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Sophie Hennekam, Subramaniam Ananthram

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Authors and Affiliations : Subramaniam Ananthram Curtin University

Corresponding author : Sophie Hennekam, Audencia Business School, shennekam@audencia.com



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Authors and affiliations:

Sophie Hennekam

Audencia Business School

8 rue de la Jonelière

44000 Nantes

shennekam@audencia.com

IRGO Bordeaux

35 Avenue d'Abadie

Bordeaux, France

Subramaniam Ananthram

Curtin University

Perth, WA, Australia

s.ananthram@curtin.edu.au

Corresponding author: shennekam@audencia.com

Abstract

Demotion has received little attention from scholars and practitioners alike. The purpose of this study was to assess empirically the reaction to, and outcomes of, both involuntary and voluntary demotion. Drawing on 49 semi-structured in-depth interviews with 28 involuntarily demoted workers and 21 voluntarily demoted workers, we develop a conceptual model using organizational justice theory and person-job fit of the reaction to and outcomes of demotion. We show that involuntarily demoted individuals might react by expressing turnover intentions and lower motivation and commitment, indicating that the demotee's reaction is related to perceptions of fairness. Voluntary demotion is related to a better work-life balance, greater satisfaction, less stress and burnout and is perceived to be a viable phased retirement option by older workers. In addition, the findings highlight the role of demotion-related stigma, status loss, identity threat, and age in the way employees react to the experience of demotion.

Keywords: age, identity threat, involuntary demotion, perceived organizational justice, person-job fit, status loss, stigma, voluntary demotion, work-life balance.

Introduction

Demotion can be defined as a downward movement within an organization's hierarchy leading to an actual or perceived loss of authority and/or responsibility (Carson & Carson, 2007), either with or without a decrease in salary (Ng, Sorensen, Eby, & Feldman, 2007). We distinguish between voluntary demotion, where the downward movement is initiated by an individual and results in moving to a lower position that better suits his/her needs (Verheyen & Vermeir, 2011), and involuntary demotion, where the demotion is initiated by the

organization (Carson & Carson, 2007; Ng et al., 2007). The focus of this article is on both voluntary and involuntary demotion. Both types of demotion can manifest as a reduction in rank, responsibility, span of control, job title, pay including benefits, or a mix of these.

Demotion as a research topic has received only limited attention from scholars worldwide, despite frequent calls for more investigation (Carson & Carson, 2007; Hennekam, McKenna, Richardson, & Ananthram, 2019; van Dalen & Henkens, 2018; Verheyen & Guerry, 2018). The few reported studies on involuntary demotion suggest that undergoing a demotion has mainly negative consequences, such as lower identification with one's job (Sargent, 2003), fewer developmental opportunities after being demoted (West, Nicholson, & Rees, 1990) and a decrease in the perception of organizational support (Eby & Dematteo, 2000). However, one study on voluntary demotion identified that individuals had opted for a lower position or a reduction in responsibilities to enable positive outcomes, including a reduction in work-related stress, to alleviate health issues or to enjoy spending more time at home (Josten & Schalk, 2010). These results indicate that involuntary and voluntary demotion have different motivations and outcomes.

Careers are changing and individuals are more likely to move in and out of the labour market, hold multiple jobs, change positions and occupations and engage in upward, lateral and downward moves (Barley, Bechky, & Milliken, 2017; Dries & Verbruggen, 2012). These changes manifest across organizational, occupational and/or geographic boundaries, leading to increasingly boundaryless careers (Verbruggen & De Vos, 2019). In this context, although the development of new forms of upward career movements, in the form of promotion or job changes to higher functions, continues to be the norm (Chudzikowski, 2012), we argue that both involuntary and voluntary demotion could become more widespread due to several factors. These factors include changing societal trends characterized by economic downturns, resulting in organizational restructuring (e.g., downsizing), an aging workforce necessitating

solutions around sustainable careers (De Vos & Van der Heijden, 2017) and workers seeking increasingly flexible working arrangements (Spreitzer, Cameron, & Garrett, 2017). As demotion becomes more commonplace, it is important to understand the possible consequences of both involuntary and voluntary demotion for the demotees, as well as the wider organizational consequences. Such an understanding will arguably expand the limited theoretical understanding of both types of demotion, as well as provide underpinning for human resource (HR) practitioners and managers in the use of demotion as a viable HR tool for improved employee and organizational performance.

The above arguments provide the motivation for this study. We report on a two-phase study that included a total of 49 semi-structured in-depth interviews: 28 interviews in phase one of the study with individuals who had undergone involuntary demotion and 21 interviews in phase two with voluntarily demoted workers. We utilize two theoretical lenses in our study. In line with the literature on downsizing (Brockner, Tyler, & Cooper-Schneider, 1992; Brockner, Wiesenfeld, Reed, Grover, & Martin, 1993), we considered organizational justice to be relevant when studying involuntary demotion (Verheyen & Guerry, 2018). Given the alignment between an individual's needs or wishes and his/her position (Bakker & Demerouti, 2007), person-job fit was chosen to further our understanding of voluntary demotion. We sought to investigate the following research questions:

1. *Using an organizational justice lens, how do employees react when being involuntarily demoted?*
2. *Using a person-job fit lens, what are the outcomes of voluntary demotion for individual workers?*

We make several contributions. First, we compare perceptions and outcomes of involuntary and voluntary demotion and make a theoretical contribution by highlighting the relevance of organizational justice with regard to involuntary demotion and person-job fit to

voluntary demotion. Second, we present the perspectives of individuals who have undergone demotion and their lived experiences (van Manen, 2016), building on earlier studies that reported on the perception of HR managers (van Dalen & Henkens, 2018), HR professionals (Verheyen & Guerry, 2018) and co-workers (Hennekam, Ananthram, & McKenna, 2019). This perspective gives unique insights into what it is like to undergo a demotion in today's workplace. Third, we make a contribution by providing a more contextual understanding of the reaction to demotion in organizations. More specifically, we identify stigma, status loss, identity threat/reaction of others and age as factors that play a role in the way in which employees react to both involuntary and voluntary demotion.

Literature review

Involuntary demotions could be instituted for various reasons – including disciplinary action, underperformance of employees, redundancies and restructuring (Verheyen & Guerry, 2018). Employees can also self-initiate a demotion voluntarily through, for example, asking for a reduction in rank, span of control or responsibility. Although econometricians have used a rather narrow definition of demotion, which includes only tangible and visible downward movement as a consequence of underperformance, social scientists have opted for a broader definition that includes non-performance-related downward movements that can involve a reduction in the span of control (Carson & Carson, 2007). Using the narrower definition, demotion affects less than 1% of all career moves globally, whereas this increases to 20-30% when the broader definition is considered (Carson & Carson, 2007). In this study, the broader definition is adopted in that we view demotion as a downward movement resulting from both performance- and non-performance-related factors and includes a reduction in rank, responsibility and span of control. However, it has been argued that demotions are rarely used

in practice, mainly because managers expect the consequences of applying this HR tool to be negative (van Dalen & Henkens, 2018).

It is important to distinguish between demotion with and without financial penalty, although it has been argued that even demotions without a reduction in pay or a fall in salary through reduced benefits have a negative financial impact in the long term (Carson & Carson, 2007). In their study involving 74 manufacturing firms in Portugal, Lima and Pereira (2001) identified that demotions had long-lasting negative effects on individual earnings. The study found that the difference in earnings between promoted and plateaued or demoted workers tended to increase over time, with a difference of 20% after 5 years, 55% after 10 years and 93% after 15 years. In addition, demoted individuals had fewer career development opportunities after their demotion, thus experiencing an indirect impact on their earnings (West et al., 1990).

Voluntary and involuntary demotions are instituted under different motivators and hence we use different theoretical lenses to study those different phenomena. As voluntary demotion is self-initiated by the employee, possibly to increase the alignment between that individual's needs or wishes and his/her position (Bakker & Demerouti, 2007), we use person-job fit to study voluntary demotion and identify its outcomes. Further, as involuntary demotion is initiated by the organization, it might not be positively perceived by individuals and could affect their perception of justice (Hennekam et al., 2019). We thus use organizational justice theory to understand its outcomes. Further justification of the relevance of these two lenses is provided next.

Aligning one's needs with one's job: voluntary demotion to enhance person-job fit

Person-job fit can be defined as the relationship between an individual's characteristics and those of the job or tasks that a person performs at work (Kristof, 1996). Person-job fit has

been conceptualized in two ways (Cable & Judge, 1996): first, the demands-abilities fit, in which workers' skills, knowledge and abilities are in line with the requirements of their job; and second, the needs-supplies or supplies-values fit, which is the match between the needs, desires or preferences of employees and the job they perform (Kristof-Brown, Zimmerman, & Johnson, 2005). We focus on the needs-supplies type of person-job fit, as this has been found to have the greatest impact on individual attitudes and behaviours, such as job satisfaction and organizational commitment (Boon, Den Hartog, Boselie, & Paauwe, 2011; Kristof-Brown et al., 2005). Although demotion has been suggested as a possible means of improving person-job fit (Kristof-Brown et al., 2005, p. 317) in order to better align the needs or preferences of individuals with the jobs they perform, it has never been studied from that perspective. Demotion has mainly been studied from an organizational justice perspective (Hennekam et al., 2019; Verheyen & Guerry, 2018) or by using attribution theory (van Dalen & Henkens, 2018). However, employees who self-initiate voluntary demotion might expect positive outcomes for doing so (Josten & Schalk, 2010), making person-job fit a more appropriate lens through which to study voluntary demotion.

Perception of the fairness of involuntary demotion: organizational justice theory

Involuntary demotion that is perceived as being forced may result in perceptions of unfairness, as previous research has shown that a lack of choice may embitter employees and lead them to reduce their psychological investment in the organization (Mowday, Porter, & Steers, 2013). Managers' awareness of the importance of fairness in work-related decisions (Cropanzana, Bowen, & Gilliland, 2007) has been one of the reasons for their reluctance to use involuntary demotion as an HR tool (Verheyen & Guerry, 2018). Perceptions of inequity can be applied to demotion situations (Verheyen & Guerry, 2018) in which individuals who have been involuntarily demoted perceive the demotion to be unjust and experience distress.

This sense of injustice relates in particular to the four types of organizational justice – distributive, procedural, interpersonal and informational. *Distributive justice* pertains to fairness in the role, responsibilities or salary (Phelps, 1987) of the demotee after demotion. Demotion involving a mismatch between a demotee’s salary and role/responsibilities compared with co-workers has, for example, been found in perceptions of inequity (van Dalen & Henkens, 2018).

Procedural justice pertains to the fairness of the rules and processes used to decide who is demoted and how this is implemented (Brockner & Greenberg, 1990). Given that very few companies have written demotion policies (Verheyen & Vermeir, 2011), demotees often do not have articulated rules regarding demotion on which they can rely. Thus, non-transparent demotion processes based on seemingly random and/or subjective criteria might result in perceptions of unfairness. This is exacerbated when the demotion motive is unclear (Colquitt, 2012).

Interpersonal justice refers to “respectful and socially sensitive treatment” (Bies, 2005, p. 93) and “reflects the degree to which people are treated with politeness, dignity, and respect by authorities and third parties involved in executing procedures or determining outcomes” (Colquitt, Conlon, Wesson, Porter, & Ng, 2001, p. 427). Appropriate verbal strategies to justify the use of demotion and communication of the demotion decision can assist in minimizing the apparent severity of demotion (Brockner & Greenberg, 1990). For example, demotion is likely to be perceived as more acceptable when it is presented as ‘the best alternative’ to layoffs.

Informational justice reflects fairness in information sharing (Greenberg, 1993). The amount of information supplied to justify a demotion is likely to influence the perceptions of informational justice if it increases understanding of the motive behind the demotion (Richter, König, Koppermann, & Schilling, 2016; Verheyen & Guerry, 2018). Receiving timely,

accurate and complete information helps individuals regain a sense of control (Kernan & Hanges, 2002).

The literature reports several negative reactions to involuntary demotion, including turnover intention and reduced commitment (Carson & Carson, 2007; Hennekam et al., 2019; Sargent, 2003; West et al., 1990), and negative outcomes for organizations when decisions and processes are perceived as unfair, such as lower customer satisfaction as a result of lower-quality customer service by unhappy employees (Ryan & Wessel, 2015). Negative emotional responses stemming from involuntary demotions have been found to be greater under certain circumstances (Hennekam et al., 2019). Research on related topics, such as downsizing, suggests that perceptions of stigma, status loss, identity threat and age might play a role (Carson & Carson, 2007; Leavitt & Sluss, 2015; Marr & Thau, 2014). These factors could also influence the way voluntary demotees react.

Factors that influence one's reaction to demotion

Stigma

Demotion can be considered a stigmatizing event, as it is often perceived as evidence of the failure of the demotee (Carson & Carson, 2007). That the term demotion is often replaced by others that are less socially stigmatizing, such as downward mobility (van Dalen & Henkens, 2018), suggests that demotion does indeed have a negative meaning attached to it. Stigma theory (Goffman, 1963) points to two common dimensions of stigma: concealability and perceived controllability. When demotion is a voluntary decision, the movement is perceived as controllable. As this form of demotion is self-initiated, an individual seeking demotion aspires to have demonstrably greater positive outcomes from a needs-fit perspective.

However, these positive outcomes would depend on whether the individual is able to convey

the positive aspects of the demotion to others i.e., is able to control the stigma attached to the demotion.

When demotion is involuntary, workers might feel that events are beyond their control. In addition, demotion often cannot be concealed, as the demoted individual continues to work at the organization. It has been argued that the stigma attached to being involuntarily demoted might lead to behaviours that can be detrimental to the organization, such as expressing less motivation and loyalty or sabotaging organizational procedures (Ambrose, Seabright, & Schminke, 2002).

Status loss

Status loss can be defined as the subjective experience of a decrease in professional regard (Neeley, 2013). There are many instances in organizations in which individuals assume a loss of status in terms of respect, influence or prestige (Magee & Galinsky, 2008; Ridgeway & Correll, 2006), and demotion is one of them. Although research has been conducted on status-threatening situations in which individuals fear status loss (Pettit, Yong, & Spataro, 2010; Scheepers, Ellemers, & Sintemaartensdijk, 2009), little research has been carried out with individuals who have had to deal with actual loss of status (Marr & Thau, 2014; Neeley, 2013). Individuals are sensitive to their relative standing in an organization (Magee & Galinsky, 2008; Pearce, 2011; Ridgeway & Correll, 2006), as this determines their levels of respect and influence. In addition, Pearce (2011) has theorized a link between status loss and organizational disadvantage, in the sense that individuals might believe that they are being denied the opportunity for promotion, high-impact assignments and leadership roles. As a consequence, demotion might lead to strong feelings of loss, which has been found to have a possible demotivating effect on workers (Ederer & Pataconi, 2010). Research has also shown that a greater relative loss of status leads to worse outcomes in terms of performance (Marr &

Thau, 2014). It would seem to follow, then, that individuals in prestigious and visible positions might suffer more from a demotion than lower-ranked individuals and, therefore, might react more strongly. As voluntarily demoted individuals self-initiate demotion as a trade-off for positive outcomes, the loss of status from a reduction in rank, for example, might not be as significant as for someone who is involuntarily demoted and for whom status from rank is important, thereby furthering a negative perception of organizational justice. This could potentially be exacerbated when future career opportunities are thwarted.

Identity threat

The experience of demotion can lead to an identity threat. An identity threat is defined as an “experience appraised as indicating potential harm to the value, meanings, or enactment of an identity” (Petriglieri, 2011, p. 641). It has been argued that identity threats are more likely to arise for those identities that are most central to one’s sense of self (Sluss & Ashforth, 2007). This implies that individuals who identify strongly with their occupation are more likely to experience an identity threat when undergoing demotion (Leavitt & Sluss, 2015). In addition, it has been posited that individuals who do not subjectively perceive themselves to have multiple alternative identities on which they can draw to construct a positive social identity are thereby more likely to view the event of a demotion as identity-threatening (Leavitt & Sluss, 2015). Such individuals are said to have low social identity complexity (Roccas & Brewer, 2002), which can be defined as an identity structure in which people recognize that their various in-groups are not fully convergent or overlapping (Roccas & Brewer, 2002). However, individuals who attach less importance to their work-related identity, and can draw on other social identities that provide a sense of meaning and satisfaction to them, might be better able to cope with the identity threat related to a demotion (Ashforth, Harrison, & Corley, 2008). In relation to the two types of demotion considered in this article, voluntarily

demoted individuals might be better equipped to give up some aspect of their professional identity as a trade-off for positive outcomes to which they aspire with a self-initiated demotion, compared with involuntarily demoted individuals who had not sought to be demoted and might attach greater importance to their professional identity. This might make involuntary demotion more painful, adding to that individual's perception of injustice.

Age

Demotion might be perceived differently depending on the age of the demotee (Josten & Schalk, 2010). Previous research has shown that more than half of older workers could imagine taking a step back in their careers (van Dalen & Henkens, 2015). For example, a demotion could provide work that is physically less challenging, which could help older workers deal with age-related decline (Kooij, van Woerkom, Wilkenloh, Dorenbosch, & Denissen, 2017), and has been suggested as a way to disengage slowly from work and move towards retirement (Damman, Henkens, & Kalmijn, 2013). For younger workers, both voluntary and involuntary demotion might be more negatively perceived because of the possible financial consequences and the negative effects this might have on their future career development opportunities.

Methodology

We employed a two-phase interview-based methodology in our investigation. The characteristics of the sample, the procedures followed and the process of the data analysis are outlined below.

Sample and study context

This study was conducted in the Netherlands, where demotions are a rather rare phenomenon (Josten & Schalk, 2010). Fifteen large organizations were approached with a request to collaborate on a research project on demotion. However, probably because of the sensitive nature of the subject, none of the organizations responded favourably to the request. As a consequence, the researchers opted to use convenience sampling by identifying individuals who had been demoted. Participants were recruited through blogs and forums as well as personal contacts of the first author. Demotion was defined as a downward movement in an organization's hierarchy leading to an actual or perceived loss of authority and/or responsibility, with or without a decrease in salary. We encouraged participants to rely on their perceptions, as previous studies had identified that people act upon their perceptions rather than any other reality (Jussim, 1991; Newman, Nielsen, & Miao, 2015). The only selection criterion was to have experienced a demotion at work, either in the form of a perceived reduction in rank, responsibilities, span of control, job title, pay through benefits, or a mix of these. Two individuals who had undergone a lateral change (different department, same job) contacted the researchers as they were unsure whether they should be included in the study and were, ultimately, excluded. Each interviewee was asked to identify other individuals who had experienced demotion and who might be interested in participating in the study. Both voluntarily and involuntarily demoted individuals were included in the study, albeit in a sequential manner. In phase one, only involuntarily demoted workers were included, whereas in phase two we specifically targeted voluntarily demoted workers in order to compare the two groups. The snowball technique has been argued to be ideal for studying populations that are not easily accessible (O'Leary, 2004) and led in this case to the identification of additional interviewees. The sample consisted of 49 individuals: 28 involuntarily demoted workers and 21 who had been voluntarily demoted; 49% of the sample was female; and the average age was 48.5 years, ranging from 32 to 64 years. The

interviewees worked in a range of sectors, such as financial services, education and healthcare. Table 1 outlines the demographic information of the sample as well as the official reason for the demotion. In accordance with Carson and Carson's (2007) approach, when employees were provided with a 'choice' between being fired or demoted, we classified the case as involuntary, as the demotion was organizationally induced. The type of demotion the employees experienced is also provided in the table. We distinguished between a reduction in rank, responsibilities, span of control, job title or pay through benefits, or a mix of these. Moreover, we distinguished between demotions with and without a financial penalty, either as a decrease in salary or indirectly as a reduction in benefits.

Insert Table 1 about here

Procedures

The interviewees were contacted by the first author and an individual interview was scheduled. All interviews were conducted by Skype and audio recorded after permission from the interviewees was obtained. Anonymity was guaranteed and the interviewees were told they could stop the interview at any time. The interviews were conducted in Dutch and lasted for about 90 minutes on average. The number of interviews was not determined beforehand; however, we stopped looking for more interviewees when saturation point was reached after having conducted 28 interviews regarding involuntary demotion and 21 relating to voluntary demotion. Moreover, it was difficult to find individuals who had been involuntarily demoted, as this HR tool is rarely applied in practice (Kohl & Stephens, 1990). As a consequence, the 28 interviews with involuntarily demoted workers were conducted over a time span of 14 months. This presents an important limitation, as perceptions and reactions might evolve over time. The time between the demotion and the interview is provided in Table 1. The interview

guide used in phase one when studying involuntarily demoted workers was adapted slightly to examine voluntary demotion and is based on the existing literature. The two interview guides can be found in the appendix (see Appendices A and B). In line with the semi-structured design, the researchers were open to discussing other issues referred to by the interviewees. The interview guides were dynamic and evolved as more interviews were conducted.

Analysis

The interviews were transcribed verbatim and the analysis was conducted in three interrelated steps. Both researchers were involved in the analysis to reduce error and bias in coding the transcripts (Mays & Pope, 2000) and inter-coder reliability was established. Cohen's κ was used to avoid chance agreement. Several rounds of discussion between the coders, modification of the codebook, coding and calculating the inter-coder reliability were necessary to obtain reliabilities that met the inter-rater reliability cut-off point of 0.80 (Miles & Huberman, 1994). The analysis was interpretive and iterative in nature and the researchers had to go back and forth between the transcriptions, coding book, literature and additional observational notes that were taken immediately after each interview was conducted in order not to lose sight of the context in which statements were given. Figure 1 below shows how the analysis evolved from the first-order themes to the broader categories and dimensions in the third and last step. This way of presenting the data structure was developed by Gioia, Corley, and Hamilton (2013). During the first step of the analysis, all the transcripts were read to gain a feel for the data. Then, deductive coding was used to reveal themes in line with our literature review. The next phase involved an iterative process of coding to develop a codebook, which was modified in line with each new case. Herein, we went back and forth with the literature to identify codes. The first-order codes can be found on the left in Figure 1. In the second step of the analysis and after coding the data, we focused on the connections

between the codes and identified higher-order conceptual codes. Here, we utilized a constant comparative method of analysis (Silverman, 2000), in which the coding process oscillated between and within first- and second-order codes. We moved away from the rather descriptive formulation of first-order codes, in which the words of the interviewees themselves were used, to a higher level of abstraction, where meaningful themes were created based on the first-order themes (Locke, 2001; Strauss & Corbin, 1990). The second-order themes can be found in the middle of Figure 1. The final aggregated theoretical dimensions can be found on the right in Figure 1.

Insert Figure 1 about here

Findings

This article studies reactions to and outcomes of involuntary and voluntary demotion. Drawing on 49 semi-structured in-depth interviews, 28 with involuntarily demoted workers and 21 with voluntarily demoted employees, we developed a conceptual model of the reactions and outcomes of both involuntary and voluntary demotion and used organizational justice theory and person-job fit as a way to frame and explain the findings. This model is discussed below and can be found in Figure 2.

Insert Figure 2 about here

The interviewees reacted to demotion in different ways. The general pattern indicates a range of attitudes and behaviours that are detrimental to an organization, such as turnover intentions and lower motivation and commitment to their job for involuntarily demoted workers, and more positive outcomes for voluntarily demoted workers, including better work-life balance,

less stress and burnout and greater satisfaction. However, it is important to stress that involuntarily demoted workers also experienced some unforeseen positive outcomes and that voluntarily demoted workers encountered some unanticipated negative outcomes of their decision to undergo demotion. Moreover, we extend the study by Carson and Carson (2007), who identified the importance of stigma and identity crisis amongst demoted workers, by showing that stigma, status loss, identity threat/reaction of others and age relate to the reaction of employees in the light of a demotion.

Five involuntarily demoted interviewees experienced a financial penalty, either through a drop in salary (two demotees) or indirectly through a reduction in benefits (three demotees). These five demotees were all aged between 43 and 59 years old and can, therefore, be considered to be in mid- to end-career. Previous research has found that older workers suffer fewer financial consequences from demotion, whereas individuals in mid-career suffer the most (Carson & Carson, 2007). In accordance with this observation, we found that older workers did not perceive the financial consequences of their demotion as a problem and that their perception of justice seemed their main concern:

I can imagine that financially it can be difficult when you're younger. Luckily, money is not an issue for me (involuntarily demoted interviewee 2, male, 59 years old, sales, reduction in rank and pay).

However, for individuals in the middle of their career, the financial consequences did affect their perception of and reaction to the demotion event:

It's painful enough and now having less money only makes things worse (involuntarily demoted interviewee 3, male, 43 years old, hospitality sector, reduction in span of control and pay).

Voluntarily demoted workers who experienced a reduction in income seemed to take this for granted:

I knew it would lead to a lower income. That seems normal to me and I did take that into account when we decided I would scale down (voluntarily demoted interviewee 48, female, 40 years old, administrative sector, reduction in responsibilities and pay).

Perceptions of justice

Perceptions of (un)fairness were mentioned by both voluntarily and involuntarily demoted interviewees. Involuntarily demoted workers in particular expressed negative attitudes and behaviours. We distinguished between distributive, procedural, interpersonal and informational justice (Colquitt et al., 2001; Rupp, Shapiro, Folger, Skarlicki, & Shao, 2017). Distributive justice reflects the perception of the fairness of the outcomes of a demotion, such as the type of role, responsibilities or salary an individual has after the event, and was mentioned by around one quarter of the involuntarily demoted interviewees. The findings suggest that demotion becomes more acceptable in certain situations, for example when there is an economic downturn and many individuals undergo a salary freeze or when part of someone's task is taken over by technology or outsourced to another country.

People compare themselves with one another, so when you're the only one being demoted, when plenty of others actually see their salaries increase or get promoted, it

makes you feel extra bad (involuntarily demoted interviewee 11, female, 63 years old, healthcare sector, reduction in responsibilities and span of control).

I can't complain, I had not looked for fewer responsibilities, but I actually don't mind too much. I kept my title, which is good if I ever want to change job and I keep my salary, so my workload has decreased while having the same job. It's not all positive, because I miss the stimulation and especially the great amount of autonomy I had, but it's definitely not a bad deal (involuntarily demoted interviewee 12, male, 55 years old, education sector, reduction in responsibilities).

Voluntarily demoted workers also mentioned distributive justice, but in a different way. They mentioned that their demotion had more far-reaching consequences than expected, especially when it related to fewer career development opportunities in the future, as their decision to take a demotion had been perceived as temporary by some interviewees:

While I am happy to be more at home for the family right now, I also feel I'm being side-tracked. It's scary and unfair, because for me it's just for a couple of years and I would love to move up and take more responsibilities in a few years' time (voluntarily demoted interviewee 46, female, 36 years old, IT sector, reduction in job title, span of control, responsibilities and pay).

With regard to procedural justice, it was found that when the decision regarding who should be demoted was perceived as being based on merit, as measured through objective criteria, this was perceived as fair, which is in accordance with research on survivors of downsizing (Brockner, 2002). However, when this process was non-transparent and perceived as being

random or based on subjective criteria, involuntarily demoted workers expressed negative perceptions of procedural justice. Understanding the underlying rationale for demotion was mentioned by more than half the involuntarily demoted interviewees.

It's funny when you think about how managers decide who should get promoted, demoted, laid off... You'd say it's about how valuable someone is for the organization, but it feels like it's about how visible you are, how good you are at playing the game (involuntarily demoted interviewee 17, female, 51 years old, healthcare sector, reduction in rank).

I can understand that he chose me. He said he chose me because I have children and therefore have other things that would keep me busy. While I thought that was really mean in the beginning, it did make sense when I thought about it. We're all equal in competencies and stuff, so he looked at the more personal stuff (involuntarily demoted interviewee 6, female, 45 years old, healthcare sector, reduction in span of control).

With regard to interpersonal justice, one quarter of the involuntarily demoted interviewees explained that the way the demotion was announced was considered important, suggesting that verbal strategies can be used effectively to minimize the severity of organizational decisions (Brockner & Greenberg, 1990).

It's all about how they say it. Non-verbal language is much more important than just the words. The fact that [the manager] took his time to announce and explain it and did so by choosing his words carefully, being empathetic, etcetera, did make a

difference (involuntarily demoted interviewee 20, male, 59 years old, healthcare sector, reduction in responsibilities).

If only he had taken some more time to break the news. It felt like it was one of the things on his to-do list. The quicker the better (involuntarily demoted interviewee 14, male, 41 years old, retail sector, reduction in responsibilities and span of control).

Informational justice refers to fairness in information sharing (Greenberg, 1993) and was mentioned by around one third of the involuntarily demoted interviewees. The mere fact of having received an explanation seemed to influence individual perceptions of informational justice (Brockner, DeWitt, Grover, & Reed, 1990), as it reduced uncertainty and increased understanding of the reason behind the demotion. Correct and detailed information about the implications of a demotion were appreciated, whereas a lack of transparency and information led to negative feelings and emotions. Three interviewees received no explanation of why they had been demoted, whereas four demotees were presented with a discriminatory reason for their demotion, such as their age (three interviewees) or being pregnant (one interviewee).

It helped that they told me why I got demoted. You can still be angry, but at least you understand. I mean, putting myself in their shoes I can see why they did it. They do have the best interests of the company in mind at the end of the day (involuntarily demoted interviewee 25, male, 49 years old, consulting sector, reduction in salary through benefits).

Stigma, status loss and identity threat seemed to play a role in the way employees reacted to both voluntary and involuntary demotion and are discussed below.

Stigma

The stigma attached to demotion was a common theme and was mentioned by almost half of both the voluntarily and involuntarily demoted interviewees. In accordance with cognitive dissonance theory (Festinger, 1957), the involuntarily demoted interviewees reported negative feelings and the need to find a new means of seeing themselves in a positive way. One way of trying to reduce the stigma of failure identified in the data was by presenting the demotion in a more positive way to others. Although this was difficult, the involuntarily demoted interviewees reported that their success in making others believe that the demotion was not as involuntary or as negative as it appeared seemed to influence how stigmatizing they experienced the demotion to be. The more successful they thought they were, the less stigma they felt:

So one day you feel like you're a valued element in the organization and the following day you feel like they threw you in the bin, that you're being side-tracked. People knew I was ambitious and fairly career-oriented, so there was no way I could make up for it. It was a failure. I couldn't say, well actually I was looking for a less demanding job, because everyone knows that wasn't true (involuntarily demoted interviewee 4, female, 44 years old, financial services sector, reduction in responsibilities).

Maybe it helped that I'm a woman and have kids. Although my colleagues knew I had not wanted to be demoted, the whole situation would have been more awkward for a man, I think. The stereotype that a mother should work less probably worked in my advantage this time as it is the socially accepted thing to do to (involuntarily demoted

interviewee 18, female, 40 years old, education sector, reduction in responsibilities and autonomy).

Half the voluntarily demoted interviewees also explained that a demotion was a stigmatizing experience, even when it was a personal choice to take a step back in one's career. They highlighted that it was a taboo subject that people avoided talking about.

I understand that people who get demoted involuntarily experience this as a stigmatizing event, but I asked for it! That means I wanted it myself. I still feel that people treat me like I failed, which is really strange (voluntarily demoted interviewee 33, female, 61 years old, healthcare sector, reduction in rank).

Demotion is taboo and I knew that before talking about it to my boss. The fact that it is taboo did make me think twice before asking for it (voluntarily demoted interviewee 47, female, 39 years old, consulting sector, reduction in responsibilities and pay).

Moreover, four involuntarily demoted interviewees reported that their demotion led them to be socially isolated, as colleagues distanced themselves from them. This can be related to the stigma-by-association effect (Kulik, Bainbridge, & Cregan, 2008), in which the stigma related to a demotion is transferred to individuals who have not been demoted themselves. By interacting with a demoted colleague at work, non-demoted individuals evoke disapproval from others as they now share the stigma (Kulik et al., 2008). To avoid stigma by association, colleagues often withdrew from the demotees, leading them to become socially isolated, as the following excerpt highlights:

All of a sudden, people started avoiding me in the corridors and during lunch as if I had an infection. Not all, but really quite a few. It was sad to see how they no longer wanted to be near me as it would reflect bad on them professionally to hang out with someone who got demoted (involuntarily demoted interviewee 4, female, 44 years old, financial services sector, reduction in responsibilities).

Status loss

Individuals who had enjoyed prestigious positions with a lot of influence and respect from others reported the downward movement of demotion as painful. Indeed, their experience of status loss was deemed to include a decrease in professional regard (Neeley, 2013). Demotion was associated with a loss of respect, influence or prestige (Magee & Galinsky, 2008; Ridgeway & Correll, 2006), both for voluntarily and involuntarily demoted workers.

I was very much respected in my organization, I mean, people knew who I was, they knew my face and my position. Being put back felt like losing face in front of the whole organization. I could feel people staring and pointing at me while whispering things to one another. I don't think they blamed me for what happened or that they said negative things about me, but it made me feel so incredibly bad about myself (involuntarily demoted interviewee 27, male, 37 years old, healthcare sector, reduction in rank).

It does change the way people look at you. I personally did feel that people no longer looked up at me, a real difference in status (voluntarily demoted interviewee 43, male, 48 years old, manufacturing sector, reduction in job title).

Not only did demotion feel like a personal failure (Carson & Carson, 2007), it also led employees to believe that this meant they were no longer considered for any form of career development. This finding regarding both the voluntarily and involuntarily demoted interviewees aligns with previous research in which status was linked to organizational disadvantage in the sense that individuals believed that they were being put off for promotions, high-impact assignments and leadership roles (Pearce, 2011) and this had a demotivating effect.

Demotion as a temporary step back does not work as it will taint your entire career.

To me, demotion is like side-tracking you in a disguised way (involuntarily demoted interviewee 1, male, 41 years old, healthcare sector, reduction in rank).

It's a temporary choice, so I can be more at home. However, others might see me as a mum who's no longer interested in her career. That's not true at all, it's just because I need a better balance for the moment, but they may not see it that way (voluntarily demoted interviewee 46, female, 36 years old, IT sector, reduction in job title, span of control, responsibilities and pay).

Identity threat and reaction of others

For around half the involuntarily demoted interviewees, demotion was perceived as an identity threat (Petriglieri, 2011), especially when they strongly identified with their professional identity. They had to reconstruct a positive social identity, as the pride and satisfaction they had drawn from their professional status and accomplishments had suddenly decreased. In support of the concept of social identity complexity (Roccas & Brewer, 2002), the more easily the interviewees could draw on other social identities they possessed, the

lower the identity threat; the identity threat was greater if interviewees were unable to draw on other social identities. Identity threat in turn affected how painful the demotion was felt to be and led to negative reactions, such as turnover intention:

When people ask me who I am, I often say I'm a consultant, so yes, I seem to identify strongly with my job. Possibly because I put in so many hours and my job is my life.

When they downgraded me to a junior consultant it did something to me. It made me wonder what else I have in my life apart from my job (involuntarily demoted interviewee 5, male, 39 years old, consulting sector, reduction in job title).

It was a mourning process for me to let go this cherished picture of a successful and competent worker I had of myself (involuntarily demoted interviewee 19, male, 39 years old, logistics sector, reduction in rank).

Voluntarily demoted interviewees did not experience an internal identity threat, but one third reported that demotion was socially and organizationally against the norm. They were more worried about how they would be perceived by others:

Demotion goes against what people expect you to do. You're supposed to go higher up, get promoted, get more responsibilities, become a manager, get a better salary. I wasn't sure what people would think of my decision. I was afraid they would see me as lazy or uninteresting (voluntarily demoted interviewee 37, female, 40 years old, arts sector, reduction in responsibilities and pay).

I can explain the decision to do a step back to myself, but I cannot control how others perceive it. I was scared that a demotion would imply that others see me as someone who is no longer interested in any career advancement whatsoever for the rest of my life (voluntarily demoted interviewee 35, female, 32 years old, education sector, reduction in responsibilities and pay).

Reactions to and outcomes of demotion

Being faced with an involuntary demotion seemed to be related to turnover intention and lower motivation and commitment to their jobs. Older workers mainly tended to express a reduction in motivation and commitment, as employees can struggle to find new employment as they age (Wanberg, Kanfer, Hamann, & Zhang, 2016) and are, therefore, less likely to express turnover intentions compared with younger workers (Gielen & van Ours, 2006). However, some older workers in this study did express turnover intentions:

I started to look very quickly for another job. Staying was no option. I could have stayed, obviously, but it just didn't feel good anymore. I had lost my drive to serve the company (involuntarily demoted interviewee 23, male, 47 years old, hospitality sector, reduction in span of control).

So now I'm left with less money and a boring job. Well, fine. I'm doing the absolute minimum too. I come in at 9 and leave at 5 and that's it. If a better opportunity comes along, I'll definitely take it (involuntarily demoted interviewee 1, male, 41 years old, healthcare sector, reduction in rank).

Some of the involuntarily demoted interviewees did mention positive outcomes, especially older workers and young parents. Positive comments, although rare, revolved around having a less demanding job, particularly for older workers, and a better work-life balance for young parents. In other words, involuntary demotion could lead to positive outcomes through a better fit between one's needs and one's job. This aligns with the positive reactions observed in the accounts of the voluntarily demoted interviewees. Some of the positive outcomes identified by the involuntarily demoted workers were frequently mentioned by the voluntarily demoted interviewees, such as a better work-life balance, less stress and burnout, greater satisfaction, and demotion as a phased retirement option.

First, demotion was perceived as a way to withdraw slowly from the labour market. Voluntarily demoted older workers who had asked for a demotion positioned it as a way to move gradually into retirement:

I've been quite a workaholic, so it seemed difficult to me to retire all of a sudden. I mean, work has been an important part of my life. It's my wife who actually had the idea to demote, she thought it would be easier for me to retire if I gradually reduced my responsibilities and involvement and she has a point (voluntarily demoted interviewee 32, male, 60 years old, hospitality sector, reduction in responsibilities and pay).

You're not going to make career after the age of 60 anyway, so you might as well just make it as pleasant as possible. I moved to a more administrative position as it's less demanding and matches the more laid-back lifestyle I'm looking for at my age (voluntarily demoted interviewee 30, male, 60 years old, transportation sector, reduction in span of control and pay).

Involuntarily demoted workers who were ‘pushed’ into retirement reported a similar reasoning:

I didn't like it in the beginning, but looking back it actually was pretty good. Working fewer hours helps to do more other activities, which prepares me for when I really retire (involuntarily demoted interviewee 20, male, 59 years old, healthcare sector, reduction in responsibilities).

Second, voluntary demotees perceived demotion as a tool to help them integrate work into their lives, obtain a better work-life balance, experience less stress or prevent burnout:

You can ask for a part-time position and feel stressed out and guilty on your day at home or you can really reduce your responsibilities. To me, it's about becoming less important for the organization, so that people really leave you alone when you're not physically at work (voluntarily demoted interviewee 47, female, 39 years old, consulting sector, reduction in responsibilities and pay).

My demotion prevented me getting a full-blown burnout. Something had to change and doing a step back helped me to get myself and my life back on track (voluntarily demoted interviewee 29, female, 50 years old, administrative sector, reduction in responsibilities, job title and pay).

Again, this was echoed by involuntarily demoted interviewees who reported unexpected positive outcomes in their work-life balance and quality of life. Some voluntarily demoted

interviewees also explained that their personal situation had changed, which had led to a shift in their needs and wishes regarding work and a career. For example, four interviewees reported that having to care for aging parents required more flexible working arrangements that could only be provided by making a downward career move. Others felt that the increasing workload and pressure of work was not sustainable and that they needed to scale down in order to protect their psychological well-being. In sum, they volunteered for demotion in order to match their individual needs to the job they were doing and be more satisfied with both their job and their personal lives.

I felt it was getting too much. Officially, nothing had changed, but I could see that I got more and more work to do in the same 40 hours a week, which wasn't possible. So you take it and you take it, until you realize it just is not going to work out and that you'd rather just withdraw from this rat race and take it easy, which suits me just fine! (voluntarily demoted interviewee 48, female, 40 years old, administrative sector, reduction in responsibilities and pay).

I could not stand the stress and felt constantly on the edge of a burnout. Not everyone is made for a high-flying career. I think I'm actually better off in a more functional position than in a managerial one. It's important to know what you're good at and find your place, it makes us happier and can avoid a lot trouble (voluntarily demoted interviewee 31, female, 57 years old, consulting sector, reduction in responsibilities and pay).

Discussion

Our study developed a conceptual model of the outcomes of both voluntary and involuntary demotion. We have expanded the range of reactions to involuntary demotion identified in previous studies that can have negative consequences for organizations (Carson & Carson, 2007; Hennekam et al., 2019; Sargent, 2003; West et al., 1990) by identifying turnover intentions and lower motivation and commitment to one's job. We also show that those negative attitudes and behaviours are related to involuntarily demoted individuals' perception of fairness. We found that individual perceptions of distributive, procedural, interpersonal and informational justice influence a demotee's reaction to involuntary demotion. It should be noted that the official reason communicated by the organization also affects the employee's perception of fairness. When a beyond-our-control explanation was provided, such as restructuring due to financial difficulties, the demotion was perceived as fair, whereas a lack of explanation or discriminatory explanations based on an individual's age, for example, resulted in perceptions of unfairness.

The findings on voluntary demotion provide different outcomes. Demotion was perceived by voluntarily demoted individuals to be a way to better align their individual needs with the characteristics of their job, thereby enhancing person-job fit. The improved person-job fit seemed, in turn, to lead to a range of positive outcomes for individuals, such as better work-life balance, greater satisfaction and reduced stress and burnout. In addition, voluntary demotion was perceived as a phased retirement option by older workers. Voluntary demotion can, as such, present a range of positive outcomes for individuals and be a viable option in a career cycle.

We also identified a range of factors that had an impact on an individual's reaction to and outcome of involuntary and voluntary demotion: status loss, identity threat/reaction of others, stigma and the person's age. Thus, we provide a deeper and more contextually sensitive understanding of demotion. With regard to status loss, the findings tend to suggest

that the higher one's status, respect and influence prior to the demotion, the more painful the perception of demotion. The stronger an employee identifies with his/her work-related identity, the higher the likelihood that that person will experience identity threat in the case of involuntary demotion. Similarly, individuals who had initiated the demotion themselves reported the social norm of career advancement, how they felt they were being perceived differently by others as a result, and how this affected their sense of self. Furthermore, the perceived stigma related to involuntary demotion depends on the extent to which the way the demotion is explained to co-workers and validated by others, in that when their explanation is validated, they perceive less stigma and find it easier to deal with the demotion. However, the stigmatizing nature of demotion was also reported by voluntarily demoted workers. Finally, age affected the reaction to demotion in that older workers tended to express lower commitment and motivation, rather than turnover intentions, in the case of involuntary demotion, whereas voluntary demotion was perceived by older workers as a way to withdraw gradually from the labour market. These findings present several theoretical contributions and implications for practice, which are discussed next.

Theoretical contributions

Our first theoretical contribution is that the findings show the relevance of organizational justice theory and person-job fit to demotion in the workplace and highlight that different theoretical lenses are useful in studying the two types of demotion. Although we can confirm previous research by showing the relevance of organizational justice theory with regard to involuntary demotion (Carson & Carson, 2007; Hennekam et al., 2019), we make a contribution by demonstrating that distributive justice is also relevant to voluntary demotion. More precisely, individuals do not always foresee the long-term potential negative consequences for their careers when they ask for a demotion at work. With regard to

involuntary demotion, our findings suggest that procedural justice is especially important in an individual's overall perception of fairness, although all four types of organizational justice play a role. In terms of voluntary demotion, we show that this type of demotion can enhance an individual's needs-supplies person-job fit and result in positive outcomes in the form of better work-life balance, less stress and burnout and greater satisfaction. It can also be a viable option for older workers as a means of phased retirement. As a consequence, voluntary demotion is an interesting concept in the light of the emerging literature on career sustainability. We make a second contribution by providing a more in-depth and contextual understanding of demotion through the identification of stigma, status loss, identity threat/reaction of others and age as factors that influence the way employees react to a demotion. Interestingly, we show that these issues are not only relevant for involuntarily demoted workers, but reveal that a loss of status and demotion-related stigma affect voluntarily demoted individuals as well.

Our third contribution relates to the positive outcomes of demotion. We not only show that self-initiated demotion can provide a better match between an individual's needs and his/her job, but also reveal that involuntary demotion can lead to similar positive outcomes that the involuntarily demoted interviewees in our study did not anticipate. The interviewees explicitly linked their demotion to a better fit between their needs and their jobs, thereby providing qualitative evidence for a relationship between demotion and improved needs-supplies person-job fit (Boon et al., 2011). Kristof-Brown et al. (2005) asserted that demotion could potentially improve person-job fit, and our findings suggest a link between demotion and person-job fit.

Practical contributions

Demotion as an organizational practice has wide-ranging implications for HR and for workers themselves. First, handled correctly and sensitively, demotion can have positive outcomes for individuals. As the number of individuals who are struggling with their work-life balance appears to be on the rise (Direnzo, Greenhaus, & Weer, 2015) and an increasing number of individuals experience burnout and stress (Health and Safety Executive, 2017), demotion could assist individuals in better balancing their personal and professional lives (Bakker & Demerouti, 2007).

Second, the stigma of demotion can lead to professional devaluation (Semadeni, Cannella, Fraser, & Lee, 2008) in relation to career mobility. This is similar for both voluntary and involuntary demotion. Although communication about being free to choose the employment pattern that best fits someone's needs and wishes is important, this is probably just one of the tools that can be used to reduce the stigma related to demotion. The creation of a taskforce on work-life balance could discuss demotion and propose this as an option to enhance individuals' work-life balance. As demotion is more frequently mentioned and discussed, the strength of the taboo is likely to reduce and its use might become more common practice.

Third, status loss affects both voluntarily and involuntarily demoted individuals economically in several ways. For example, it is difficult for an individual to justify a demotion to a future employer in another organization. Moreover, when demotion consists of a move to another position that requires a narrower range of cognitive and/or technical skills, the individual is affected in terms of a loss of opportunity to utilize and develop the higher level of skillset that might be critical to seek employment elsewhere. Individuals who are demoted from prestigious senior positions also tend to believe that a downward move amounts to a negative setback in their career and loss of perquisites, such as a company car,

business class air travel and job title, is treated as a personal failure. This is something that an HR department should take into consideration.

Fourth, demotion was perceived as a phased retirement option in this study, which is in line with van Dalen and Henkens (2015), who found that 60% of older workers in the Netherlands could imagine that they would move to a lower rank in their organization and earn less during the remainder of their careers. Research has found that as older workers get closer to retirement, they start to disengage from work (Damman et al., 2013) and demotion can be a way to move into retirement more gradually. Similarly, demotion might prevent a dropout from the workforce by being able to find a new balance between work on the one hand and familial or personal responsibilities, interests or needs on the other. As a consequence, demotion might be a useful concept as a valued individual career choice and aligns with the concept of sustainable careers (Van der Heijden et al., in press).

Fifth, the findings highlight that the reaction of demoted workers can have negative consequences for organizations when the demotion is perceived to be unfair. Indeed, managers' awareness of the importance of fairness in work-related decisions (Cropanzana et al., 2007) has been one of the reasons why they are reluctant to use demotion as an HR tool. As a consequence, HR professionals need to play a more proactive role to alleviate possible negative employee reactions to demotion and, for example, pay attention to the way they communicate. Given that demotion is a sensitive issue and often touted as difficult to broach, the employee being considered for demotion would benefit if the reasons for it were articulated clearly in a transparent manner. This would also take away the notion of employees being singled out for promotion for political reasons. Explaining the rationale behind the demotion is likely to have a positive influence on procedural and informational justice, and taking the time to announce the demotion and treat the demotee with respect by showing empathy is likely to lead to less negative perceptions of interpersonal justice.

Moreover, communication channels need to remain open before, during as well as after the demotion.

Sixth, a common employee reaction during and after involuntary demotion is grief. HR managers should be aware of the various stages of grief related to demotion and help demoted workers to re-establish their sense of self and feelings of self-worth in order to avoid an identity crisis (Carson & Carson, 2007). HR professionals can do so by engaging in, rather than avoiding, conversations about the current position and the professional prospects of the demoted employee.

Finally, HR professionals need to be aware that demotion could, when used as an HR strategy, potentially lead to perceptions of injustice. This has implications for other employees who have observed the demotion and may interpret this as a signal that the organization does not care about or value its workforce. HR personnel will need to minimize any negative employee reactions that can have a viral effect leading to negative organizational outcomes. This can be done by demonstrating the organization's commitment towards demoted employees, allowing them to succeed in the new role and enabling the appropriate utilization of the knowledge, skills and attributes they possess. Demoted employees will need to be treated as valued members and a career path for them should be discussed.

Limitations and suggestions for future research

Although this study provides interesting insights into the reactions of and outcomes for workers when facing demotion, it is not without shortcomings. The study limitations as well as suggestions for taking this line of research further are outlined below.

First, we built a conceptual model of the reactions to and outcomes of demotion by drawing on 49 in-depth interviews. It should be noted, however, that our qualitative research design only provides an initial model. We could not test the model statistically or claim cause-

and-effect relationships and so encourage future studies to further develop, refine and statistically test the proposed conceptual model. We strongly suggest that future studies test this model by using quantitative methods consisting of a survey including the different key constructs and concepts.

Second, our sample included interviewees who had experienced different types of demotion, which is a limitation. It is important to acknowledge that a reduction in the span of control might be perceived differently when compared with a reduction in responsibilities and that we could not control for the degree of the demotion. Furthermore, older workers are overrepresented in our sample of involuntarily demoted workers. This is a limitation of our study, as younger workers (aged 20-30) also experience demotion because of wrong job choices or because they are overqualified (Verhaest, Schatteman, & Van Trier, 2015). Future research should study younger demoted workers and compare them with older age groups.

Third, the period between the demotion and the interview varied from a few weeks to a few years. It is possible that, with time, individuals' attitudes towards their demotion changed, influencing the results. A longitudinal study in which individuals are tracked over time would be ideal, although difficult to realize due to the sensitive nature of the topic and the difficulty of getting organizations involved. More research on what happens after someone is demoted is needed. For example, we do not know how an individual's career evolves after having been demoted and how organizations can best retain demoted workers.

Fourth, it is important to study whether gender plays a role in the decision to opt for a voluntary demotion and how others perceive this. Previous research among older workers found that gender did not influence the extent to which individuals could imagine undergoing a demotion, whereas their educational level and financial situation did (van Dalen & Henkens, 2018). However, when we look at workers at any age, it might be that women are more likely to initiate a demotion as this is more socially acceptable than for men, which is in line with

previous research suggesting that women's employment patterns emerge as being more flexible than men's, in part due to child-rearing commitments (Steiber & Haas, 2012). Not only gender, but also other factors, such as economic position and career stage (Carson & Carson, 2007), might play a role in the perception of and reaction to demotion.

Fifth, studies on sensitive topics that employ qualitative interviews could elicit socially desirable responses. Our study adopted several strategies to minimize social desirability bias, such as ensuring anonymity and voluntary participation as well as stressing that there were no right or wrong answers.

Finally, other theoretical perspectives would be helpful to enhance our understanding of demotion. A social identity lens might be useful to study how a person's identity changes when he/she is demoted and social exchange theory with a focus on the breach of someone's psychological contract might lead to additional insights regarding the way in which individuals react to demotion. A stigma identity management perspective might shed light on how individuals deal with the stigma related to demotion.

Conclusion

We have addressed the understudied phenomenon of demotion by examining both voluntary and involuntary demotion, drawing on a total of 49 semi-structured in-depth interviews. Our findings indicate that the perception of fairness plays a critical role in the reaction of involuntarily demoted workers, in the form of lower commitment and motivation and turnover intentions. The findings also suggest that voluntary demotion can be a viable option in an individual's career and result in a better person-job fit, leading to better work-life balance, reduced levels of stress and burnout and a higher degree of satisfaction and presents a phased retirement option for older workers. Finally, we identified stigma, status loss, identity threat/reaction of others and age as factors that have an impact on someone's reaction to and

outcome of demotion, providing a more contextual understanding. As demotion increasingly becomes more widespread in its use, HR managers and practitioners are encouraged to understand how both involuntary and voluntary demotion affect employees' reactions and the critical factors that influence those responses.

References

- Ambrose, M. L., Seabright, M. A., & Schminke, M. (2002). Sabotage in the workplace: The role of organizational injustice. *Organizational Behavior and Human Decision Processes*, 89(1), 947–965.
- Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An examination of four fundamental questions. *Journal of Management*, 34(3), 325–374.
- Bakker, A. B., & Demerouti, E. (2007). The job demands–resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328.
- Barley, S. R., Bechky, B. A., & Milliken, F. J. (2017). The changing nature of work: Careers, identities, and work lives in the 21st century. *Academy of Management Discoveries*, 3(2), 111–115.
- Bies, R. J. (2005). Are procedural justice and interactional justice conceptually distinct? In J. Greenberg, & J. A. Colquitt (Eds), *Handbook of organizational justice* (pp. 85–112). Mahwah, NJ: Lawrence Erlbaum Associates.
- Boon, C., Den Hartog, D. N., Boselie, P., & Paauwe, J. (2011). The relationship between perceptions of HR practices and employee outcomes: Examining the role of person-organization and person-job fit. *The International Journal of Human Resource Management*, 22(1), 138–162.
- Brockner, J. (2002). Making sense of procedural fairness: How high procedural fairness can

- reduce or heighten the influence of outcome favorability. *Academy of Management Review*, 27(1), 58–76.
- Brockner, J., DeWitt, R. L., Grover, S., & Reed, T. (1990). When it is especially important to explain why: Factors affecting the relationship between managers' explanations of a layoff and survivors' reactions to the layoff. *Journal of Experimental Social Psychology*, 26(5), 389–407.
- Brockner, J., & Greenberg, J. (1990). The impact of layoffs on survivors: An organizational justice perspective. In J. S. Carroll (Ed.), *Applied social psychology and organizational settings* (pp. 45–75). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Brockner, J., Tyler, T. R., & Cooper-Schneider, R. (1992). The influence of prior commitment to an institution on reactions to perceived fairness: The higher they are, the harder they fall. *Administrative Science Quarterly*, 37(2), 241–261.
- Brockner, J., Wiesenfeld, B. M., Reed, T. F., Grover, S., & Martin, C. (1993). Interactive effect of job content and context on the reactions of layoff survivors. *Journal of Personality and Social Psychology*, 64(2), 187–197.
- Cable, D. M., & Judge, T. A. (1996). Person-organization fit, job choice decisions, and organizational entry. *Organizational Behaviour and Human Decision Processes*, 67(3), 294–311.
- Carson, P. P., & Carson, K. D. (2007). Demystifying demotion: A look at the psychological and economic consequences on the demotee. *Business Horizons*, 50(6), 455–466.
- Chudzikowski, K. (2012). Career transitions and career success in the 'new' career era. *Journal of Vocational Behavior*, 81(2), 298–306.
- Colquitt, J. (2012). Organizational justice. In S. Kozlowski (Ed.), *The Oxford handbook of organizational psychology* (pp. 526–547). New York: Oxford University Press.
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C.O., & Ng, K.Y. (2001). Justice at

- the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86(3), 425–445.
- Cropanzana, R., Bowen, D. E., & Gilliland, S. W. (2007). The management of organizational justice. *The Academy of Management Perspectives*, 21(4), 34–48.
- Damman, M., Henkens, K., & Kalmijn, M. (2013). Late-career work disengagement: The role of proximity to retirement and career experiences. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 68(3), 455–463.
- De Vos, A., & Van der Heijden, B. I. (2017). Current thinking on contemporary careers: The key roles of sustainable HRM and sustainability of careers. *Current Opinion in Environmental Sustainability*, 28, 41–50.
- Direnzo, M. S., Greenhaus, J. H., & Weer, C. H. (2015). Relationship between protean career orientation and work-life balance: A resource perspective. *Journal of Organizational Behavior*, 36(4), 538–560.
- Dries, N., & Verbruggen, M. (2012). Fresh perspectives on the 'new' career. *Journal of Vocational Behavior*, 82(2), 269–270.
- Eby, L. T., & Dematteo, J. S. (2000). When the type of move matters: Employee outcomes under various relocation situations. *Journal of Organizational Behavior*, 21(6), 677–687.
- Ederer, F., & Pataconi, A. (2010). Interpersonal comparison, status and ambition in organizations. *Journal of Economic Behavior & Organization*, 75(2), 348–363.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Gielen, A. C., & van Ours, J. C. (2006). Age-specific cyclical effects in job reallocation and labor mobility. *Labour Economics*, 13(4), 493–504.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive

- research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15–31.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice Hall.
- Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.) *Justice in the workplace: Approaching fairness in human resource management* (pp. 79–103). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Health and Safety Executive (2017). Work-related stress, depression or anxiety statistics in Great Britain 2017. Retrieved from <http://www.hse.gov.uk/statistics/>
- Hennekam, S., Ananthram, S., & McKenna, S. (2019). Co-workers' perceptions of and reactions to employee's involuntary demotion. *Employee Relations*, 41(4), 740–757.
- Hennekam, S., McKenna, S., Richardson, J., & Ananthram, S. (2019). Perceptions of demotion decisions: A social capital perspective. *European Management Journal*, 37(6), 730-741.
- Josten, E., & Schalk, R. (2010). The effects of demotion on older and younger employees. *Personnel Review*, 39(2), 195–209.
- Jussim, L. (1991). Social perception and social reality: A reflection-construction model. *Psychological Review*, 98(1), 54–73.
- Kernan, M. C., & Hanges, P. J. (2002). Survivor reactions to reorganization: Antecedents and consequences of procedural, interpersonal, and informational justice. *Journal of Applied Psychology*, 87(5), 916–928.
- Kohl, J. P., & Stephens, D. B. (1990). Is demotion a four-letter word? *Business Horizons*, 33(2), 74–76.
- Kooij, D. T. A. M., van Woerkom, M., Wilkenloh, J., Dorenbosch, L., & Denissen, J. J. A.

- (2017). Job crafting towards strengths and interests: The effects of a job crafting intervention on person-job fit and the role of age. *Journal of Applied Psychology*, *102*(6), 971–981.
- Kristof, A. L. (1996). Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology*, *49*(1), 1–49.
- Kristof- Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individual's fit at work: A meta-analysis of person-job, person-organization, person-group and person-supervisor fit. *Personnel Psychology*, *58*(2), 281–342.
- Kulik, C. T., Bainbridge, H. T., & Cregan, C. (2008). Known by the company we keep: Stigma-by-association effects in the workplace. *Academy of Management Review*, *33*(1), 216–230.
- Leavitt, K., & Sluss, D. M. (2015). Lying for who we are: An identity-based model of workplace dishonesty. *Academy of Management Review*, *40*(4), 587–610.
- Lima, F., & Pereira, P. (2001). *Careers and wage growth within large firms*. Discussion paper series 336. Leibniz: Institute for the Study of Labor.
- Locke, K. D. (2001). *Grounded theory in management research*. London: Sage.
- Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power and status. *Academy of Management Annals*, *2*(1), 351–398.
- Marr, J. C., & Thau, S. (2014). Falling from great (and not-so-great) heights: How initial status position influences performance after status loss. *Academy of Management Journal*, *57*(1), 223–248.
- Mays, N., & Pope, C. (2000). Assessing quality in qualitative research. *British Medical Journal*, *320*(7226), 50–52.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.

- Mowday, R. T., Porter, L. W., & Steers, R. M. (2013). *Employee–organization linkages: The psychology of commitment, absenteeism, and turnover*. New York: Academic Press.
- Neeley, T. B. (2013). Language matters: Status loss and achieved status distinctions in global organizations. *Organization Science*, 24(2), 476–497.
- Newman, A., Nielsen, I., & Miao, Q. (2015). The impact of employee perceptions of organizational corporate social responsibility practices on job performance and organizational citizenship behavior: Evidence from the Chinese private sector. *The International Journal of Human Resource Management*, 26(9), 1226–1242.
- Ng, T., Sorensen, K., Eby, L., & Feldman, D. (2007). Determinants of job mobility: A theoretical integration and extension. *Journal of Occupational and Organizational Psychology*, 80(3), 363–386.
- O’Leary, Z. (2004). *The essential guide to doing research*. London: Sage.
- Pearce, J. L. (2011). Introduction: The power of status. In J. L. Pearce (Ed.) *Status in management and organizations* (pp. 1–22). Cambridge, UK: Cambridge University Press.
- Petriglieri, J. L. (2011). Under threat: Responses to and the consequences of threats to Individuals’ identities. *Academy of Management Review*, 36(4), 641–662.
- Pettit, N. C., Yong, K., & Spataro, S. E. (2010). Holding your place: Reactions to the prospect of status gains and losses. *Journal of Experimental Social Psychology*, 46(2), 396–401.
- Phelps, E. S. (1987). Distributive justice. *The new Palgrave: A dictionary of economics* 1 (pp. 886–888). London: Macmillan.
- Richter, M., Konig, C.J., Koppermann, C., & Schilling, M. (2016). Displaying fairness while

- delivering bad news: Testing the effectiveness of organizational bad news training in the layoff context. *Journal of Applied Psychology*, 101(6), 779–792.
- Ridgeway, C. L., & Correll, S. J. (2006). Consensus and the creation of status beliefs. *Social Forces*, 85(1), 431–453.
- Roccas, S., & Brewer, M. B. (2002). Social identity complexity. *Personality and Social Psychology Review*, 6(2), 88–106.
- Rupp, D. E., Shapiro, D. L., Folger, R., Skarlicki, D. P., & Shao, R. (2017). A critical analysis of the conceptualization and measurement of organizational justice: Is it time for reassessment? *Academy of Management Annals*, 11(2), 919–959.
- Ryan, A. M., & Wessel, J. L. (2015). Implications of a changing workforce and workplace for justice perceptions and expectations. *Human Resource Management Review*, 25(2), 162–175.
- Sargent, L. (2003). Effects of a downward status transition on perception of career success, role performance and job identification. *Australian Journal of Psychology*, 55(2), 114–120.
- Scheepers, D., Ellemers, N., & Sintemaartensdijk, N. (2009). Suffering from the possibility of status loss: Physiological responses to social identity threat in high status groups. *European Journal of Social Psychology*, 39(6), 1075–1092.
- Semadeni, M., Cannella, A. A., Fraser, D. R., & Lee, D. S. (2008). Fight or flight: Managing stigma in executive careers. *Strategic Management Journal*, 29(5), 557–567.
- Silverman, D. (2000). *Doing qualitative research: A practical handbook*. London: Sage.
- Sluss, D. M., & Ashforth, B. E. (2007). Relational identity and identification: Defining ourselves through work relationships. *Academy of Management Review*, 32(1), 9–32.
- Spreitzer, G. M., Cameron, L., & Garrett, L. (2017). Alternative work arrangements: Two

- images of the new world of work. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 473–499.
- Steiber, N., & Haas, B. (2012). Advances in explaining women's employment patterns. *SocioEconomic Review*, 10(2), 343–367.
- Strauss, A. L., & Corbin, J. M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. London: Sage.
- Van Dalen, H. P., & Henkens, K. (2015). Is demotie *echt* een taboe? Oudere werknemers aan het woord. *Me Judice*.
- Van Dalen, H. P., & Henkens, K. (2018). Why demotion of older workers is a no-go area for managers. *The International Journal of Human Resource Management*, 29(15), 2303–2329.
- Van der Heijden, B., De Vos, A., Akkermans, J., Spurk, D., Semeijn, J., Van der Velde, M., & Fugate, M. (in press). Sustainable careers across the lifespan: Moving the field forward. *Journal of Vocational Behavior*.
- Van Manen, M. (2016). *Researching lived experience: Human science for an action sensitive Pedagogy* (2nd ed.). New York: Routledge.
- Verbruggen, M., & De Vos, A. (in press). Why people don't realize their career desires: Towards a theory of career inaction. *Academy of Management Review*.
<https://doi.org/10.5465/amr.2017.0196>
- Verhaest, D., Schatteman, T., & Van Trier, W. (2015). Overeducation in the early career of secondary education graduates: An analysis using sequence techniques. *Young*, 23(4), 336–356.
- Verheyen, T., & Guerry, M. A. (2018). Motives for (non) practicing demotion. *Employee Relations*, 40(2), 244–263.
- Verheyen, T., & Vermeir, B. (2011). *Remotie, een stap terug is een stap vooruit*. Mechelen:

Kluwer.

- Wanberg, C. R., Kanfer, R., Hamann, D. J., & Zhang, Z. (2016). Age and reemployment success after job loss: An integrative model and meta-analysis. *Psychological Bulletin*, *142*(4), 400–426.
- West, M., Nicholson, N., & Rees, A. (1990). The outcomes of downward managerial mobility. *Journal of Organizational Behavior*, *11*(2), 119–134.

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Appendix A: Interview guide – involuntary demotion

- Please tell me about your organization and your function in that organization.
- How long have you worked there and what is the ambiance like?
- I would like to talk about the demotion you experienced. Could you please tell me what happened?
- How do you feel about this? Which emotions did you experience? How did you react?
- What does it do to how you see yourself?
- Why do you think you got demoted? And why not others? Do you feel it was fair?
- Do others know you got demoted? How did they react?
- Do you feel the demotion has influenced the way you see your career or your organization?
- Do you think demotion is a useful tool for organizations?

Appendix B: Interview guide – voluntary demotion

- Please tell me about your organization and your function in that organization.

-I would like to talk about the demotion you experienced. Could you please tell me why you chose demotion?

-How did others react?

-What pushed you or prevented you from asking for a demotion?

-How has the demotion influenced your career? Your life?

-Do you feel the demotion has influenced the way you see your career or your organization?

-Do you think demotion is a useful tool for organizations or a real possibility for individuals?

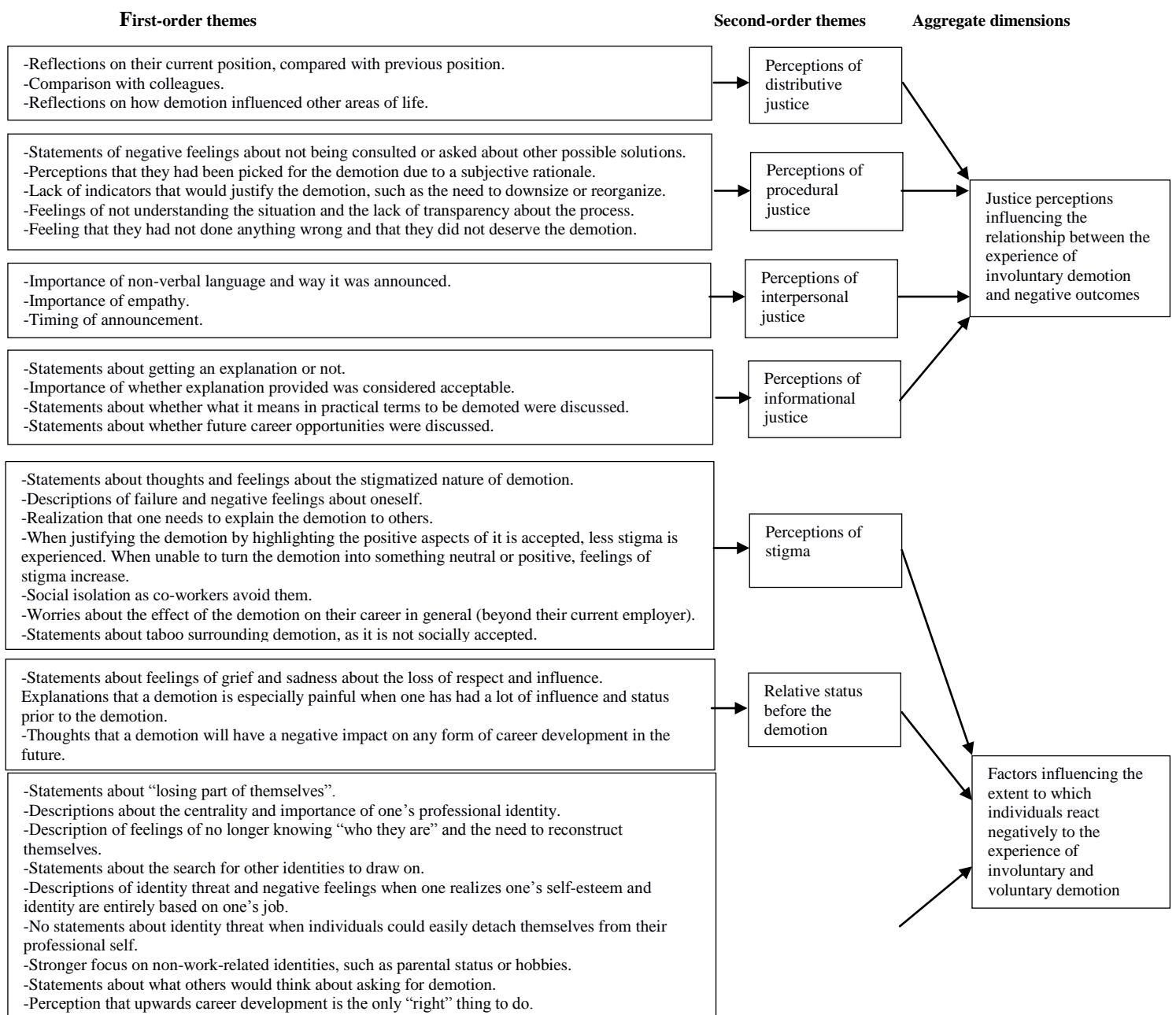
Table 1: Demographic information of the sample

No.	Gender	Age	Sector	Role	Type of demotion	Voluntary or involuntary demotion	Official reason for demotion	Time since demotion
1	Male	41	Healthcare	Head of department	Reduction in rank	Involuntary	Someone else considered more suitable	4 years
2	Male	59	Sales	Manager	Reduction in rank and pay	Involuntary	Clash with manager	6 months
3	Male	43	Hospitality	Staff coordinator	Reduction in span of control (authority) and pay	Involuntary	Unclear	2 years
4	Female	44	Financial services	Employee	Reduction in responsibilities	Involuntary	Financial difficulties	7 months
5	Male	39	Consulting	Senior consultant	Reduction in job title (status)	Involuntary	Downsizing	10 months
6	Female	45	Healthcare	Team manager	Reduction in span of control (authority)	Involuntary	Restructuring	1 year
7	Male	58	Financial services	Employee	Reduction in job title (status)	Involuntary	Negative performance appraisal	5 months
8	Male	64	Education	Programme manager	Reduction in responsibilities	Involuntary	Forced into early retirement	14 months
9	Female	33	Healthcare	Team leader	Reduction in responsibilities	Involuntary	Demotion due to pregnancy	1 year
10	Male	57	Oil	Operational manager	Reduction in salary through benefits	Involuntary	Downsizing	3.5 years
11	Female	63	Healthcare	Employee	Reduction in responsibilities and span of control	Involuntary	Demotion due to age	7 months
12	Male	55	Education	Employee	Reduction in responsibilities	Involuntary	Major restructuring	9 months

13	Male	51	Consulting	Employee	Reduction of responsibilities	Involuntary	Negative performance appraisal	3 weeks
14	Male	41	Retail	Manager	Reduction in responsibilities and span of control (authority)	Involuntary	Organizational restructuring	1 month
15	Male	56	Healthcare	Coordinator	Reduction in rank	Involuntary	Fewer financial resources	6 months
16	Male	55	Hospitality	Manager	Reduction in rank	Involuntary	Reorganization	1 year
17	Female	51	Healthcare	Employee	Reduction in rank	Involuntary	Unclear	5 months
18	Female	40	Education	Coordinator	Reduction in responsibilities and autonomy	Involuntary	Restructuring	11 months
19	Male	39	Logistics	Operations manager	Reduction in rank	Involuntary	Major restructuring	13 months
20	Male	59	Healthcare	Responsible for emergencies	Reduction of responsibilities	Involuntary	Pushed into retirement	4 months
21	Male	44	Financial services	Employee	Reduction in salary through benefits	Involuntary	Financial downsizing to stay competitive	1 month
22	Female	58	Administration	Assistant	Reduction in responsibilities and span of control (authority)	Involuntary	Demotion to avoid lay-offs	3 months
23	Male	47	Hospitality	Manager	Reduction in span of control (authority)	Involuntary	Reducing teams to increase motivation	6 months
24	Female	59	Administration	Employee	Reduction in responsibilities	Involuntary	To reduce workload	1 year
25	Male	49	Consulting	Senior consultant	Reduction in salary through benefits	Involuntary	Negative performance appraisal	8 months
26	Male	42	Healthcare	Assistant	Reduction in responsibilities	Involuntary	Unclear	3 years
27	Male	37	Healthcare	Assistant	Reduction in rank	Involuntary	Organizational restructuring	2 years
28	Female	48	Sales	Senior sales representative	Reduction in title (status)	Involuntary	Low performance	18 months
29	Female	50	Administration	Receptionist	Reduction in responsibilities, job title and pay	Voluntary	Burnout	14 months
30	Male	60	Transportation	Logistics manager	Reduction in span of control and pay	Voluntary	Less demanding, to phase into retirement	3 months
31	Female	57	Consulting	Business analyst	Reduction in responsibilities and pay	Voluntary	Burnout	1 year
32	Male	60	Hospitality	Supervising cook	Reduction in responsibilities and pay	Voluntary	Smooth transition to retirement	4 months
33	Female	61	Healthcare	Head of service	Reduction in rank	Voluntary	Less demanding job	9 months

34	Female	34	Healthcare	Geriatric worker	Reduction in span of control, responsibilities and pay	Voluntary	Aging parents	6 months
35	Female	32	Education	Coordinator	Reduction in responsibilities and pay	Voluntary	Children	2 years
36	Male	38	Consulting	Consultant	Reduction in job title and pay	Voluntary	Pressure and stress	10 months
37	Female	40	Arts	Curator	Reduction in responsibilities and pay	Voluntary	Aging parents	6 months
38	Female	58	Education	Professor	Reduction in job title and responsibilities	Voluntary	Less stress	18 months
39	Female	52	Hospitality	Waitress	Reduction in span of control	Voluntary	Aging parents	14 months
40	Male	40	Education	Teacher	Reduction in responsibilities	Voluntary	Burnout	4 months
41	Female	64	Healthcare	Nurse	Reduction in responsibilities	Voluntary	Husband's illness	13 months
42	Female	45	Healthcare	Nurse	Reduction in job title, span of control and pay	Voluntary	Death of family member	6 months
43	Male	48	Manufacturing	Supervisor, assembly line	Reduction in job title	Voluntary	Need for better work-life balance	1 year
44	Female	63	Education	Coordinator	Reduction in responsibilities and pay	Voluntary	Smooth transition to retirement	9 months
45	Male	49	Transportation	Logistics manager	Reduction in responsibilities and pay	Voluntary	Aging parents	1 year
46	Female	36	IT	IT engineer	Reduction in job title, span of control, responsibilities and pay	Voluntary	Need for better work-life balance	5 months
47	Female	39	Consulting	Business architect	Reduction in responsibilities and pay	Voluntary	Need for better work-life balance	4 months
48	Female	40	Administration	Departmental assistant	Reduction in responsibilities and pay	Voluntary	Work overload	8 months
49	Female	35	Arts	Manager, cultural centre	Reduction in responsibilities and pay	Voluntary	Children	10 months

Figure 1: Data structure



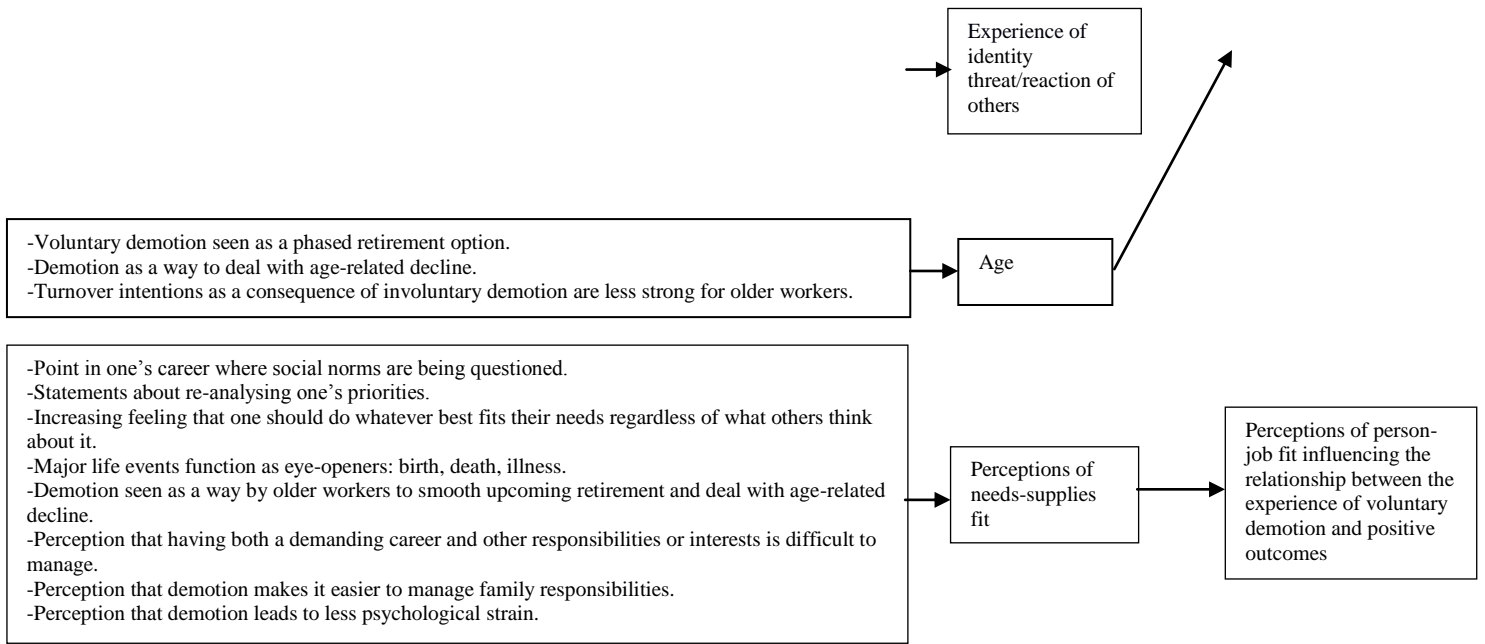


Figure 2: Conceptual model

