the loss as permanent. As a result, it may be harder for a person to accept the irreversibility of the job loss and integrate the loss into the autobiographical memory; e.g., it may be tempting to believe there is still a way to undo the job loss by starting a lawsuit. Preliminary results showed that people who experience JLCG symptoms find it difficult to accept that the job loss is irreversible, feel overwhelmed by memories of the job loss, and are preoccupied with the job loss (Papa & Lancaster, 2016; Van Eersel et al., 2019). They experience disbelief concerning the permanence of their lost job and keep playing the sequences of events over and over in their head, trying to figure out where it went wrong (e.g., Archer & Rhodes, 1995; Papa & Maitoza, 2013). The third core process of insufficient integration of the job loss into the autobiographical memory will be illustrated in the vignette of Lisa.

Vignette: Lisa

Lisa is 43 years old, married, and has no children. She worked for a global software company for eight years as a learning and development specialist. She loved the diversity of her job, the complexity of the projects, the travelling around the world, but above all the appreciation she received from her executive and colleagues. The company was growing rapidly and reorganisations were the order of the day. Deep down, Lisa knew that one day her job would be outsourced to another country. Then one day, indeed, she heard she had lost her job. Still, she was taken aback by the news of her job loss and could not believe it was happing to her.

Eighteen months have passed since the news broke. To this day, almost every night Lisa dreams about the projects she completed, the meetings with her team, and the problems she solved for clients. When she wakes up, she feels vivid and enthusiastic, until after a few moments, reality sets in and feelings of sadness and confusion overwhelm her. It takes her a while to pull herself together before she can begin her morning routine. Although Lisa quickly found a new job as a consultant at an employment agency, she still longs for her previous job, particularly the sense of competence and appreciation she gained in this job. Even during her current work, her mind wanders to memories of her lost job, and she has to remind herself that she no longer works there. Even though she likes her colleagues, clients, and tasks in her current job, she feels disconnected and estranged. Lisa believes she has lost a part of herself and she first needs to figure out who she is before she will be able to move on. Hence, against the odds, she continues to wait and hope that one day the phone rings, and she can return to her old position.

Risk Factors

As schematically depicted in Figure 1, within the framework it is proposed that the three core processes can be influenced by specific risk factors, including circumstances surrounding the job loss, personality traits, and characteristics of the social environment. For each category several variables will be discussed which we consider important. However, this list is not exclusive and may be expanded. This hypothesised effect of these variables will be illustrated with examples for each category of the risk factors.

Circumstances Surrounding the Loss Event

When someone is involved in a *labour conflict* or *lawsuit*, emotions such as anger and bitterness, as well as the negative cognitions about the job loss, can serve a purpose, namely to keep pursuing justice. These types of conditions can create a perfect grounding to amplify and strengthen negative cognitions related to one's job loss.

Experiencing one's job loss as *sudden* or *unexpected* (Van Eersel et al., 2019) and not being able to say *farewell* in an appropriate way after the job loss (Van Eersel et al., 2020a), have also been related to JLCG symptoms. It is tenable, that this can make it more difficult for someone to accept the irreversibility of the job loss.

Furthermore, an employer can demand that the employee signs a *non-disclosure agreement* to end the contract. Under these circumstances, the employee is not allowed to talk to anyone about the events that have occurred which have led up to one's job loss. As a result, this person is unable to discuss one's negative cognitions with one's social environment, hindering the correction of these negative cognitions.

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Finally, from the perspective of the conservation of resources theory, the range of *available resources* and *loss of resources* (e.g., income, social contacts, status, and self-efficacy) can influence the level of distress surrounding the job loss (Hobfoll et al., 2016). For instance, perceived *financial strain* has been associated with an increase of avoidance behaviour (Papa & Maitoza, 2013). Whereas higher *unemployment benefits* have been found to be related to better psychological well-being and less financial strain (Paul & Moser, 2009; Wanberg et al., 2020). Hence, it seems plausible that higher social benefits may have a mitigating effect on the engagement in anxious and depressive avoidance strategies.

Personality Traits

Certain personality traits are likely to influence the three core processes. For instance, *work centrality* refers to the extent to which work is important within one's life (Bal & Kooij, 2011). A high degree of work centrality implies that an individual strongly *identifies* with one's job (Papa & Lancaster, 2016). As a result of this identification, it is harder to integrate one's job loss with one's existing memories and image of oneself.

In the same line, *neuroticism* - the tendency to view the world and the self negatively and to experience intense negative emotions in response to stress (Barlow et al., 2013) - can render someone susceptible to negative cognitions following job loss.

Similarly, a limited degree of *psychological flexibility* – one's ability to cope, accept, and adjust to difficult situations - is related to an increased tendency toward experiential avoidance (Hayes et al., 2012). This may lead to a more frequent reliance on anxious avoidance coping strategies after involuntary job loss.

Social Environment

Reactions of the social environment may also affect the three core processes. When the impact of one's job loss is *not recognised* or *supported* by a person's social environment, it can increase feelings of shame and guilt (Doka, 2016). Negative reactions from one's social environment and *disenfranchisement* of the grief can interfere with integrating the loss in the present concept of one self.

Job loss is still often associated with a *social stigma* and internalised feelings of *blame* (Blau et al., 2013), which can increase depressive avoidance behaviour. An empathic social environment can play an important role by encouraging someone to go out, become more active, and undertake activities. Nevertheless, the *availability* of one's social environment may decrease as a result of one's job loss and interactions with family and peers may change (Brand, 2015), leading to further social isolation (Peterie et al., 2019), and increased depressive avoidance behaviour.

Implications of the Cognitive-Behavioural Framework of JLCG symptoms

To alleviate JLCG symptoms the three core processes of this cognitive-behavioural framework need to be targeted. This can be accomplished by (1) identifying and altering problematic cognitions related to the job loss and misinterpretations of one's grief reactions, (2) replacing anxious and depressive avoidance strategies with more adaptive strategies to cope with the job loss, and (3) stimulating integration of the job loss and its consequences into one's autobiographical memory.

Since research on JLCG symptoms is relatively new, no studies have yet been conducted on the effectiveness of treating these symptoms. Nonetheless, cognitive behavioural therapy (CBT) has been found to be effective in the alleviation of complicated grief symptoms following bereavement loss (Johannsen et al., 2019; Wittouck et al., 2011). It seems conceivable CBT may also mitigate JLCG symptoms. Another promising candidate to reduce JLCG symptoms is acceptance and commitment therapy (ACT), which has been found to be effective in treatment of mental problems (A-Tjak et al., 2015), including complicated grief (Davis et al., 2017). Suggestions for preventive measures, psycho-education, and psychological interventions based on CBT and ACT will be provided in the succeeding sections.

Preventive Measures

Several pointers for preventive measures and treatment options can be derived from the cognitive-behavioural framework. For instance, preliminary evidence shows that perceiving the job loss as unfair, sudden and beyond one's control can influence the three core processes (Brewington et al., 2004; Van Eersel et al., 2019, 2020b, 2021a). These types of circumstances of the job loss can be influenced by the employer up to a certain level.

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For instance, involving the employee earlier on in the process and straightforward *communication* will diminish the chance that the employee will perceive their job loss as unexpected. An *exit interview* after one's dismissal can be a useful instrument as well (Gordon, 2011). This conversation between the employer and the departing employee can offer the opportunity to discuss pending questions, review achievements, share mutual appreciations, and give constructive feedback. Open communication, sincere interest, respect, and authenticity are key factors for a constructive exit interview (Harris, 2000). On the one hand, this will increase the chance that the employee feels seen and acknowledged in their loss. On the other hand, an exit interview can correct some negative assumptions about the cause of the dismissal and reduce the risk that the employee considers the dismissal unfair. Finally, discussing the options for saying *farewell* to the company, colleagues, customers, and how to structure the last period to transfer all the work in a proper manner, will give the employee a greater sense of control during a time with many uncertainties.

Psycho-education

When a person with JLCG symptoms, i.e., the client, seeks help, the therapist should provide *psycho-education* and *normalise* the JLCG symptoms as a preventive measure, explaining to the client that the experienced JLCG symptoms are understandable reactions following one's job loss. This will decrease the chance that clients will negatively misinterpret their grief symptoms as abnormal and threatening. It may help them to better understand what is going on and the process that they are going through, namely, that reactions like yearning, preoccupation with the loss, feeling numb, anger, a sense of futility, are all part of the grieving process. Therefore, it is advisable to clarify the relations between the three core processes to clients and how they can amplify each other. This perspective can help them to see that one's negative thoughts and feelings may be a consequence of the grief and can fuel JLCG symptoms. For instance, when clients believe to be worthless without their lost job, it can be harder to connect with other people ('they will think I am worthless too') and to undertake activities ('I am not good for anything'). Discussing examples from one's daily life, in particular specific thoughts, cognitions, and behaviours that are most upsetting to clients, will help them to understand how their behaviour pattern can interfere with their recuperation.

Psychological Interventions

For each of the three core processes examples of psychological interventions from CBT and ACT are discussed in what follows.

For the first core process, the key is to modify *negative cognitions* and *misinterpretations of grief reactions*. Effective CBT interventions to achieve this are *cognitive restructuring* techniques (Beck & Dozois, 2011). These techniques can help clients to identify and examine the validity of one's cognitions and beliefs. For instance, when clients believe the future holds no meaning since the job loss, categorising a list of evidence in favour of, or opposed to- this statement can be helpful, to subsequently seek for alternatives based on the given evidence to the modify this negative belief into a more manageable form (Mancini et al., 2012).

When clients strongly identify with limiting thoughts, cognitions, feelings, or identity labels (e.g., 'If I really give in to my sorrow, I would go crazy') ACT interventions such as *defusion* techniques can aid them to cope with these unwanted thoughts and feelings and increase one's psychological flexibility. Defusion is basically the deliteration of language in order to strip words and sentences of their symbolic meaning (Hayes et al., 2012). This can be achieved by repeating a simple word or sentence, like 'I am weak', for several minutes with a voice modifier, until the sentence starts losing its symbolic

meaning. The goal of this exercise is to expand the associative network surrounding the cognition 'I am weak' with alternative thoughts and feelings to reduce the level of emotional distress (Batink et al., 2012).

For the second core process, the central theme is reducing the utilization of *anxious and depressive avoidance strategies*. From a CBT perspective, when clients are avoiding reminders of the job loss (e.g., places, people, or objects) *exposure* procedures can be deployed to correct misinterpretation of one's grief reactions and to diminish avoidance attempts (Boelen et al., 2006). Examples of this are setting up a concrete plan and stimulating clients to reach out to former colleagues, or by asking them to bring documents or photo's which are related to the lost job to discuss what they represent to them.

Behavioural activation strategies from CBT can be implemented to break the negative circle of depressive avoidance strategies and the apathy and withdrawal that follows. The aim of these strategies is to structure attempts to undertake activities which can improve one's mood and quality of life (Papa et al., 2013). If these activities, in addition to being pleasant and meaningful, are also linked to activities that clients enjoyed before the job loss, this can also facilitate the reconstruction of one's self (Papa & Lancaster, 2016).

From the perspective of the ACT, *acceptance* is a process of unconditionally allowing and actively inviting all thoughts, feelings, experiences in the client's life that they would prefer to suppress or avoid and that cannot be influenced by one's behaviour (Jansen & Batink, 2018). Hence, clients need to learn to distinguish between *pain*, which is a part of life and caused by direct circumstances, and *suffering*, which has no clear cause and arises from resisting pain (Hayes et al., 2012). The goal is to develop willingness in the client to accept psychological consequences of life events, such as one's job loss, as they come rather than trying to avoid emotional triggers of the job loss by employing anxious avoidance strategies.

To address depressive avoidance behaviour, ACT interventions focused on *exploring personal values* may be effective (Hayes et al., 2012). For instance, if clients categorise justice, friendship, and clarity as their main personal values, the next step would be to support them to define what a value-oriented life would precisely entail; particularly, which steps and actions can be taken to increase their sense of justice, friendship, and clarity in their life. The answers can help to draw up a specific action plan to encourage clients to undertake small steps towards committed action and a value-oriented life (Batink et al., 2012).

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With respect to the third core process, facilitating *integration in the autobiographical memory* of the job loss and its consequences, a key aim is to help clients to rearrange their internal and external world in such way that the loss is taken into account. From a CBT perspective, this can be achieved by discussing the clients' narrative of the job loss. The next step is to carefully review memories of the circumstances leading up to the dismissal, zooming in on the most painful and meaningful elements (Beck & Dozois, 2011). Facing these painful moments, feelings, and thoughts instead of avoiding them can help the client to integrate the job loss with their existing memories and image of themselves.

From the perspective of the ACT, interventions focused on the *self* can help to integrate the job loss into the client's autobiographical memory. Clients will unravel the self on three levels, namely the self as content, as process, and as context, and practice with the ability to take different perspectives. Mapping aspects of the self on different moments in time, can help clients to get in touch with that part of the self which is constant throughout time, and will remain the same even without the lost job (Jansen & Batink, 2018).

Future Research

One of the goals of this presented framework is to stimulate systematic research. As a starting point, we have formulated several areas of interest for future research on JLCG symptoms.

Areas for Further Research

1. From research by Bonanno and colleagues (2011) an estimation can be made that JLCG symptoms occur in approximately 18% of the cases of involuntarily job loss. However, this research was focused on emotional distress and quality of life, rather than JLCG symptoms. Before we can determine the prevalence of JLCG symptoms, we first need to conduct more systematic research whether JLCG symptoms substantially differ from *uncomplicated/healthy grief*, *depression*, and *anxiety* symptoms after involuntary job loss.
2. Job loss often leads to a decrease of available resources and over time depletion of resources (e.g., money, time, social contacts, "favours"; Hobfoll et al., 2018). The degree to which available resources and the depletion of resources are involved in the development and maintenance of JLCG symptoms needs to be thoroughly examined. This knowledge could provide more guidance for tailor-made preventive measures and early interventions.

3. Finally, the influence of negative, but also positive cognitions on JLCG symptoms needs to be unravelled to identify vulnerable individuals after involuntarily job loss and to create customised psychological interventions. It seems conceivable that these interventions, for instance from CBT or ACT, should focus on modifying the negative cognitions and biases created by the job loss and reinforce positive cognitions, such as hope, optimism, and self-efficacy, to reduce the JLCG symptoms.

Author Contributions

Janske H. W. van Eersel, Toon W. Taris and Paul A. Boelen (Writing-review & editing); Janske H. W. Eersel (Writing-original draft). Paul A. Boelen and Toon W. Taris (Supervision).

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CHAPTER 9

General discussion

Involuntary job loss is considered a major life event, affecting the lives of many (McKee-Ryan et al., 2005). In the Netherlands the current unemployment rate is 3.3%, which accounts for 307,000 individuals (CBS, 2021a), including 90.000 long-term unemployed persons (CBS, 2021b). The Dutch government spent over 21,6 billion on unemployment benefits in 2021 (UWV, 2021). Next to these economic costs, at the individual level job loss can cause severe emotional distress (Brand, 2015), depression (Stolove et al., 201), anxiety (Howe et al., 2017), physical problems (Norström et al., 2014), disruption of identity and social status (Papa & Lancaster, 2016), and stigmatization (Blau et al., 2013). Although the majority of the individuals confronted with involuntary job loss show stable levels of healthy functioning after job loss (Bonanno et al., 2011), a significant minority develops symptoms of job loss-related complicated grief (JLCG; Papa & Maitoza, 2013).

At the start of this project information on JLCG symptoms was sparse. Research on grief following bereavement loss showed that complicated grief symptoms include reactions like separation distress, yearning, preoccupation with the loss, anger, bitterness, and the feeling that life is meaningless, causing persistent suffering and impairments in daily life (Prigerson et al., 2009). It seemed conceivable that if JLCG symptoms are in some way similar to complicated grief symptoms following bereavement loss, they could not just negatively affect one's psychological well-being, but could also form an obstacle to re-entering the labour market (Carlier et al., 2014; Janssens et al., 2020). Hence, the main research question of this dissertation was: *'What are characteristics and correlates of complicated grief symptoms following job loss?'*. This research question was addressed in eight chapters drawing on various samples, study designs and statistical techniques.

Various aspects of this research question were addressed in Chapters 2 to 8. Chapter 2 and Chapter 6 introduced novel instruments to measure JLCG symptoms and negative cognitions related to the job loss. Chapter 3 examined potential risk factors related to JLCG symptoms. Chapter 4 and Chapter 5 continued to study the interrelation between JLCG, depression, and anxiety symptoms following involuntary job loss. Chapter 7 analysed JLCG symptoms in relation to daily activities. Chapter 8 introduced a cognitive-behavioural framework to explain the underlying mechanisms which may lead to JLCG symptoms.

Summary of Findings per Chapter
Development and Validation of the Job Loss Grief Scale
In Chapter 2 we described the development and validation of an instrument to measure JLCG symptoms, namely the Job Loss Grief Scale (JLGS). Drawing on survey data from 288 participants, the study showed that the JLGS instrument is a one-dimensional scale with strong psychometric properties. The results of the confirmatory factor analysis implied

that JLCG symptoms can be distinguished from depression and anxiety symptoms following involuntary job loss. As for socio-demographics and work characteristics, they held no significant relation with JLCG symptoms, unlike circumstances surrounding the job loss which did show a significant relation. This implies that when individuals experience their job loss as sudden, unfair, or beyond their control, the chance of developing JLCG symptoms increases.

Risk factors for the Development and Maintenance of JLCG Symptoms

In Chapter 3, we built on the findings in Chapter 2, and examined potential risk factors for the development and maintenance of JLCG symptoms on two points in time, six months apart. The study showed that a strong belief in an unjust world was positively associated with JLCG symptoms and that this effect remained stable over time. A more frequent use of maladaptive coping strategies and lower level of self-esteem were significantly related to JLCG symptoms, although these effects did not remain significant over time. This indicates that these three variables are potential risk factors for the development and maintenance of JLCG symptoms. Finally, consistent with our findings in Chapter 2, there was no significant association between JLCG symptoms on the one hand, and socio-demographic and work characteristics on the other hand.

Cross-lagged Relations between JLCG, Depression, and Anxiety Symptoms

In Chapter 4, the interrelationship between JLCG, depression, and anxiety symptoms was further explored with crossed-lagged analyses at two points in time, six months apart. Drawing on survey data from 128 participants, the results showed that JLCG symptoms at Time 1 were positively associated with depression symptoms at Time 2, but not vice versa. Similar results were found for anxiety: JLCG symptoms at Time 1 were positively associated with anxiety symptoms at Time 2, yet not the other way around. These findings provide the first evidence that JLCG symptoms may contribute to the aggravation of depression and anxiety symptoms later in time.

Latent Class Analysis based on JLCG, Depression, and Anxiety Symptoms

In Chapter 5, we examined the interrelationship between JLCG, depression, and anxiety symptoms by using a person-centred approach instead of the variable-centred approach employed in Chapter 2. We conducted a latent class analysis to identify classes based on different patterns of endorsement of reactions of JLCG, depression, and anxiety. The results revealed four classes: (I) a mixed class characterised by endorsement of most of the items representing JLCG, depression, and anxiety reactions, (II) a grieving class, (III) a predominantly depressed class, and (IV) a resilient class. The resilient class comprised approximately half of the sample (45%). Class membership was unrelated to most socio-demographics and work characteristics. Importantly though, if an individual perceived

one's dismissal as sudden, unfair, and without an opportunity for an appropriate farewell, there was a lower probability to be assigned to the resilient class. Multinomial regression analyses showed that, compared to the resilient and the depressed class, endorsement of experiencing the dismissal as unfair increased the chance of being assigned to the grieving class.

Development and Validation of the Beliefs about Loss of Work Scale

In Chapter 6, we drew on the results of Chapter 3 to further explore potential risk factors for JLCG symptoms. To this aim, we developed and validated an instrument, the Beliefs about Loss Of Work (BLOW) scale. This scale was designed to tap into negative cognitions that may play a role in the development and maintenance of emotional distress following job loss. Confirmatory factor analysis revealed that a second-order eight factor model had the best fit to the data. The overall BLOW scale and its eight subscales (measuring cognitions about the self, life, the future, the world, others, self-blame, threatening misinterpretations of grief, and inappropriate grief reactions, respectively) showed solid psychometric properties. In general, the BLOW scale can facilitate research on the impact of involuntary job loss and can enable practitioners to identify negative cognitions associated with elevated levels of emotional distress following involuntary job loss.

Daily Diary Study on JLCG Symptoms, Basic Needs, and Daily Activities

In Chapter 7, we examined the link between JLCG symptoms and depression on the one hand and daily activities on the other hand with the basic needs distinguished in Jahoda's latent deprivation model (1933/2002) as mediator. To this aim a diary study was conducted on five consecutive days among 236 participants, which resulted in 1,046 daily measures. The study results showed that high involvement in relaxing activities, in terms of time spent, was associated with less fulfilment of the basic needs, whereas longer engagement in social, physical, high-duty, and meaningful activities was related with more fulfilment of the basic needs. Nevertheless, the effect sizes were relatively low. The perceived utility of the daily activities showed a more solid relation with the basic needs, indicating that when someone perceives the activities as more useful, one will experience more fulfilment of the basic needs. The mediation effect of the basic needs, with time spent and perceived utility of the activities on the one hand, and JLCG and depressive symptoms on the other hand, showed significant results with minor effects sizes, indicating that the degree to which the latent deprivation model can account for the relation between daily activities and emotional distress was limited.

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A Cognitive-Behavioural Framework of JLCG symptoms

In Chapter 8, we introduced a cognitive-behavioural framework that may help to explain the underlying mechanisms of the development and maintenance of JLCG symptoms. Three core processes appear to play a central role in this phenomenon. First, the job loss can create and reinforce negative cognitions concerning one's self, one's life, one's future, the world, and one's own grief reactions. Global negative beliefs about one's self, life, and one's future may result in, e.g., a diminished sense of self and a strong belief in an unjust world; the misinterpretation of one's grief reactions may increase avoidance behaviour and a more intense sense of grief. Second, the job loss may fuel engagement in anxious and depressive avoidance behaviours in order to avoid the confrontation with the reality of the loss. These behaviours can result in, e.g., social withdrawal and apathy. Third, insufficient integration of the job loss into the autobiographic memory results in continuously and easily triggered loss-related thoughts, sensations, and emotions in the associative network of memory. The three core processes can reinforce each other's effects, which can result in the manifestation of JLCG symptoms. These three core processes can be influenced by certain risk factors, such as circumstances surrounding the job loss, personality traits, and the social environment. JLCG symptoms can lead to an increase of psychological problems, emotional distress, reduced employability, depletion of resources, and a decreased chance of re-employment.

Answering the Research Question and Overall Findings

What are characteristics and correlates of complicated grief symptoms following job loss?

The main findings of the studies will be discussed to answer the research question. First, our study results endorse the findings of Papa and colleagues (Papa & Lancaster, 2016; Papa & Maitoza, 2013), and indicate that JLCG symptoms are in some way similar to complicated grief symptoms following bereavement loss, in terms of characteristics like: separation distress, longing and yearning for the lost job, feelings of anger and bitterness over the job loss, a sense of futility, and shattered assumptions about the self, the future, and the world. In healthy trajectories, people's common negative thoughts about their self, their life, and their future after the job loss will diminish when they start to rebuild their self-esteem based on positive experiences outside their lost job. In the case of JLCG symptoms, this adverse mindset remains in place and is reinforced as time passes by. The Job Loss Grief Scale has shown to be reliable and valid instrument to measure these JLCG symptoms, and may aid in identifying and treating vulnerable individuals after involuntary job loss; the scale may also contribute to systematic research on the antecedents and consequences of JLCG symptoms.

Second, our results of the variable-centred and person-centred studies both revealed that symptoms of JLCG, depression, and anxiety after involuntary job loss form distinguishable clusters. This endorses the proposition that JLCG symptoms represent a unique concept and, thus, attest to the construct validity of JLCG symptoms. Moreover, these findings are in line with the findings of Papa and Maitoza (2013). The results from our cross-lagged study indicate that JLCG symptoms may predict depression and anxiety symptoms over time. This implies that yearning for and preoccupation with the lost job, may hinder involvement in positive and valued activities, which can fuel depressive symptoms, and the fears, worries and rumination about the uncertainties of the future may fuel anxiety symptoms.

Third, our studies indicated several potential risk factors for the development and maintenance of JLCG symptoms. A general belief in unjust world, a tendency towards the use of maladaptive coping strategies, and a lower level of self-esteem were found to be related to JLCG symptoms, while socio-demographics and work characteristics appeared to be unrelated to JLCG symptoms. Still, the circumstances surrounding the job loss may also be a risk factor, especially when individuals perceive their job loss as sudden, unfair, and beyond their personal control. From the perspective of the conservation of resources theory (Hobfoll et al., 2016), it is conceivable that the loss of resources can create and reinforce negative cognitions and fuel feelings of unfairness, bitterness, and anger (e.g., 'I did not deserve this, the world is unfair'). In the case of job loss, depletion of available resources with the passage of time is a likely scenario (e.g., financial means, social support, hope, and self-efficacy). When resources have been exhausted, an individual is more likely to enter a defensive and irrational mode to preserve oneself (Hobfoll et al., 2018), which may increase one's emotional distress and simultaneously decrease one's chances of re-employment.

Finally, our study results suggested that undertaking social, physical, high-duty, and meaningful activities may help to mitigate the negative impact of one's job loss. In terms of alleviating JLCG and depressive symptoms, the time spent in the activity is subordinate to the perceived utility of the activity. This is noteworthy given that these results contradict common assumptions underlying interventions such as behavioural activation, which propose that unemployed individuals should engage in healthy activities for a certain period of time to reduce emotional distress (Martell et al., 2013; Papa et al., 2013).

Limitations
The conducted empirical studies have several limitations. First, the Job Loss Grief Scale to measure JLCG symptoms was based on the Inventory of Complicated Grief-Revised (ICG-R; Boelen et al., 2003), which measures different putative markers of complicated

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grief following bereavement loss. The choice for using the ICG-R was made since this instrument has strong and well-tested psychometric properties and because there was no reason to assume that JLCG symptoms would differ considerably from complicated grief symptoms following bereavement loss. More specifically, at the start of this project, several studies had already shown that there are commonalities between complicated grief reactions following bereavement loss, job loss, divorce (Papa et al., 2014), romantic break-ups (Boelen & Reijntjes, 2009), and natural disasters (Shear et al., 2011). Hence, the choice to use the ICG-R as a starting point and to build further on the work of Papa and Maitoza (2013) on JLCG symptoms made sense. The drawback of this method is that it may lack certain nuances in defining JLCG symptoms and how they differ from complicated grief reactions following bereavement loss. Therefore, in addition to the quantitative studies, it is advisable to conduct more qualitative research in order to systematically assess the exact perceptions and experiences of the individuals who suffer from JLCG symptoms after involuntary job loss.

Second, our studies were mostly based on convenience samples where individuals themselves decided whether to take part in the study or not. Characteristics of the individuals who decided not to participate or who we could not reach via our recruitment channels (e.g., social network, social media channels, and workshops) are unknown. Consequently, generalisations must be made with caution and no statements can be made regarding the prevalence of JLCG symptoms in the population, as would be the case if a cohort of unemployed individuals had been studied, ideally over a longer period of time (Etikan et al., 2016). It seems conceivable that due to this self-selection bias relatively more individuals who experienced a high level of emotional distress participated in our studies, as opposed to individuals with a strong tendency towards avoidance behaviour, who were probably less willing to participate in our studies.

Third, based on prior findings, a limited selection of potential risk factors for the development and maintenance of JLCG symptoms was included in our studies, including circumstances surrounding the job loss (Archer & Rhodes, 1993; Brewington et al., 2004), a tendency towards maladaptive coping strategies, a general belief in an unjust world, and a lower level of self-esteem (Papa & Maitoza, 2013). It was deemed important to first replicate these prior findings with a validated instrument for JLCG symptoms and different (longitudinal) study designs before expanding the search to other potential risk factors. In further research, this selection can be broadened, for instance by including guilt-related emotions, since research on bereavement loss (Stroebe et al., 2014) and cancer caregivers (Trevino et al., 2018) have shown that feelings of guilt can evoke reactions of complicated grief after the loss of a significant other. In the case of job

loss, it seems likely that individuals feel in some way responsible for their job loss and believe that if they would have acted differently it could have been prevented. These types of negative cognitions may lead to feelings of guilt and rumination about the circumstances surrounding the job loss.

Fourth, the cross-lagged analyses between JLCG, depression, and anxiety symptoms in Chapter 3 were based on two points in time with an interval of six months. Since this was the first cross-lagged study on these symptoms with regard to involuntary job loss, it was uncertain what the effect of the time-interval dependency was on the current results (Taris, 2000). For instance, it is conceivable that the cross-lagged effect from depression and anxiety on JLCG symptoms take more time to reveal itself than vice versa. There is no theoretical reason to assume this, because the present findings in the case of job loss are in line with prior cross-lagged analyses studying the linkage between of complicated grief, depression, and anxiety following bereavement loss (Djelantik et al., 2018; Lenferink et al., 2019; Prigerson et al., 1996). Still, these results need to be replicated with varying (shorter and longer) time-intervals to further unravel the interrelation between JLCG, depression, and anxiety symptoms following involuntary job loss. Studies with more than two time-intervals would also allow the application of even more sophisticated statistics for more robust results, such as random intercept cross-lagged modelling (Hamaker et al., 2015).

Finally, all our studies were conducted in the Netherlands, where unemployment benefits are relatively well-arranged (Government of the Netherlands, 2021). Our study results and the findings of Papa and Maitoza (2013) on JLCG symptoms so far showed no significant relation between loss of income and JLCG symptoms. Still, studies on the impact of unemployment did find that better unemployment benefits were related to higher levels of psychological well-being due to less financial strain (Paul & Moser, 2009; Wanberg et al., 2020). Of course, income reduction does not necessarily have to result in financial strain, since this also depends on specific contextual factors (e.g., level and duration of unemployment benefits, the availability of savings, and having a partner with an income). The relatively high-level unemployed benefits in the Netherlands could provide individuals more time to grieve before they have to start searching for another job; therefore, generalization of these findings to other countries with different well-fare systems has to be made with caution.

Practical Implications

Notwithstanding the aforementioned limitations, our study results and literature reviews have offered a valuable basis for the development of a cognitive-behavioural framework to define JLCG symptoms. This framework draws on the model of Boelen and colleagues

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(2006), which explains the process of complicated grief following bereavement loss. In the case of involuntary job loss, similar core processes seem to play a substantial role, namely (1) negative cognitions related to the job loss and misinterpretation of one's grief reactions, (2) anxious and depressive avoidance strategies to cope with the job loss and its consequences, and (3) insufficient integration of the loss into the autobiographical memory or "life story" of the person. This framework is generally consistent with some of our study results as well as the findings of Papa and Maitoza (2013), which all show strong relations between JLCG symptoms on the one hand, and a tendency towards maladaptive coping strategies and negative cognitions related to job loss on the other hand. The interaction between these core processes can lead to the development and maintenance of JLCG symptoms and, therefore, it seems essential to address these processes with specific interventions, such as cognitive restructuring, defusion techniques, or behavioural activation. For instance, cognitive restructuring and defusion techniques can be deployed to modify negative cognitions and misinterpreted grief reactions. Behavioural activation strategies can be implemented to break the negative circle of depressive avoidance behaviour. And interventions from acceptance and commitment therapy aimed at the 'self', can help to integrate the loss into one's autobiographical memory by exploring parts of the self that remain constant over time.

Our study results, as well as the previous findings of Brewington and colleagues (2004) and Papa and Maitoza (2013), indicate that job loss circumstances may be a risk factor for the development of JLCG symptoms. Therefore, positively influencing the circumstances surrounding the job loss may have a preventive effect on JLCG symptoms. In most cases there are legal and regulatory issues that affect how and when employees are notified of their prospective dismissal. Still, employers can affect this process by the way in which they give notice and thus reduce the level of emotional distress before, during, and after the job loss. By involving employees earlier in the termination process, as far as this is possible within the given context, it becomes less likely that they will experience their dismissal as unexpected. Openness in communication, consistent feedback, and respect for each other can decrease the degree to which individuals experience their job loss as sudden or unfair. Also, when employers provide a valid explanation for the dismissal, it is less likely that employees will experience their job loss as unfair, or continue to wonder and search for a valid reason why their job loss occurred. An exit interview could be helpful as well by offering an opportunity to answer pending questions, for closure, and to share achievements and appreciations (Gordon, 2011). This may enable employees to probably experience higher levels of personal control and to use more adaptive coping strategies, which can mitigate the negative aftermath of their job loss.

Scientific Implications

This dissertation covers just the tip of the iceberg, since at this moment our knowledge of JLCG symptoms is still limited. However, the cognitive-behavioural framework of JLCG symptoms may be of use to aid scholars in studying JLCG symptoms and underlying mechanisms and risk factors of these symptoms, more systematically.

First, one of the priorities should be to examine the interrelation between JLCG, depression, and anxiety symptoms following involuntary job loss in more detail. Our study results and the findings from Papa and Maitoza (2013) indicate that they form distinguishable symptom clusters and that the symptoms may influence each other over time. Nonetheless, these findings need to be replicated in different samples and other countries to test and validate the robustness of these current results. Along the same line, it is essential that we learn more about the differences and the overlap between a better grieving process following involuntary job loss and JLCG symptoms; this may also us to determine when normal grief reactions evolve into JLCG symptoms.

Second, it is essential for future research to examine the exact impact of the three core processes in the cognitive-behavioural framework of JLCG symptoms, as well as the interaction effect between these three processes. Negative cognitions and maladaptive coping strategies have been linked to JLCG symptoms in cross-sectional designs in our studies and previous research (Papa & Maitoza, 2013; Papa & Lancaster, 2016), as well as in longitudinal designs in our studies. These findings should be replicated and tested in different study designs. For instance, including more time points with a shorter or longer time interval could provide more precise information on the cross-lagged effect between JLCG symptoms, negative cognitions, and maladaptive coping strategies.

Finally, it would be interesting to follow a cohort of individuals, who have involuntary lost their job, for a longer period of time. That would provide the opportunity to further explore the consequences of JLCG symptoms, examine the characteristics of the individuals who suffer from JLCG symptoms compared to those individuals who show stable trajectories of healthy functioning, and to determine the prevalence of JLCG symptoms in that cohort.

In conclusion, the majority of the individuals seems to recover well after involuntary job loss, while a significant minority develops high levels of emotional distress. The work in this dissertation shows that within this small group, we should not only focus on symptoms of depression and anxiety, but that we should also be alert to the presence of JLCG symptoms in order to identify and treat vulnerable individuals after involuntary job loss.

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Samenvatting
Summary in Dutch

HET DOORWERKEN VAN BAANVERLIES: KENMERKEN EN GEVOLGEN VAN GECOMPLICEERDE ROUWKLACHTEN NA BAANVERLIES

In 2015 lag het werkloosheidspercentage in Nederland op 6,9, wat gelijk staat aan 616.000 werkloze personen op een populatie van 17 miljoen (CBS, 2021a). Van deze groep hadden 289.000 individuen tenminste 12 maanden geleden hun baan verloren (CBS, 2021b). Achter deze cijfers gaat veel leed schuil. Enerzijds zijn de maatschappelijke kosten torenhoog; in 2015 heeft de Nederlandse overheid meer dan 22,1 biljoen euro uitgegeven aan werkloosheidsuitkeringen (UWV, 2015). Anderzijds kan onvrijwillig baanverlies een grote weerslag hebben op het psychologische- en fysieke welzijn van de getroffen persoon (Brand, 2015; Wanberg, 2012). In een significante minderheid kan onvrijwillig baanverlies zelfs leiden tot rouwklachten (Archer & Rhodes, 1993; Brewington et al., 2004; Papa & Maitoza., 2013).

Een rouwproces na baanverlies kan een breed scala aan uiteenlopende emoties, cognities en gedragingen beslaan. In de acute fase van rouw kan dit gepaard gaan met een hoge mate van psychologische stress. Niettemin, zolang iemand in staat blijft om te functioneren in diens dagelijks leven, en het een relatieve korte periode betreft, wordt dit beschouwd als een onderdeel van een gezond rouwproces (Harris, 2020). Wanneer dit gezonde proces wordt verstoord kan dit resulteren in gecompliceerde rouwklachten gerelateerd aan het baanverlies (Papa & Maitoza, 2013). Deze rouwsymptomen worden gekenmerkt door: moeite om het verlies te accepteren, problemen om "door te gaan" met leven, gevoelens van woede, bitterheid en schuld, een gebrek aan zingeving, verlangen naar de verloren baan, opdringerige of preoccuperende gedachten aan het verlies en identiteitsontwrichting (Prigerson et al., 2009).

De meeste onderzoeken aangaande de impact van baanverlies en werkloosheid hebben zich gericht op uitkomstenmaten als depressie, angst en kwaliteit van leven. Hierdoor weten we nog relatief weinig over het fenomeen gecompliceerde rouwklachten ten gevolge van baanverlies en hoe deze klachten zich verhouden ten aanzien van depressie en angstklachten. Om deze reden staat in dit proefschrift de volgende vraag centraal: *Wat zijn de kenmerken en correlaties van gecompliceerde rouwklachten na baanverlies?* Deze kennis is essentieel om enerzijds kwetsbare mensen, die rouwklachten ervaren na onvrijwillig baanverlies, te kunnen identificeren en behandelen, en anderzijds om interventies op maat te kunnen ontwikkelen om deze rouwklachten te reduceren.

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Verschillende aspecten van de onderzoeksvraag komen aan bod in Hoofdstuk 2 tot en met Hoofdstuk 8. In Hoofdstuk 2 en in Hoofdstuk 6 worden nieuwe meetinstrumenten geïntroduceerd om gecompliceerde rouwklachten na baanverlies en negatieve cognities gerelateerd aan baanverlies te meten. In Hoofdstuk 3 zijn potentiële risicofactoren voor rouwklachten ten gevolge van baanverlies onderzocht. In Hoofdstuk 4 en in Hoofdstuk 5 is de relatie tussen symptomen van gecompliceerde rouw, depressie en angst na onvrijwillig baanverlies verder uitgediept. In Hoofdstuk 7 zijn symptomen van gecompliceerde rouw na onvrijwillig baanverlies bestudeerd in relatie tot dagelijks activiteiten. Tot slot is in Hoofdstuk 8 een cognitief gedragsraamwerk geïntroduceerd om de onderliggende mechanismes te kunnen verklaren die kunnen leiden tot symptomen van gecompliceerde rouw na onvrijwillig baanverlies.

De Ontwikkeling en Validatie van de WerkVerliesLijst

In Hoofdstuk 2 hebben we de ontwikkeling en validatie van een nieuw meetinstrument omschreven, namelijk de WerkVerliesLijst (WVL). Dit instrument meet symptomen van gecompliceerde rouw na baanverlies. Aan dit onderzoek hebben 288 participanten deelgenomen. De resultaten laten zien dat de WVL een uni-dimensionaal, betrouwbaar en valide meetinstrument is. Tevens tonen de resultaten aan dat symptomen van gecompliceerde rouw onderscheiden kunnen worden van depressie- en angstklachten na onvrijwillig baanverlies. Sociaal-demografische gegevens en werkkenmerken hangen niet significant samen met gecompliceerde rouwklachten. Daarentegen laten de omstandigheden van ontslag wel een significante relatie zien met de mate van gecompliceerde rouwklachten. Dit impliceert dat wanneer mensen hun baanverlies als onverwacht, onrechtvaardig of buiten hun persoonlijke controle ervaren, de kans op het ontwikkelen van gecompliceerde rouwsymptomen toeneemt.

Risicofactoren voor Gecompliceerde Rouwklachten na Baanverlies

In Hoofdstuk 3 hebben we gekeken naar risicofactoren die mogelijk samenhangen met gecompliceerde rouwklachten ten gevolge van baanverlies. Dit is gedaan op twee momenten in de tijd, zes maanden na elkaar. De resultaten laten zien dat er een sterke positieve relatie bestaat tussen gecompliceerde rouwklachten na baanverlies en het geloof in een onrechtvaardige wereld, dit effect blijft stabiel over de tijd. Dit impliceert dat geloof in een onrechtvaardige wereld gecompliceerde rouwklachten kan versterken met het verstrijken van de tijd. Het vaker toepassen van niet-passende coping strategieën en een lager gevoel van eigenwaarde hangen eveneens significant samen met gecompliceerde rouwklachten na baanverlies. Dit impliceert dat deze variabelen mogelijke risicofactoren zijn voor de ontwikkeling en de instandhouding van gecompliceerde rouwklachten na baanverlies. Sociaal-demografische gegevens en werkkenmerken lieten wederom geen significant verband zien met gecompliceerde rouwklachten.

Verbanden tussen Gecompliceerde Rouw, Depressie en Angst

In Hoofdstuk 4 is de relatie tussen gecompliceerde rouw-, angst- en depressieve klachten na onvrijwillig baanverlies verder onderzocht. Dit is gedaan door de kruiselingse verbanden tussen gecompliceerde rouwklachten enerzijds en angst- en depressieve klachten anderzijds te bestuderen op twee momenten in de tijd, zes maanden na elkaar. Aan deze studie hebben 128 personen deelgenomen. De analyses laten zien dat gecompliceerde rouwklachten op tijdspunt 1 een voorspeller zijn van depressieve klachten op tijdspunt 2, maar niet vice versa. Er zijn vergelijkbare resultaten gevonden voor gecompliceerde rouw- en angstklachten op beide tijdspunten. Deze bevindingen leveren het eerste bewijs dat gecompliceerde rouwklachten met het verstrijken van de tijd mogelijk kunnen leiden tot depressieve- en angstklachten.

Latente Klassenanalyse: Gecompliceerde Rouw, Depressie en Angst

In Hoofdstuk 5 is de relatie tussen gecompliceerde rouw-, depressieve- en angstklachten verder uitgediept middels een latente klassenanalyse. Bij deze analyse worden groepen geïdentificeerd op basis van verschillende patronen van de aanwezigheid van gecompliceerde rouw-, angst- en/of depressieve klachten. De resultaten van de latente klassenanalyse toonden vier groepen: (I) een 'gemengde' klasse, gekenmerkt door de aanwezigheid van gecompliceerde rouw-, angst- en depressieve klachten, (II) een 'rouwende' klasse, (III) een overwegende 'depressieve' klasse, en (IV) een 'veerkrachtige' klasse. De veerkrachtige klasse besloeg ongeveer de helft van de steekproef (45%). Sociaal-demografische gegevens en werkkenmerken lieten geen significante relatie zien met klasse-indeling. Echter wanneer personen hun ontslag ervaren als onverwacht, onrechtvaardig en zonder de mogelijkheid om passend afscheid te nemen, is de kans kleiner dat zij in de veerkrachtige klasse worden ingedeeld. De resultaten toonden ook aan dat, in vergelijking met de veerkrachtige- en de depressieve klasse, een hoge mate van ervaren onrechtvaardigheid van het ontslag de kans vergroot om te worden ingedeeld in de rouwende klasse groep.

De Ontwikkeling van de Rouw Cognitie Vragenlijst - Werk

Hoofdstuk 6 stond in het teken van de ontwikkeling en validatie van een nieuw meetinstrument voor negatieve cognities gerelateerd aan baanverlies, de Rouw Cognitie Vragenlijst – Werk (RCV-W). De verwachting is dat deze negatieve cognities een belangrijke rol spelen in de ontwikkeling en de instandhouding van gecompliceerde rouwklachten na onvrijwillig baanverlies. De resultaten tonen aan dat de RCV-W een betrouwbaar en valide meetinstrument is, en dat er zowel met de totaalscore als met de sub schaal scores gewerkt kan worden. De RCV-W kan verder onderzoek stimuleren naar mechanismen die betrokken zijn bij baanverlies-gerelateerde emotionele stress en kan bijdragen aan de ontwikkeling van gerichte interventies om deze emotionele stress te reduceren.

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Dagboekstudie naar Gecompliceerde Rouw, Basisbehoeften en Dagelijkse Activiteiten

In Hoofdstuk 7 is Jahoda's latente deprivatie theorie (1933/2002) onderzocht in relatie tot gecompliceerde rouwklachten na onvrijwillig baanverlies en dagelijkse activiteiten. Er werd verondersteld dat betrokkenheid bij niet werk-gerelateerde activiteiten (bijv. sporten) vijf basisbehoeftes kan vervullen (bijv. de behoefte aan tijdstructuur) en dat vervulling van deze basisbehoeftes de negatieve impact van onvrijwillig baanverlies kan verzachten. Voor dit onderzoek is er een dagboekstudie uitgevoerd op vijf aaneengesloten dagen onder 236 personen. De resultaten laten een klein effect zien tussen de tijd die iemand besteed aan bepaalde activiteiten en de vervulling van de basisbehoeftes. Evenwel toonde het ervaren nut van de activiteiten een meer solide verband. Hoe sterker de activiteit als nuttig werd ervaren, hoe sterker de vervulling van de basisbehoeftes. Het mediatie-effect van de basisbehoeftes tussen de evaluatie van de dagelijkse activiteiten aan de ene kant, en de mate van emotionele stress aan de andere kant, kon niet worden bevestigd. Deze resultaten impliceren dat het zinvol is om personen, die last hebben van gecompliceerde rouwklachten na onvrijwillig baanverlies, te stimuleren om bepaalde activiteiten te ondernemen en dat de mate van ervaren nut van deze activiteiten door de persoon daarbij leidend is.

Een Cognitief Gedragsraamwerk voor Gecompliceerde Rouwklachten

In Hoofdstuk 8 hebben we een cognitief gedragsraamwerk geïntroduceerd, wat kan helpen om de onderliggende mechanismes van gecompliceerde rouwklachten na baanverlies te kunnen duiden. In dit raamwerk staan drie kernprocessen centraal. Ten eerste, onvrijwillig baanverlies kan negatieve cognities creëren of versterken ten aanzien van iemands zelf-, wereld-, levens- en toekomstbeeld en rouwreacties. Deze negatieve cognities over iemands zelfbeeld, leven en toekomst kunnen leiden tot ontwrichting van iemands identiteit en resulteren in geloof in een onrechtvaardige wereld. Misinterpretatie van iemands rouwreacties kan leiden tot een toename in vermijdingsgedrag en intensere rouwklachten. Ten tweede, kan onvrijwillig baanverlies aanzetten tot angstige en depressieve vermijdingsstrategieën om de realiteit van het verlies en diens gevolgen niet onder ogen te hoeven zien. Dit gedrag kan onder meer resulteren in sociale terugtrekking en apathie. Ten derde, gebrekkige integratie van het baanverlies in het autobiografische geheugen kan leiden tot voortdurende en makkelijk te triggeren verlies-gerelateerde gedachtes en gevoelens in het associatieve netwerk van het geheugen.

Deze drie kernprocessen kunnen elkaar versterken, wat kan leiden tot gecompliceerde rouwklachten na onvrijwillig baanverlies. Bepaalde risicofactoren kunnen deze kernprocessen beïnvloeden, zoals de omstandigheden van het ontslag, persoonlijkheidstrekken en de sociale omgeving. Tot slot kunnen gecompliceerde

rouwklachten op hun beurt weer leiden tot andere psychologische- en praktische problemen, zoals angst- en depressieve klachten, uitputting van hulpbronnen en een verminderde kans op het vinden van een nieuwe baan.

Samengevat laten de resultaten van dit proefschrift zien dat personen gecompliceerde rouwklachten kunnen ervaren na onvrijwillig baanverlies. Factor- en latente klassenanalyses hebben aangetoond dat gecompliceerde rouwklachten verschillen van angst- en depressieve klachten na onvrijwillig baanverlies. Vermijdingsstrategieën en negatieve cognities gerelateerd aan het baanverlies zijn meermaals in verband gebracht met de intensiteit van de gecompliceerde rouwklachten. Op basis van de bevindingen is een cognitief gedragsraamwerk geïntroduceerd om de onderliggende mechanismes van gecompliceerde rouwklachten na onvrijwillig baanverlies te kunnen duiden. Daarnaast zijn er twee nieuwe meetinstrumenten ontwikkeld en gevalideerd die kunnen bijdragen aan verder onderzoek naar de kenmerken en correlaties van gecompliceerde rouwklachten na onvrijwillig baanverlies.

Concluderend kan worden gesteld dat de meerderheid van de personen goed hersteld na onvrijwillig baanverlies, terwijl een significante minderheid vastloopt en een hoge mate van emotionele stress ervaart. Het werk binnen dit proefschrift laat zien dat we ons binnen deze minderheid niet alleen moeten richten op symptomen van depressie en angst, maar ook oog moeten hebben voor de gecompliceerde rouwklachten om kwetsbare individuen na onvrijwillig baanverlies tijdig te kunnen identificeren en te behandelen.

S

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About the author

About the Author

Janske van Eersel was born on December 18th, 1980 in Geldrop. She completed her secondary education at Strabrecht College in Geldrop, completed her higher education at Saxion University of Applied Science in Enschede and at Radboud University in Nijmegen, receiving her MSc from the latter university in Cultural and Religious Psychology in 2006.

Following her graduating, Janske started working as a psychologist at Emotional Brain where she conducted psychopharmacological research. After a year, she joined Van Campen Consulting, where she developed and implemented digital tools, provided trainings for the healthcare professionals, and conducted career assessments. In 2010, she transferred to Vier L, where she worked as a consultant in the labour reintegration sector, supporting people who lost their jobs. During this period, she attended a two-year course in loss and grief counselling.

In 2015, she became an external PhD student at Utrecht University to examine symptoms of complicated grief following job loss, and she started her own business. As an entrepreneur, she counsels individuals who experience complicated grief symptoms after their job loss and she trains professionals who work with people who lost their jobs. Additionally, in 2020 she started working as a lecturer at the Department of Clinical Psychology at Utrecht University.

A

International Peer-reviewed Publications

Van Eersel, J. H. W., Taris, T. W., & Boelen, P. A. (2021). Negative cognitions and emotional distress following job loss Development and validation of the Beliefs about Loss Of Work (BLOW) scale. *International Journal of Cognitive Therapy*. https://doi.org/10.1007/s41811-021-00126-6

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Manuscripts in Preparation

Van Eersel, J. H. W., Taris, T. W., & Boelen, P. A.. A cognitive-behavioural framework of job loss-related complicated grief symptoms. *In preparation.*

Lenferink, L. I. M., van Eersel, J. H. W., & Fransen M.. Is it accurate, acceptable, and feasible to measure grief in daily life using experience sampling methodology? *In preparation.*

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