One step ahead:

Proactive coping to minimize job insecurity

Judith Brigitte Langerak

One step ahead:
Proactive coping to minimize job insecurity

Judith Brigitte Langerak

Cover illustration: Youri Stans
Printed by: ProefschriftMaken || www.proefschriftmaken.nl

ISBN: 978-94-6473-388-4

Het hier beschreven onderzoek werd mede mogelijk gemaakt door steun van Instituut Gak. Instituut Gak is een vermogensfonds dat een bijdrage wil leveren aan de kwaliteit van de sociale zekerheid en arbeidsmarkt in Nederland door het investeren in maatschappelijke projecten, onderzoek, leerstoelen en lectoraten.

The research described here was supported by a research grant from Instituut Gak. Instituut Gak is a Dutch organization that aims to contribute to the quality of social security and the labor market in the Netherlands by financially supporting social projects, research, chairs and professorships.

One step ahead:
Proactive coping to minimize job insecurity

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad van doctor
aan de Universiteit van Amsterdam
op gezag van de Rector Magnificus
prof. dr. ir. P.P.C.C. Verbeek
ten overstaan van een door het College voor Promoties ingestelde commissie,
in het openbaar te verdedigen in de Agnietenkapel
op woensdag 19 juni 2024, te 13.00 uur

door Judith Brigitte Langerak
geboren te Nieuwegein

Promotiecommissie

Promotor:	prof. dr. E. A. J. van Hooft	Universiteit van Amsterdam
Copromotor:	dr. J. Koen	TNO
Overige leden:	prof. dr. H. De Witte	KU Leuven
	prof. dr. B. I. J. M. van der Heijden	Radboud Universiteit
	prof. dr. P. T. De Beer	Universiteit van Amsterdam
	prof. dr. F. D. Belschak	Universiteit van Amsterdam
	prof. dr. A. C. Homan	Universiteit van Amsterdam

Faculteit der Maatschappij- en Gedragswetenschappen

Expressions of Appreciation

There is no way I can show the true extent of my gratitude and appreciation, but I will try to reveal a part of it. Although all these persons have contributed to me being able to do research and finish my dissertation, more importantly, many of them have helped me to shape my life into its current form. I could never have bounced back as I did from my break-up, my hip surgery, my short-term memory loss, and the loss of Noor, had I not seen the support and trust in the eyes of those around me.

First of all, I want to thank my parents for always being convinced that if I wanted to, I could do anything. They did not just tell me that, they also illustrated me this, by letting me teach myself how to ride a unicycle on self-created obstacle courses, letting me create all kinds of art including mosaiced furniture pieces from the thrift shop, and when I became bigger: providing the funds to learn how to climb and belay and do all kinds of "scary things" high above the ground. I am also very grateful for not being steered into any occupational direction and receiving support for the idea to become a professional artist. This freedom to choose and try to learn everything I wanted has been the seed of some kind of super-power: my strong enjoyment of learning new things. Even more importantly, I cannot imagine a life without the feeling I could always count on them for love and support. For that, I am eternally grateful.

Second, I want to thank my academic parents. Maybe they would have preferred to be called "supervisors" or "colleagues", which I completely understand. But with the three of us, it was often clear those two had different (yet well-informed) opinions on things and I was placed in the position to make a decision. If there had been cookies to win, I definitely would have targeted my questions more strategically to one at a time to get a "yes" and then only tell the other: "but they said it's fine!". But do not worry, from the start I could appreciate these differences. It truly helped with realizing that there are so many different perspectives and approaches to choose from and that they are usually not simply right or wrong. It has also helped me (okay, forced me) to make decisions that ran against the advice of a highly esteemed supervisor. Consequently, I have become pretty competent in making my own decisions, as illustrated by putting these acknowledgements at the beginning of my dissertation instead of near the end.

When I started my PhD journey, I did not fully realize I would receive this much autonomy and appreciation for my work. Being used to clarify and justify the time I spent and data I presented in previous jobs, I started out presenting similar PowerPoint presentations to my academic parents. They told me this was not necessary and this made me totally confused about our exact roles and goals of the meetings. So I asked them about their roles – and they laughed. Then they looked at me and said: "We are here to support you". I could not *really* believe it. But since September 2018, these two magnificent persons have really been supporting me, and I am so incredibly privileged because of this. Even during the time I could not

work, they still made time to check up on me and laugh together. I will always cherish all the support they have given me - because of this I never found myself lost for too long.

To make my research as it is, there are many others I need to thank. Aukje Nauta, Chantal Huinder and Luc Dorenbosch, thank you so much for being my advisory committee. Your input (on research designs, exploratory mechanisms, survey construction, and so on) and help with collecting data have improved my research a lot. Bruno, thank you so much for your help with Lotus. I really liked puzzling together and I am super happy with the end result that is shown in Chapter 2. Janneke, thank you for your help with the systematic literature search for the meta-analytic review presented in Chapter 3, I could never have done it so well without you. Isis, thank you for helping out with screening the enormous amounts of articles we started out with. Audrey, Daan, Lara, Luisa, and Vince, thank you for volunteering as subject matter experts and providing your expert opinions on the proactive coping categorization of Chapter 3. Jeannette, thank you for chasing the meta-analysis software I needed. Sharon, thank you for all your suggestions that helped improve the intervention research of Chapter 4. Anonymous reviewers, I did not like all your suggestions, but I am thankful for many of them. I also want to thank my promotion committee: Hans de Witte, Beate van der Heijden, Paul de Beer, Frank Belschak, and Astrid Homan. I am honored that you have been willing to invest time in reading my dissertation and in joining the defense ceremony. Thank you!

I am also very grateful for the research collaborations I had next to my dissertation research. Jana, I am so happy we have met. I loved all our coffees together and it has been so cool to combine our expertise on job insecurity and flexibilization in a podcast and on research seminars from Instituut Gak. Maarten, thank you for all the nice chats in our room, our more elaborate conversation about pursuing an academic career, and our collaborations for *Gedrag & Organisatie* and the webinar at UWV. I am sure the sunny day on which I will cycle to the Uithof will come some time! Michelle, thank you for your constructive feedback on one of my papers, which eventually got published in *Gedrag & Organisatie*. In addition, much research would not have been possible without the students that have helped me collect survey data and all the people that have taken the time to fill in these surveys, so thank you to all of you!

I also want to thank my fellow PhD students (and holders) for all the talks and laughs together: I have really appreciated it Loes, Lara, Luisa, Sanne, Florian, Vince, Daan, Klara, Ellis, David, Iris, Audrey, Yasmin, Carolin, Ana, and Khadiga! I enjoyed all the courtyard, coffee and pizza moments. Special thanks to Lara, for being there since the moment I started my PhD to being there at the end of my PhD, as my paranymph no less! I am also thankful for all the other lovely colleagues of my department: all the warm and supportive conversations in hallways, metros, restaurants and department outings made me feel so welcome and honored to be a part of this group. And I am very grateful for certain conversations I had with people who probably did not even know I found our talks so insightful: Thank you Nele de Cuyper for our conversation about academic career trajectories, thank you Jeroen Vermeulen for talking with me about

what I *really* want in life and sharing Lines of Flight with me years ago, thank you Anne van Valkengoed for advocating the importance of being “druppels op een gloeiende plaat”. Also, thank you Jeroen for illustrating me how enjoyable pursuing a PhD can be and providing me my first academic notebook with PhD best practices, thank you Remy for voicing your confidence I could probably succeed as smoothly as Jeroen did, thank you David for the hundreds cups of tea brought to my desk as tokens of support and all the other precious memories.

Nothing would have turned out the way it has, had I not regained the ability to sit without pain. Therefore, I am forever grateful to Amarins. Together with her colleagues from Medicort she helped me with pain relief, training, preparing for the surgery and rehabilitation. It was a hard time mentally, and sometimes I felt I had exchanged the ability to climb with the ability to sit and lay down (yes, I preferred climbing), but thanks to her expertise and guidance I kept hope that I would one day find my flow on the walls again. After my revalidation, I signed up to train with Gidion. Gidion, I am so happy that you helped me re-discover movements such as heel hooks and becoming comfortable at heights again. Thank you for sharing your expertise with us and helping me find back my flow. I also want to thank the rest of the Boulderhal Sterk community, for all the support during my recovery, after Noor’s death, and in the final phase of my PhD. There are so many people that give me a smile on my face when I see them. But some of these people I would not mind seeing every single time, such as: Thomas, Sander, Edwin, Frans-Mark, Ivo, Lazaros, Marilena, Pepijn, Maarten, Marit, Roos, and of course Paulien, Feike and Jos! Maarten, special thanks to you: not only for the Japanese version of Miyamoto Musashi’s quote, but also for being living proof that almost anything can be learned - even Japanese. In addition, your book translations provided me peace of mind during stressful times and helped me with processing the sudden loss of Noor.

Lastly, I want to thank those who created a lovely environment for me next to work and climbing. Daphne, thank you for being my friend and letting me live in your home together with Sam and the chickens when I needed housing. Ina en Frans, bedankt voor alle goede zorgen en het niet erg vinden als ik wéér ging werken boven. My dear brothers, Paul, Bram, Tim, Wouter, and Joram, thank you for all your amazing personalities and love. Even though we do not see each other all too often, I still feel I can call you at any moment to beat up potential bullies I run into. Oma, het is zo fijn om jou zo trots op mij te zien. Dankjewel dat je er altijd bent en ik zal de wijze les die je vertelde tijdens het koken nooit vergeten. Emma and Sophie, my most ancient friends, thank you for testing my research interventions and most of all: for the enormous fun we had at our high teas and meetups in Haarlem and Den Bosch. Alina and Jan, thank you for being such good friends and the fun times we had in Dinslaken, Niederkruchten, Ulvenhout and Zeist. Thomas, thank you for re-contacting me after quite some time and then hanging out with me as if we had never stopped doing that.

Youri, well, I think I have been trying to thank you for years now – with various items ranging from pinecones and dried leaves to various furniture – and I probably will forever. I am extremely grateful for the dissertation cover of my dreams, but of course, I am even more grateful for our friendship. Our 10-year anniversary is coming up and I hope we will share many more anniversaries after. You make me feel calm and content and honestly, I cannot imagine a life without you.

Daniël, I still cannot completely believe the luck we had with finding each other. The past years have not been the easiest, but thinking back, everything has been less heavy because we were able to carry it all together. I love our little habits (coffee in bed), our larger habits (Japanese on Tuesday), our secret language (hakkelahoepelus?), our shared interests (pampampam), our surreal vacations (Fiat Panda with rooftop tent!), our climbing obsession ("hangboarding is like brushing your teeth"), our forest walks with Bahubali, our enormous appetite and shared taste preferences (thank you airfryer), and our vogue-inspired home. My everyday life has become so dreamlike because of you. I feel incredibly thankful, for I live together with the love of my life and cutest dog in the world in a home full of treasures:

愛してる。

Contents

最初は難しそうに見えるが、最初は何もかも難しい。

“It may seem difficult at first, but all things are difficult at first”

Miyamoto Musashi

Chapter 1

General Introduction

Job insecurity, or the perceived threat to the continuity and stability of employment (Shoss, 2017), is harmful for both individuals and organizations. Workers who endure high levels of job insecurity experience both damaging effects at work (i.e., lower job satisfaction, decreased career success, poorer job performance) and in other facets of life (i.e., lower physical and psychological health, lower life satisfaction, increased work-family conflicts). For organizations in which employees experience high levels of job insecurity, negative consequences include increased absenteeism, increased turnover, decreased work engagement, and decreased organizational performance (Cheng & Chan, 2008; Jiang & Lavaysse, 2018; Sverke et al., 2002). Considering these harmful consequences, it is regrettable that ongoing advancements in organizations, technology, and society often result in growing levels of job insecurity. For example, the share of workers engaged in non-standard work has risen to a quarter of the European and American workforce (CBS, 2020; Karpman et al., 2022), resulting in a large group of workers who are regularly at risk of losing their job. Furthermore, nearly a third of the workforce has a job with a high risk of being automated (OECD, 2023), which makes many of these workers worry about becoming obsolete. In addition, the COVID-19 pandemic initiated a global career shock that severely influenced the working lives of many (Akkermans et al., 2020), and numerous workers with long COVID symptoms are still uncertain whether they can maintain their jobs due to problems with meeting work demands. Next to being more prevalent, job insecurity is also more chronic in our current world of work: For many workers it has become a constant and enduring experience that varies in intensity over time (Wu et al., 2020).

Given the prevalence of job insecurity, its increasingly chronic nature, and its harmful consequences, it is no surprise that creating more job security is high on both scientific and political agendas. From meta-analytic reviews, we know that policy- and organizational-level factors such as employment protection legislation and permanent contracts relate to lower levels of job insecurity (Jiang et al., 2021; Keim et al., 2014). Relatedly, Dutch political parties call for better protection of self-employed workers and for making the provision of permanent contracts more attractive for employers (D66, 2021; GroenlinksPvdA, 2023; VVD, 2023). While these are important developments that may contribute to more secure work environments, they are insufficient to minimize feelings of job insecurity for all workers in our rapidly changing world of work. For instance, for individuals who are currently working as a self-employed and cannot wait on future changes in regulation, individuals engaged with other non-standard forms of work (e.g.,

contracted workers, gig workers) who do not benefit from incentives to increase permanent contracts within organizations, and workers who experience other sources of job insecurity than an expiring contract (e.g., organizations may still need to reorganize). In addition, the rise of technological innovations such as artificial intelligence can result in feelings of insecurity about the continuance and future contents of one's job, regardless of employment legislation or employment contracts.

Thus, in addition to questioning how policy- and organizational-level initiatives may help to minimize job insecurity, an important question remains how workers themselves may manage their experience of job insecurity. In this dissertation, I therefore investigate how proactive coping, i.e., efforts undertaken in advance of potentially stressful events or situations to prevent them or to modify their form before they occur (Aspinwall & Taylor, 1997), can help workers to manage and minimize their (future) feelings of job insecurity. Thus, the primary aim of this dissertation is *to uncover whether and how proactive coping can minimize the experience of job insecurity among contemporary workers*.

Proactive versus Reactive Coping

In their seminal article, Aspinwall and Taylor (1997) assert that individuals can anticipate stressful events or situations before they occur, by putting in effort to avoid or confine such events or situations. These efforts are referred to as *proactive coping*. Proactive coping does not target any particular stressor, but is used to prepare in general by anticipating stressors that naturally occur in any life. For example, one may cope proactively by saving money for potential financial setbacks or by spending time nurturing relationships with friends and family so they will be there in the future for support. Proactive coping thus differs from the traditional concept of coping, in which efforts are aimed at reducing past or current stressors or its consequences (Folkman & Lazarus, 1985). In the current dissertation I will refer to traditional coping as *reactive coping,* because such coping efforts tend to be a reaction to past or current stressors rather than to future stressors or stressors that have not yet fully established.

Despite the potential of proactive coping to avoid or confine future stressful events or situations, it has received relatively little research attention in comparison to reactive coping. For example, there are multiple frameworks for categorizing reactive coping efforts (e.g., engaged vs. disengaged coping, emotion-focused vs. problem focused coping, avoidance vs. approach coping; Folkman et al., 1986; Roth & Cohen, 1986; Tobin et al., 1989), while there are none for proactive

coping efforts. Aspinwall and Taylor (1997) suggested that proactive coping may often go unstudied because stressors are generally the starting point of coping research, while proactive coping should, theoretically speaking, forgo these stressors. If a stressor does not (or only to a small extent) occur because of successful prior proactive coping, it may seem there is no need for investigation. For instance, a manager may assign extra staff to a presently low-demand project to avoid potential workload spikes (i.e., a stressor) as the project becomes more challenging: the workload spikes are then less likely to occur. However, to understand how stressors can be prevented, it is crucial to comprehend the strategies that have been used to avoid or confine such stressors, because insight into successful proactive coping can provide valuable guidance to persons who have not been as successful in diverting stressors.

Research on job insecurity has likewise focused mainly on reactive coping, by investigating how the negative consequences of job insecurity can be mitigated. Evidence indicates that engaged coping strategies (e.g., changing the situation, symptom reduction, seeking social support) and emotion-focused strategies (e.g., describing what one feels and re-evaluating the situation) weaken the negative relation of job insecurity with mental health and job satisfaction (e.g., Cheng et al., 2014; Menéndez-Espina et al., 2019; Probst & Jiang, 2016; Richter et al., 2013). As such, job insecurity – as a stressor – has been the starting point of most job insecurity research. However, this way it has remained largely unclear if and how job insecurity itself can be prevented from fully establishing. In this dissertation, I aim to provide more clarity regarding proactive coping as a means to avoid or confine workers' experience of job insecurity.

Proactive Coping with Job Insecurity

My dissertation builds upon the first findings that indicate proactive coping may indeed reduce the experience of job insecurity among workers (cf. Koen & Parker, 2020; Koen & van Bezouw, 2021; Stiglbauer & Batinic, 2015). While these findings are promising, this new stream of research also brought difficulties to light regarding the definition and operationalization of proactive coping in the context of job insecurity. For example, Stiglbauer and Batinic (2015) examined proactive coping as a moderator between job insecurity and its consequences while, conceptually, proactive coping should precede the experience of job insecurity in time. It also remains unclear which efforts 'count' as proactive coping, because scholars have examined various efforts as such, including some efforts that could be considered a reaction to existing job insecurity and, hence, a form of reactive coping (e.g., impression management; Probst et al., 2019). The

primary explanation for this could be that, unlike responding reactively to job insecurity, proactively addressing job insecurity does not necessarily focus exclusively on job insecurity itself. Proactive coping is a broader approach aimed at preparing for a range of unknown or unfolding stressors. Thus, before we can determine if and how proactive coping can reduce job insecurity for contemporary workers, we must first explore what it entails to engage in proactive coping within careers.

Research Question 1: How does proactive coping among contemporary workers manifest itself in the context of job insecurity?

Effective versus Ineffective Proactive Coping

Once we have unpacked which efforts can be considered proactive coping among contemporary workers, it is important to determine which ways of proactive coping can and cannot help workers to manage and minimize their job insecurity. In theory, proactive coping is considered to be beneficial − even when proactive coping efforts have been unsuccessful (Aspinwall & Taylor, 1997). The underlying idea behind this is that even such failed attempts should yield information about the situation, which can be used in future proactive coping efforts. While this may hold true in the long term, empirical evidence increasingly points towards potential downsides of proactive behaviors, such as impaired detachment from work and a short-term loss of resources (Bolino et al., 2010; Cangiano et al., 2021; Giunchi et al., 2019). This forms reason to wonder whether certain forms of proactive coping with job insecurity may backfire as well − potentially increasing levels of immediate job insecurity. In a literature review, Parker and colleagues (2019) underline that for proactivity to be successful, it should be suited for the particular situation (i.e., 'wise proactivity'). However, it remains unknown what the best course of action is to target the work situations of contemporary workers. As such, I investigate the relationship between various proactive coping efforts and job insecurity among contemporary workers. These efforts include both more conventional ways of proactive coping (e.g., career planning, building a social network) and less conventional ways (e.g., performing well at work, adopting a self-compassionate mindset). Together, the findings of this dissertation will provide a comprehensive insight into effective and ineffective ways of proactive coping with job insecurity.

Before I start investigating the relationships between various proactive coping efforts and job insecurity, it must be noted that job insecurity is not as straightforward a construct as it may seem. When people talk about job insecurity, they generally refer to worries regarding job loss. However, the experience of job insecurity can also consist of other experiences such as perceiving a lack of development opportunities. Importantly, different types of job insecurity may require different proactive coping efforts in order to be minimized. Therefore, in investigating the relationships between proactive coping and job insecurity, I also take into account the differentiation between various types of job insecurity, based on two conceptual divisions. First, job insecurity can be divided according to the content of the threat. Workers' perceived threat to the continuity of their job as a whole is denoted as *quantitative* job insecurity, whereas workers' perceived threat to valued job features is denoted as *qualitative* job insecurity (De Witte et al., 2010). Second, job insecurity can be divided according to the way in which workers experience the threat. Workers' rational perception of threat is denoted as *cognitive* job insecurity, whereas workers' emotional experience of the threat is denoted as *affective* job insecurity (Huang et al., 2010). In combining these two dimensions, four types of job insecurity can be differentiated (see Table 1.1).

Table 1.1

Overview of the Four Types of Job Insecurity

Cognitive quantitative Sample item: "Chances are, I will soon lose my job" (Vander Elst et al., 2014)	**Cognitive qualitative** Sample item: "I think my job will change for the worse" (Van den Broeck et al., 2014)
Affective quantitative Sample item: "I am worried that I will have to leave my job before I would like to" (Hellgren et al., 1999)	**Affective qualitative** Sample item: "I feel insecure about the characteristics and conditions of my job in the future" (Niesen et al., 2018)

While prior research has mostly focused on cognitive quantitative measures of job insecurity, the current literature unequivocally recognizes that all types of job insecurity form substantial risks for individual and organizational well-being (Jiang & Lavaysse, 2018; Urbanaviciute et al., 2021). Next to investigating how various forms of proactive coping relate to job insecurity, I thus investigate whether these relationships differ for different types of job insecurity.

Research Question 2: Can proactive coping alleviate contemporary workers' experience of job insecurity? Specifically,

a. What forms of proactive coping lower the experience of job insecurity?

b. Does the relationship between proactive coping and job insecurity depend upon the type of job insecurity?

Effective Proactive Coping: A Resource-based Perspective

In addition to investigating which forms of proactive coping are generally more effective than others, it is important to keep in mind that the individual situation in which proactive coping takes place likely plays a role for the effectiveness of proactive coping. A particularly important concept that may explain such situational influences is workers' amount of resources. The accumulation of resources in advance of any anticipated stressful event or situation lies at the core of effective proactive coping (Aspinwall & Taylor, 1997). In the example of proactively saving money for a potential financial setback (i.e., an anticipated stressor), saving can be considered the effort through which resources (financial assets) are accumulated. Resources can take any form: objects, personal characteristics, conditions, or energies that are valued by the individual (e.g., money, time, social network, skills; Hobfoll, 1989). This dissertation takes a closer look on how such resources affect the relationship between proactive coping and job insecurity. Below, I first address the accumulation of resources as a potential mediator, then address the availability of such resources as a potential moderator, and lastly address how the availability of resources may stimulate the use of effective proactive coping.

The accumulation of resources may form a mediating mechanism through which proactive coping has its effect on job insecurity. Such resources may come in many forms. For example, workers may build or maintain contacts within multiple organizations (proactive coping) so they have a better social network (resource), which makes them feel less threatened in their employment

prospects if their job with the current organization ends, or workers may take training to broaden their skill repertoire (proactive coping) and their acquired skills (resources) make them feel less exchangeable by artificial intelligence. The limited primary research on proactive coping with job insecurity assumes, yet does not test, that it is the accumulation of resources that explains relationships between proactive coping and job insecurity (e.g., El Khawli et al., 2022). The meta-analytic review from Jiang and colleagues (2021) on predictors of job insecurity underlines the importance of resources, yet leaves blank what efforts may precede the availability of such resources. Therefore, putting the puzzle pieces together, I go beyond asking *if* proactive coping can alleviate contemporary workers' experience of job insecurity, by investigating *how* proactive coping can alleviate job insecurity, through investigating the accumulation of resources as a mediator in the relationship between proactive coping and job insecurity.

While the accumulation of resources may mediate the relationship between proactive coping and job insecurity, the availability of such resources may moderate this same relationship. That is, the amount of resources may determine the extent to which proactive coping is effective in minimizing job insecurity. This expectation is based on conservation of resources theory (Hobfoll, 1989), which asserts that current resources help to offset future resource loss. That is, individuals who possess relatively many resources and are not coping with immediate stressors, can use these resources preventively to offset potential future losses of resources. For example, someone high in energy is better equipped to prevent future resource loss than someone who is fatigued. Aspinwall and Taylor (1997) add to this premise that resources do not only help with direct acts to avert stressors, but they can also help with other facets of the proactive coping process such as screening the environment for cues of danger, appraising situations and what they may become, and having opportunities to receive feedback. Consequently, the possession of resources should make it easier to make proactive coping efforts effective. Reversely, possessing few resources should make it harder to make proactive coping efforts effective. As such, I investigate whether the negative relationship between proactive coping and job insecurity is moderated by resources. This may help explain why certain proactive coping efforts are experienced as effective by some workers, but not by others.

The last way in which resources may play a role in the context of proactive coping and job insecurity, is as an antecedent of proactive coping. As with reactive coping, proactive coping requires individuals to invest resources (Aspinwall & Taylor, 1997; Hobfoll, 1989). Any proactive

act (e.g., planning, saving money, scenario thinking) requires individuals to invest at least time and energy. This resource loss is immediate, while the hoped-for benefits of proactive coping may need more time to establish (Giunchi et al., 2019). For example, attending a networking event does not immediately result in a large and reliable network, while it does require time, energy, and possibly a financial investment. This raises the question: If proactive coping costs resources, and resource loss makes additional proactive coping harder, how can contemporary workers then sustain the proactive coping efforts that they may benefit from? To answer this question I investigate whether certain resources can function as a replacement for the resources that are being lost with proactive coping (Hobfoll et al., 2018). This should compensate for initial resource loss and consequently stimulate continuous engagement in proactive coping.

> **Research Question 3:** What is the role of resources in the relationship between proactive coping and job insecurity? Specifically,
> **a.** Does the accumulation of resources mediate the relationship between proactive coping and job insecurity?
> **b.** Does the availability of resources function as a moderator in the relationship between proactive coping and job insecurity?
> **c.** Does the availability of resources function as an antecedent of proactive coping?

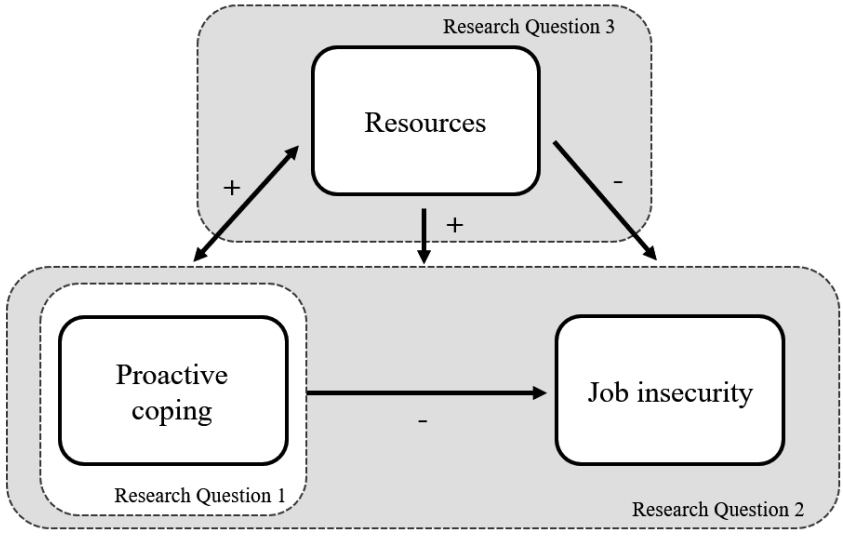
An overview of the research questions from this dissertation can be found in Figure 1.1.

Dissertation Overview

Much research has been conducted into the detrimental outcomes of job insecurity for both individuals and organizations (Cheng & Chan, 2008; Jiang & Lavaysse, 2018; Sverke et al., 2002). With the goal to avoid or confine job insecurity and by that, limit its negative consequences, a focus on the antecedents of job insecurity has emerged (Jiang et al., 2021). However, as of yet the focus has mostly been on antecedents that are largely outside the influence of individual workers (e.g., employment protection legislation) and are unlikely to take away all sources of job insecurity (e.g., artificial intelligence). In the present dissertation, I therefore investigate how workers can lower their experience of job insecurity despite existing societal or organizational circumstances through proactive coping. More specifically, I examine how proactive coping manifests itself among contemporary workers in the context of job insecurity (Research Question 1), whether such

Figure 1.1

Schematic Overview of the Research Questions



proactive coping can alleviate contemporary workers' experience of four types of job insecurity (Research Questions 2a and 2b), and how resources play a role in this process (Research Questions 3a, 3b, and 3c). This dissertation bundles four empirical chapters aimed at answering these questions. Most research questions are addressed in multiple chapters and the second research question is addressed in all chapters. Below I provide an overview of all empirical chapters in relation to the research questions they correspond with.

In the first empirical chapter of this dissertation (Chapter 2), I address Research Question 1 by translating the five theoretical stages of proactive coping into practical career behaviors (Aspinwall & Taylor, 1997). These career behaviors are: career planning, scenario thinking, career consultation, networking, and reflecting. Furthermore, Chapter 2 addresses Research Question 2 by testing the role of these career behaviors modelled as proactive coping (i.e., antecedent of job insecurity) and modelled as reactive coping (i.e., moderator between job insecurity and forthcoming strain) over time, for all four types of job insecurity in a 5-wave weekly survey study among 266 contemporary workers. The proactive coping model includes workers' availability of

resources as a cross-level moderator between proactive coping and job insecurity, which addresses Research Question 3b.

Chapter 3 presents a meta-analytic review synthesizing data from existing research on the relationship between proactive coping and job insecurity, addressing Research Question 1. To this purpose I combine traditional coping theories (Tobin et al., 1989; Kraaij & Garnefski, 2019) and proactive coping theory (Aspinwall & Taylor, 1997) into a proactive coping framework that discerns six proactive coping types to categorize proactive coping efforts (i.e., behavioral engagement, mental engagement, adaptive behavioral disengagement, maladaptive behavioral disengagement, adaptive behavioral disengagement, and adaptive mental disengagement). Addressing Research Question 2, the meta-analyses based on data stemming from 324 independent samples – comprising over 300,000 workers – uncover what ways of proactive coping are associated with lower amounts of job insecurity, and moderator analyses reveal if and how relations differ according to the type of job insecurity.

Chapter 4 addresses Research Question 2 and Research Question 3a by developing a cyclic model with proactive coping (in the form of career planning, scenario thinking, career consultation, networking, and skill development), accumulation of resources, and job insecurity, and testing this model in a 5-wave monthly survey study among 243 self-employed workers. Addressing Research Question 3c, I further investigate whether resources in the form of self-compassion and recovery experiences can help workers counteract the expected paralyzing effect of job insecurity through psychological strain.

In Chapter 5, I address Research Question 2 by constructing and testing two online proactive coping interventions aimed at career planning. More specifically, I build upon ambidexterity literature (Almahendra & Ambos, 2015) and career development theories (Bandura, 1991; Locke & Latham, 1990) to design two proactive coping interventions: A goal-oriented career planning intervention and an option-oriented career planning intervention. In two online experiments (N_{S1} = 256, N_{S2} = 212) I test the expectations that: 1) Workers in the intervention groups will experience lower qualitative job insecurity than workers in the control groups, 2) The explaining mechanism for the goal-oriented career planning intervention is increased goal awareness, while the explaining mechanism for the option-oriented career planning intervention is increased option awareness, and 3) The type of career planning workers can use best depends upon

their career path commitment and perceived labor market demand. As goal awareness and option awareness can be considered personal resources, this addresses Research Question 3a.

In the final chapter (Chapter 6), I discuss and integrate the findings from the four empirical chapters to provide answers to the research questions of this dissertation. Based on these answers, I discuss practical recommendations aimed at the prevention of loss spirals and the facilitation of prolonged proactive coping. Lastly, I outline three directions for future research pertaining to the construction of a proactive coping scale, the construction of a meso-level theory of career proactivity, and the investigation of proactive coping that is initiated by organizations rather than individuals[1].

[1] Please note that all empirical chapters (Chapters 2 – 5) were written as independent manuscripts. Because of this, the introductions of these chapters may overlap.

Chapter 2

How to Minimize Job Insecurity:

The Role of Proactive and Reactive Coping over Time

Abstract

Job insecurity is no longer a temporary setback but an experience that many workers endure for prolonged periods of time. While there is much research on the behaviors that may help workers cope with the negative consequences of job insecurity (i.e., reactive coping), insight into behaviors that may help workers minimize or even prevent the experience of job insecurity itself is still minimal (i.e., proactive coping). Yet, such insight is crucial to advance our knowledge on the dynamics of job insecurity and may offer an alternative strategy to help workers manage the experience of job insecurity during their career. Hence, in this 5-wave weekly survey study among 266 workers, we view the experience of job insecurity as an ongoing process that may fluctuate over time and investigated whether proactive coping (in the form of career planning, scenario thinking, career consultation, networking, and reflecting) could help workers to minimize their future job insecurity. Multilevel path analyses showed that weekly proactive coping behaviors were either unrelated or positively (rather than negatively) related to job insecurity in the following week, indicating that positive outcomes of proactive coping may need more time to establish. Additionally, we explored whether coping behaviors that are proactive in theory could also function as reactive coping behaviors (i.e., could buffer the negative consequences of job insecurity). Results showed no buffering effects, indicating that theoretically proactive coping behaviors did not function reactively. We discuss that prolonged proactive coping efforts are needed in contemporary careers, despite the short-term discomfort.

This chapter is based on: Langerak, J. B., Koen, J., & Van Hooft, E. A. J. (2022). How to minimize job insecurity: The role of proactive and reactive coping over time. *Journal of Vocational Behavior, 136*, Article 103729. https://doi.org/10.1016/j.jvb.2022.103729

Throughout the world, organizations are using cost-saving practices such as outsourcing, offshoring, restructuring, downsizing, and nonstandard work practices to improve their market position (Kalleberg, 2011). Due to these organizational changes, temporary and contract-based employment have become mainstream. Even workers with permanent contracts are not assured of stable job content or favorable job features. As a result, job insecurity −the perceived threat to the continuity of one's job or favorable job features (Hellgren et al., 1999)− has become a chronic experience for many workers (Wu et al., 2020). That is, job insecurity is no longer a temporary setback in contemporary careers, but a stressor that can be present for a prolonged period of time. This is a problematic development, because the experience of job insecurity impairs well-being (cf. De Witte, 1999) and is negatively associated with subjective career success, organizational commitment, job performance, and organizational performance (Cheng & Chan, 2008; Sverke et al., 2002; 2019; Ng & Feldman, 2014). As such, there is an urgent need to identify strategies with which workers can successfully cope with experiencing job insecurity in their career to minimize its harm.

Prior research has largely focused on identifying coping strategies that can decrease the negative consequences of job insecurity. Such coping refers to all cognitive and behavioral efforts to manage distress and the situation causing distress (Folkman, 2013). Specifically, research has shown that engaged coping strategies (e.g., changing the situation, symptom reduction, seeking social support) and emotion-focused strategies (e.g., describing what one feels and re-evaluating the situation) can mitigate the negative relation of job insecurity with mental health and job satisfaction (e.g., Cheng et al., 2014; Menéndez-Espina et al., 2019; Probst & Jiang, 2016; Richter et al., 2013). These types of coping strategies can be labelled 'reactive coping', as they are a response to an existing stressor and serve to decrease its negative consequences (Reuter & Schwarzer, 2009). However, one can also cope proactively: instead of reacting to a stressor to decrease its consequences, 'proactive coping' consists of efforts undertaken in advance to manage, modify or even prevent the stressor in itself (Aspinwall & Taylor, 1997). Proactive coping with job insecurity thus refers to those coping strategies that serve to decrease or prevent later feelings of job insecurity. While extant research on proactive coping with job insecurity is promising (cf. Stiglbauer & Batinic, 2015; Koen & Bezouw, 2021; Koen & Parker, 2020), it has not yet been able to capture if and how proactive coping at one point in time can indeed serve to modify later feelings of job insecurity. As such, Shoss' (2017) integrative review summarized the topic of proactive

coping with job insecurity with questions instead of answers: "*What are the strategies that individuals use to try to preserve their job or job features? What are the ways by which people proactively cope with potential job or job feature loss? (…) These questions echo the importance of longitudinal research on JI (job insecurity).*" (p.1929). Through our longitudinal design, we aim to create insight into intra-individual changes in job insecurity over time. As such, our approach will advance our theoretical knowledge on coping with job insecurity as an ongoing and chronic stressor, and provide practical implications that enable workers to better manage job insecurity during their careers.

In the current study, we conceptualize job insecurity as a continuous stressor, often without a clear onset, that fluctuates from week to week within the same person (cf. Schreurs et al., 2012). In a 5-wave longitudinal survey study, we investigate whether weekly proactive coping relates to decreased feelings of job insecurity in the following week. Specifically, by building upon Aspinwall and Taylor's (1997) conceptual framework of proactive coping, we first aim to uncover whether engaging in five proactive coping behaviors (i.e., career planning, scenario thinking, career consultation, networking, and reflecting) can decrease workers' future experience of job insecurity. Second, we aim to contribute to the conceptual clarity of proactive coping in the job insecurity process by exploring an alternative model in which the coping behaviors mentioned above function in a reactive rather than a proactive manner, i.e., by mitigating the negative consequences of job insecurity rather than the experience of job insecurity itself. By doing so, we address an apparent contradiction between Aspinwall and Taylor's (1997) proposition that proactive and reactive coping require different behaviors to be successful, and coping literature's proposition that some strategies, such as planning, may be useful in both a proactive and a reactive manner (Garnefski et al., 2001; Lyne & Roger, 2000).

Our research contributes to extant literature in four ways. First, by adopting a proactive perspective, we address the current knowledge gap regarding whether and how workers can manage the experience of job insecurity itself. Instead of approaching job insecurity as something that workers can only react to in order to mitigate its consequences (e.g., "*job insecurity is not a clear problem that can be solved since it is a situation beyond individuals' control*"; Giunchi et al., 2019, p. 5), we propose a less deterministic perspective in which workers are able to influence their own future levels of job insecurity. Second, by applying Aspinwall and Taylor's (1997) conceptual framework of proactive coping, we empirically test its premise that proactive coping

can minimize work stressors, as well as the idea that proactive coping behaviors serve a different purpose than reactive coping behaviors. Third, by using a longitudinal within-person design to shed light on job insecurity as a process unfolding over time, we respond to Lee et al.'s (2018) call: "*If insecurity continues to grow and become a more prominent feature of the work environment in the future, a process approach that captures how people make sense of their personal situation, draw on resources to [proactively] cope with it, and react in productive ways becomes essential*" (p.352). Fourth, by exploring the full job insecurity spectrum (including cognitive, affective, quantitative, and qualitative components), we help uncover whether different types of job insecurity ask for different coping strategies. As such, our study fits better with the reality of contemporary careers in which job insecurity is an ongoing multi-faceted stressor (cf., Jiang & Lavaysse, 2018; Urbanaviciute et al., 2021), and can lay the foundations for evidence-based interventions that help workers with managing job insecurity throughout their career.

Theoretical Background and Hypotheses

Job Insecurity as an Intra-Individual Process

In contemporary careers, most workers experience a certain degree of job insecurity at all times (Wu et al., 2020). While it is important to mitigate the negative consequences of job insecurity, it would be even more appealing if these consequences could be cut down at the root by managing levels job insecurity. In this article we investigate whether this can be done through proactive coping. Conceptually we propose that the proactive behavior – job insecurity dynamic operates at the intermediate self-regulation level (Lord et al., 2010), given that proactive behavior implies new actions being consciously composed and executed to decrease the discrepancy between the current and desired state. Intermediate level self-regulation processes are theorized to have cycle times varying between minutes and days, depending on the type of behavior (Lord et al., 2010). Given our focus on proactive behavior and the experience of job insecurity, we use intervals of seven days to allow individuals sufficient time to enact in proactive behaviors. This intra-individual approach enables us to discover whether workers can manage their future levels of job insecurity and to clarify the difference between proactive and reactive coping. Below, we will first introduce our hypotheses regarding how workers can manage their future job insecurity with proactive coping, after which we will discuss how the same behaviors may also function in a reactive manner to manage potential consequences.

Proactive Coping with Ongoing Job Insecurity

Proactive coping refers to future-oriented coping that tries to detect and proactively manage stressors (Aspinwall & Taylor, 1997). Proactive coping differs from concepts such as anticipatory coping or preventive coping, which are aimed at specific critical events or imminent threats (Reuter & Schwarzer, 2009). Proactive coping also differs from proactive personality (e.g., Seibert et al., 1999) and attributional measures of proactive coping (e.g., Proactive Coping Inventory; Greenglass et al., 1999), since proactive coping refers to behavior and not a general behavioral tendency. Thus, in the context of job insecurity, proactive coping refers to behaviors that are aimed at detecting and managing future job insecurity. Examples of proactive coping can be gaining information from one's supervisor about contract renewal, or maintaining (or creating) good relationships within one's professional network to signal future job leads.

According to Aspinwall and Taylor's (1997) conceptual framework, proactive coping can be divided into five components: Recognition, initial appraisal, preliminary coping, elicitation and use of feedback, and resource accumulation. Based on Aspinwall and Taylor (1997) we propose that each of these five components can help manage workers' future experience of job insecurity. First, Aspinwall and Taylor (1997) state that the recognition of potential stressors at an early stage, through being aware of one's goals and having a plan for how to attain them, may lessen the development of these stressors through increased options to divert the stressors. For example, through planning the different components of a task one has to complete within a given period of time, one may realize that this time period is insufficient to complete the whole task. By recognizing this potential stressor early, one can set priorities or negotiate more time, before the actual deadline is near. Regarding the specific stressor of job insecurity, when workers regularly engage in career planning, they recognize potential threats to their career in an early stage, which may create the opportunity for actions to minimize a future increase in job insecurity. For example, by looking forward in time, workers may realize that their contract will soon expire or that the demand for the product they sell may decline. Subsequently, they can explore the options for a new contract or a potentially better selling product −before feelings of job insecurity have grown out of proportion. We expect that being aware of options to divert threats to one's career decreases people's future experience of job insecurity. Consequently, we expect that engaging in career planning during a given week will decrease people's experience of job insecurity in the following week. Therefore, we propose:

Hypothesis 1a: The amount of weekly career planning is negatively related to the experience of job insecurity in the following week.

The second component of proactive coping, initial appraisal, involves the assessment of the current situation and, more importantly, what the situation is likely to become: "*the task facing the would-be proactive coper is to run the incipient stressful event forward in time to project what its likely implications or course will be or could be*" (Aspinwall & Taylor, 1997, p. 424). Therefore, Aspinwall and Taylor argue that considering different scenarios of how a situation may develop can help to identify threats and their future impact. Thus, scenario-thinking may benefit the appraisal process. For example, one can visualize different scenarios of an organizational restructuring, which may result in an early recognition of a threat. Following Aspinwall and Taylor's framework, we expect that being aware of possible threats provides workers with more tangible job options and subsequently decreases the experience of job insecurity. Thus, we expect that engaging in scenario thinking during a given week will decrease people's experience of job insecurity in the following week. Therefore, we propose:

Hypothesis 1b: The amount of weekly scenario thinking is negatively related to the experience of job insecurity in the following week.

The third component, preliminary coping, involves activities aimed at preventing or minimizing the further development of a recognized and appraised potential stressor. Aspinwall and Taylor (1997) suggest that preliminary coping behaviors are virtually always active, and that the specific actions that are needed depend heavily on the nature of the problem. In the context of potential job insecurity, we propose talking with one's supervisor or business partner about one's career prospects (i.e., career consultation) may be an effective preliminary coping effort. It may inhibit potential job insecurity directly (e.g., it is communicated your work efforts will still be needed in the future), or will generate important information which can be used in subsequent proactive coping behaviors (e.g., it is communicated how much time is remaining to explore other options). So regardless of the nature of the newly gained information, we expect that engaging in career consultation during a given week will decrease people's experience of job insecurity in the following week. Therefore, we propose:

Hypothesis 1c: The amount of weekly career consultation is negatively related to the experience of job insecurity in the following week.

The fourth component, elicitation and use of feedback, involves acquiring feedback from one's social network and reflecting on the development of the potential stressor and the impact of one's preliminary coping behaviors. Especially when stressors are nebulous in form, as is the case with job insecurity (Shoss, 2017), individuals rely heavily on the feedback of their social network (Aspinwall & Taylor, 1997). The information provided by a social network is argued to help interpret situations and to create suitable preliminary coping behaviors. Reflecting on preliminary coping behaviors yields information about the situation, that may be used to alter appraisals or future preliminary coping behaviors and will hence indirectly help minimize the potential stressor. Following this reasoning, we propose two coping behaviors are especially important in this stage: networking and reflecting. Here, networking entails both the maintenance of existing relationships and building new ones, and reflecting entails acquiring feedback from both others and the self. We expect networking and reflecting to result in a clearer understanding of the situation, and, thus, that engaging in networking and reflecting during a given week will decrease people's experience of job insecurity in the following week.

Hypothesis 1d: The amount of weekly networking is negatively related to the experience of job insecurity in the following week.

Hypothesis 1e: The amount of weekly reflecting is negatively related to the experience of job insecurity in the following week.

The final component of proactive coping is resource accumulation. Aspinwall and Taylor (1997) argue that the more resources one has, the likelier it is that one will be successful in the above-mentioned components of proactive coping. Resources refer to objects, personal characteristics, conditions, or energies that are valued by the individual (e.g., money, time, social network; Aspinwall & Taylor, 1997; Hobfoll, 1989). For example, it may be easier to recognize a situation that may develop into a future stressor, when one has an extensive social network to receive information from. Resources are not built in a matter of weeks, but are the result of continuous effort over a prolonged period of time (e.g., financial resources result from long-term

saving efforts, not from the act of saving money one certain week). This makes the amount of resources relatively stable during the 5-week timespan of our study. Therefore, we examine resources as a between-person moderator to investigate whether workers with more resources are more successful in their proactive coping behaviors than workers with less resources.

> **Hypothesis 2:** The negative relationship between weekly proactive coping and the experience of job insecurity in the following week is stronger for individuals with more resources than for individuals with less resources.

Job Insecurity and Strain

Prior research consistently indicates that job insecurity is related to various forms of strain, such as decreased job and life satisfaction, and reduced general and psychological health (Cheng & Chan, 2008; De Witte, 1999; Jiang & Lavaysse, 2018). Longitudinal studies suggest a directional relationship in which job insecurity results in strain (e.g., Hellgren & Sverke, 2003). Although this prior evidence concerns the relationship between job insecurity and strain at the between-person level, we pose that the job insecurity-strain relationship functions similar to other work stressor-strain relationships over time (cf. Pindek et al., 2019), and thus we expect that the experience of job insecurity is associated with strain at the within-person level:

> **Hypothesis 3:** The experience of weekly job insecurity is positively related to weekly psychological strain.

Proactive and Reactive Coping with Job Insecurity

While the conceptual distinction between proactive and reactive coping is theoretically well-defined, it can be difficult to categorize actual coping behaviors in these categories. As Stiglbauer and Batinic (2015) explain: "*the types of cognitive, behavioral, or emotional efforts made within this [proactive coping] process are not necessarily different from those within reactive coping. However, they are temporally prior and therefore fulfill a different function"* (p. 266). To illustrate, individuals may use their network proactively to minimize future job insecurity, but they may also use their network reactively to decrease the strain resulting from existing job insecurity. Unfortunately, prior research on proactive coping and job insecurity has been unable to capture this conceptual distinction because of the methodological timing of proactive coping. For example, Stiglbauer and Batinic (2015) examined proactive coping as a moderator between job

insecurity and its consequences while, conceptually, proactive coping should precede the experience of job insecurity in time. Examining coping as a way to buffer negative consequences of job insecurity makes it reactive coping by definition (Aspinwall & Taylor, 1997; Reuter & Schwarzer, 2009). While Koen and Parker (2020) did examine proactive coping prior to job insecurity and found that it can minimize the experience of job insecurity, their research design was unable to exclude the option that 'proactive' coping may have been a response to job insecurity because they did not control for job insecurity at an earlier stage.

The current study tackles this problem by measuring both coping behaviors and job insecurity at five different points in time, allowing us to differentiate between coping that is expected to minimize the future experience of job insecurity in consecutive weeks (i.e., proactive coping), and coping that is expected to minimize the strain resulting from existing job insecurity (i.e., reactive coping). This differentiation is essential to understand which behaviors are most effective in achieving proactive coping goals (i.e., minimizing job insecurity) and/or reactive coping goals (i.e., minimizing consequences). Here, we propose that the difference between proactive and reactive coping lies in its timing and function rather than in the type of behaviors. We therefore explore two within-level research models: 1) a proactive model in which coping forms an antecedent of job insecurity (Figure 2.1), and 2) a reactive model in which coping forms a moderator between job insecurity and psychological strain (Figure 2.2). Put differently, we explore whether the proactive coping behaviors discussed earlier (i.e., career planning, scenario thinking, career consultation, networking and reflecting) can also function as reactive coping behaviors by moderating the relationship between job insecurity and psychological strain.

This assumption aligns with prior research that indicates that changing the situation (Cheng et al., 2014), seeking social support (Menéndez-Espina et al., 2019), and re-evaluating the situation (Richter et al., 2013) can buffer the negative consequences of job insecurity. However, there is also evidence indicating the contrary: problem-focused coping such as job support and social support can strengthen the negative relationship between job insecurity its negative consequences (Giunchi et al., 2019). Uncovering whether behaviors can successfully fulfill both proactive and reactive functions is valuable, since this would indicate how to kill two birds with one stone: minimizing future job insecurity and buffering the consequences of insecurity that is currently experienced.

Figure 2.1

The Proactive Coping Model

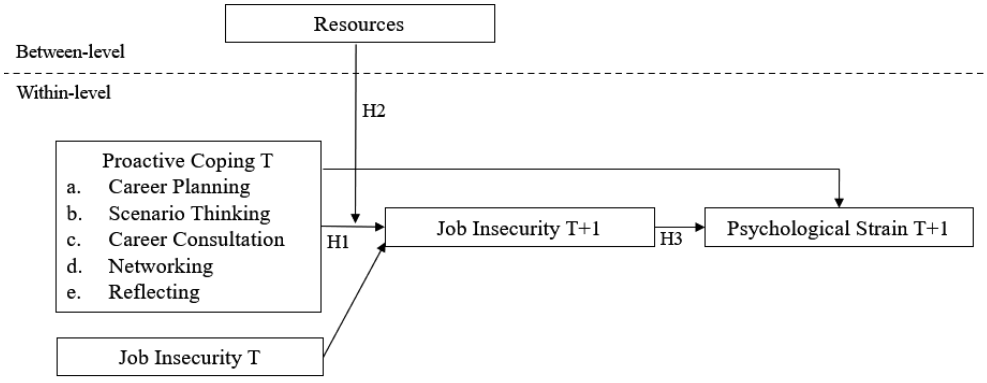
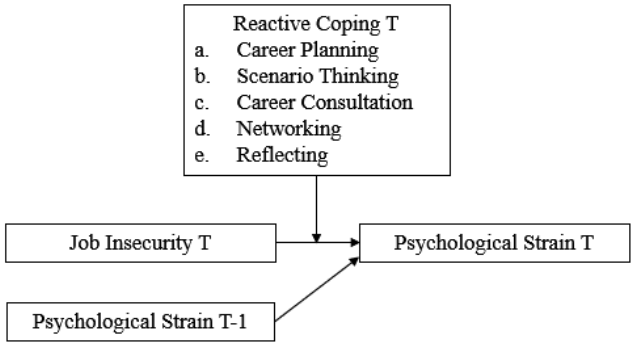


Figure 2.2

The Reactive Coping Model



Note. Arrows indicate relationships at the within-level.

It is important to address that Aspinwall and Taylor's (1997) conceptual framework seemingly opposes our proposition that proactive and reactive coping can consist of the same behaviors: they explicitly state that different behaviors are likely to be successful for proactive coping than for reactive coping. This is based on the idea that proactive and reactive coping have different goals, and thus require different skills and activities to reach those goals. That is, because the goal of proactive coping is to mitigate the development of potential stressors, it is expected to be active (e.g., problem solving, seeking social support) rather than passive (e.g., withdrawal, ignoring). Because the goal of reactive coping is to decrease a stressor's consequences, it can be both active and passive: successful reactive coping is generally active in escapable situations and passive in unescapable situations, such as bereavement or past defeat (Bandler et al., 2000). In the case of job insecurity, individuals are not yet 'defeated' and may still feel that they can influence their future work situation. As such, in the context of job insecurity, we expect successful proactive and reactive coping to be both active forms of coping, making it plausible that the same behaviors can be used effectively for their different aims.

Four Types of Job Insecurity

Job insecurity can refer to the perceived threat to the continuity of one's job (i.e., quantitative job insecurity) as well as to the perceived threat to favorable job features (i.e., qualitative job insecurity; e.g., De Witte et al., 2010). In addition, job insecurity as a 'perceived threat' implies both cognitive and emotional experiences (Huang et al., 2010), generally referred to in the literature as 'cognitive job insecurity' and 'affective job insecurity', respectively (e.g., Jiang & Lavaysse, 2018). Taken together, both quantitative and qualitative job insecurity can have a cognitive component and an affective component, resulting in a two-by-two grid of four types of job insecurity: cognitive quantitative job insecurity, affective quantitative job insecurity, cognitive qualitative job insecurity, and affective qualitative job insecurity.

While these four types of job insecurity and the value of differentiating them are generally acknowledged in prior research (e.g., Jiang et al., 2021), few studies have empirically examined all four components. Studies generally focus on either the quantitative and qualitative dimensions (De Witte et al., 2010), or the cognitive and affective dimensions (Jiang & Lavaysse, 2018). Moreover, some scales consist of a combination of quantitative and qualitative items (e.g., Kraimer et al., 2005), or a combination of cognitive and affective items (e.g., Vander Elst et al., 2014), which prohibits a fuller understanding of the separate job insecurity types and their different

relations with antecedents and outcomes. Combining cognitive and affective items may in some cases even be seen as problematic, since affective job insecurity may function as a mediator between cognitive job insecurity and health and performance outcomes (Jiang & Lavaysse, 2018). To examine if coping has a similar impact for all four types of job insecurity, we test our hypotheses and exploratory questions for each insecurity type.

Methods

Context, Participants, and Procedure

Survey data were collected[2] in June and July 2020 in the Netherlands. We targeted a broad pool of workers from all sectors and educational levels to enhance the generalizability of our findings, with three exclusion criteria. First, we excluded workers aged 65+, since prospects of retirement may make their (potential) job insecurity a different experience incomparable with job insecurity of the rest of the sample. Second, we excluded those who worked < 20 hours a week, since they may not be as dependent on work (e.g., for their identity or financial reasons). Third, we excluded fulltime students, since student loans and other regulations (e.g., student housing) may confound with our outcome variables. We recruited participants via social media, social media advertisements, and organizational newsletters. Participants received: a) a €5 voucher for completing the first survey, b) a €15 voucher for completing all five surveys, and c) recommendations about coping with job insecurity after the study.

In total, 314 participants registered for the study and 281 started the baseline survey. Of these, 15 respondents did not meet the inclusion criteria, resulting in 266 usable responses at the baseline. Mean age was 39.8 years (SD = 11.8) and 72.9% was female. Regarding highest level of education, 7.5% finished high school, 15.0% finished vocational education, 39.1% had a bachelor's degree, 36.8% had a master's degree, and 1.5% had a doctorate degree. Regarding contract type, 51.1% had a permanent contract, 27.1% had a temporary contract, 12.4% had a flexible contract, and 9.4% were self-employed. Sample sizes for the subsequent weekly surveys were: N_{T1} = 266; N_{T2} = 256 (96.2%); N_{T3} = 255 (95.9%); N_{T4} = 254 (95.5%); N_{T5} = 249 (93.6%). 248 participants filled in all five surveys. The final dataset consisted of 1.280 weekly surveys.

[2] Before data collection, the study had been approved by the Ethics Review Board of the authors' university. Participants were informed about the anonymity and confidentiality of the data and the voluntary nature of their participation at the webpage that preceded the first survey and provided their informed consent.

Measures

The baseline measures, assessed in the T1 survey, included resources and demographics. We also measured neuroticism, proactive personality, and experienced threat of COVID-19, but these were not used in the present study. We measured job insecurity, coping behaviors, and psychological strain at all measurement points (i.e., T1-T5). See Appendix 2A for all items.

Baseline Variables

Resources were measured with three items based on Aspinwall and Taylor's (1997) three main resources (i.e., time, money, and social support), supplemented with four items referring to resources that are expected to be accumulated through long-term use of the coping behaviors measured in this study (e.g., "*I have a clear image of my career goals and how to achieve them"*; 1 = "*strongly disagree"*, 7 = *"strongly agree"*).

Weekly Variables

All weekly variables were measured on 7-point scales, ranging from *"(almost) never"* to "*(almost) always".* The measures were adapted to suit a frequency response format and started with "*Could you please indicate, how often you, in the last week…".*

Job Insecurity consisted of cognitive quantitative job insecurity which was measured with three items from Vander Elst et al. (2014), cognitive qualitative job insecurity which was measured with three items from Hellgren et al. (1999), affective quantitative job insecurity which was measures with two items from Hellgren et al. (1999) and one item from Vander Elst et al. (2014), and affective qualitative job insecurity which was measured with three items from Låstad et al. (2015) and one item from Vander Elst et al. (2014). To make the survey accessible for self-employed and other non-standard workers, we adapted the items to refer to "work" instead of "job" and to refer to expectations in general instead of within their organization.

Coping Behaviors were measured with three items each, using previously validated scales that we selected guided by Aspinwall and Taylor's (1997) descriptions of the coping behaviors. Measures for career planning, career consultation, and networking were taken from Strauss et al. (2012), and for scenario thinking and reflecting from Bindl et al. (2012).

Psychological Strain was measured with eight items from Kalliath et al. (2004).

Analytic Strategy

The data had a two-level structure with repeated weekly measures at the within-person level (i.e., Level 1; N = 1.280), nested within individuals at the between-person level (i.e., Level

2; N = 266). We investigated two multilevel models using multilevel path analysis in Mplus 7.31. First, we tested our hypotheses with the proactive coping model depicted in Figure 2.1. Second, we explored whether theoretically proactive coping behaviors can also function in a reactive manner, by testing the reactive coping model depicted in Figure 2.2. The proactive and reactive models were tested separately for the four job insecurity types and five coping behaviors. While our hypotheses concern within-level relationships, we also modeled these same relationships at the between-level to explore whether results showed a similar trend between persons. In all models, time-varying predictor variables were person-mean centered for the within-level analyses. For the between-level supplemental analyses, time-varying predictor variables were averaged into person means (cf. Binnewies et al., 2010).

Results

Table 2.1 displays descriptive statistics and correlations for study variables. We evaluated the factor structure of the four job insecurity types with multilevel confirmatory factor analysis (CFA) in Mplus 7.31. Fit indices were interpreted using Hu and Bentler's (1999) suggested values. Results showed a good fit for the four-factor model, $\chi2(127) = 335.26$, CFI = .95, RMSEA = .04, SRMR = .05. This model fitted the data significantly better than a two-factor Model with a quantitative and qualitative dimension ($\Delta\chi2 = 403.39$, $\Delta df = 1$, $p < .001$, ΔCFI = .09), a two-factor model with cognitive and affective dimension ($\Delta\chi2 = 759.29$, $\Delta df = 12$, $p < .001$, ΔCFI = .08), or a common-factor model ($\Delta\chi2 = 857.65$, $\Delta df = 15$, $p < .001$, ΔCFI = .02). We evaluated the factor structure of the coping behaviors measure with multilevel CFA in Mplus 7.31, using Hu and Bentler's (1999) suggested values. Results showed an acceptable fit for the five-factor structure of coping, $\chi2(170) = 719.89$, CFI = .94, RMSEA = .05, SRMR = .05, and the five-factor model fitted the data significantly better than a six-factor model consisting of five factors and an higher order factor ($\Delta\chi2 = 9834.08$, $\Delta df = 40$, $p < .001$, ΔCFI = .05), or a common-factor model ($\Delta\chi2 = 2756.80$, $\Delta df = 24$, $p < .001$, ΔCFI = .28).

Table 2.1

Means, Standard Deviations, and Correlations for the Study Variables

	M	*SD*	α	*ICC*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	39.78	11.76	-	-	-													
2. Gender[a]	1.73	0.45	-	-	.03	-												
3. Education[b]	3.01	0.93	-	-	-.38**	.07	-											
4. Resources	5.08	0.92	.72	-	-.03	-.08	.20**	-										
5. Career planning	3.86	1.71	.95-.95	.65	-.21**	.04	.17**	.03	-	.86**	.64**	.55**	.63**	.32**	.34**	-.13*	.43**	.14**
6. Scenario thinking	3.67	1.53	.86-.90	.66	-.19**	.05	.10	.05	.85**	-	.69**	.61**	.70**	.38**	.41**	-.09	.46**	.18**
7. Career consultation	2.44	1.43	.76-.84	.61	-.05	-.03	-.02	.07	.58**	.64**	-	.75**	.74**	.27**	.28**	-.13**	.28**	.08**
8. Networking	2.96	1.68	.92-.95	.64	-.01	.01	.06	.12	.46**	.54**	.69**	-	.74**	.26**	.26**	-.16**	.26**	.09**
9. Reflecting	2.89	1.49	.84-.90	.63	-.14*	-.00	.05	.04	.58**	.63**	.69**	.71*	-	.31**	.32**	-.15*	.32**	.12*
10. Cog Quan JI	2.77	1.67	.84-.89	.83	.03	-.02	-.05	-.21**	.34**	.40**	.29**	.24**	.36**	-	.84**	.35**	.64**	.41**
11. Af Quan JI	2.58	1.59	.89-.93	.81	.04	.05	-.04	-.25**	.35**	.41**	.27**	.21**	.35**	.86**	-	.31**	.72**	.42**
12. Cog qual JI	4.26	1.26	.70-.80	.65	.25**	-.01	-.15*	-.32**	-.12*	-.15*	-.13*	-.22**	-.17**	.22**	.22**	-	.36**	.30**
13. Af qual JI	3.15	1.40	.84-.90	.75	-.10	.15	.06	-.34**	.44**	.43**	.24**	.20**	.27**	.57**	.63**	.26**	-	.52**
14. Psych strain	3.16	1.32	.84-.90	.73	-.22**	.02	.08	-.46**	.15*	.17**	.06	.06	.07	.28*	.32**	.14*	.43**	-

Note: Correlations below the diagonal represent between-person correlations at T1 (N = 264-266) and correlations above the diagonal are within-person correlations (N = 1278). **p < .01 *p < .05 (2-tailed). All measures with the exception of age, gender, and education, were measured on 7-point Likert scales.
[a] 1 = Male, 2 = Female. [b] 1 = Primary education or high school, 2 = Vocational education, 3 = Bachelor education, 4 = Master education, 5 = PhD degree.
JI = Job insecurity, Cog = Cognitive, Af = Affective, Quan = Quantitative, Qual = Qualitative.

Main Findings

Table 2.2 displays the results of the multilevel path analyses, testing Hypotheses 1-3. Hypothesis 1a posed that weekly career planning is negatively related to job insecurity in the following week. This hypothesis was not supported as we found no significant relationships between career planning and any of the job insecurity types (all *p*s > .05; see H1a in Table 2.2). Hypothesis 1b posed that weekly scenario thinking is negatively related to job insecurity in the following week. This hypothesis was also not supported as we found no significant relationships between scenario thinking and any of the job insecurity types (all *p*s > .05; see H1b in Table 2.2). Hypothesis 1c posed that weekly career consultation is negatively related to job insecurity in the following week. Contrary to this hypothesis, we found a positive relationship between career consultation and affective quantitative job insecurity ($B = .08$, $p < .01$). No significant relationships were found for the other job insecurity types (all *p*s > .05; see H1c in Table 2.2). Hypothesis 1d and 1e posed that weekly networking and weekly reflecting are negatively related to the experience of job insecurity. These hypotheses were not supported as we found no significant relationships of networking and reflecting with any of the job insecurity types (all *p*s > .05; see H1d and H1e in Table 2.2).

Hypothesis 2 posed that the negative relationship between weekly proactive coping and job insecurity in the following week is moderated by the amount of resources. The results show no significant cross-level interactions of resources in the within-level relationships between the proactive coping behaviors and job insecurity (all *p*s > .05; see H2's in Table 2.2), with one exception: We found a significant cross-level interaction between resources and reflecting on cognitive quantitative job insecurity ($B = -.06$, $p < .05$). The relationship between weekly reflecting and cognitive quantitative job insecurity was more positive for workers with few resources (95% CI [-0.00, 0.15]) compared to those with many resources (95% CI [-0.12, 0.03]).

Hypothesis 3 posed that the experience of weekly job insecurity is positively related to weekly psychological strain. In support of this hypothesis, we found significant positive relationships between all types of job insecurity and psychological strain (all *p*s < .01, *B*s ranged between .10 and .17, see H3's in Table 2.2). The exploratory question whether proactive coping behaviors can also function in a reactive manner to minimize the psychological strain resulting from job insecurity, was tested according to the research model presented in Figure 2.2, for the four types of job insecurity and the five types of coping separately. The results as displayed in

Table 2.2

Results of the Multilevel Path Analyses of the Proactive Coping Models

	Job insecurity type			
	Cognitive quantitative	Cognitive qualitative	Affective quantitative	Affective qualitative
Career planning				
Direct relationships:				
Job insecurity T → Job insecurity T+1	-0.107*	-0.130**	-0.143**	-0.097*
H1a: Career planning T → Job insecurity T+1	0.024	0.008	0.015	0.000
H3: Job insecurity T+1 → Strain T+1	0.110**	0.098**	0.129**	0.163**
Career planning T → Strain T+1	0.000	0.002*	0.002	0.004
Cross-level moderation:				
H2: Career planning T * Resources → Job insecurity T+1	0.009	-0.021	-0.004	-0.031
Scenario thinking				
Direct relationships:				
Job insecurity T → Job insecurity T+1	-0.110**	-0.131**	-0.156**	-0.083*
H1b: Scenario thinking T → Job insecurity T+1	0.026	-0.029	0.008	-0.020
H3: Job insecurity T+1 → Strain T+1	0.110**	0.098**	0.129**	0.162**
Scenario thinking T → Strain T+1	-0.009	-0.005	-0.007	-0.002
Cross-level moderation:				
H2: Scenario thinking T * Resources → Job insecurity T+1	-0.032	-0.031	0.010	-0.005
Career consultation				
Direct relationships:				
Job insecurity T → Job insecurity T+1	-0.106*	-0.146**	-0.144**	-0.092*
H1c: Career consultation T → Job insecurity T+1	0.038	-0.052	0.081**	0.012
H3: Job insecurity T+1 → Strain T+1	0.110**	0.099**	0.128**	0.163**
Career consultation T → Strain T+1	0.014	0.022	0.008	0.019
Cross-level moderation:				
H2: Career consultation T * Resources → Job insecurity T+1	-0.038	-0.008	-0.031	-0.032
Networking				
Direct relationships:				
Job insecurity T → Job insecurity T+1	-0.110**	-0.141**	-0.141**	-0.099**
H1d: Networking T → Job insecurity T+1	0.014	-0.047	-0.002	0.014
H3: Job insecurity T+1 → Strain T+1	0.111**	0.096**	0.129**	0.163**
Networking T → Strain T+1	-0.027	-0.023	-0.026	-0.027
Cross-level moderation:				
H2: Networking T * Resources → Job insecurity T+1	-0.053	-0.003	0.004	-0.028
Reflecting				
Direct relationships:				
Job insecurity T → Job insecurity T+1	-0.106*	-0.139**	-0.149**	-0.101**
H1e: Reflecting T → Job insecurity T+1	0.018	-0.052	0.042	0.010
H3: Job insecurity T+1 → Strain T+1	0.111**	0.097**	0.131**	0.163**
Reflecting T → Strain T+1	-0.016	-0.011	-0.019	-0.014
Cross-level moderation:				
H2: Reflecting T * Resources → Job insecurity T+1	-0.064*	-0.037	-0.019	-0.009
Estimate [CI] for high resources	-0.040 [-0.115, 0.034]			
Estimate [CI] for low resources	0.076 [-0.002, 0.154]			

Note. **$p < .01$ *$p < .05$ (2-tailed). $N = 1007$ (within-person), $N = 259$ (between-person).

Table 2.3 show that none of the coping behaviors moderated the within-level relationship between any of the job insecurity types and psychological strain (all *p*s > .05; see 'Job insecurity T * Coping T → Strain T' in Table 2.3), with two exceptions. First, career planning moderated the relationship between affective quantitative job insecurity and psychological strain (B = -.06, p < .05), in such a way that the positive relationship between insecurity and strain was weaker for workers high on career relationship between insecurity and strain was weaker for workers high on career planning (95% CI [0.01, 0.14]), than for those low on career planning (95% CI [0.10, 0.26]). Second, career consultation moderated the relationship between cognitive qualitative job insecurity and psychological strain (B = .05, p < .05), in such a way that the positive relationship between job insecurity and strain was stronger for workers high on career consultation (95% CI [0.08, 0.20]), than for those low on career consultation (95% CI [0.01, 0.11]).

Supplemental Findings

The main results indicated that weekly proactive coping was unrelated (career planning, scenario thinking, networking, reflecting) or positively related (career consultation) to the experience of job insecurity in the following week. Because these findings contradict our expectations, we further explored the data by conducting two supplemental analyses. First, we tested the possibility that a combination of the five proactive coping behaviors, rather than each separate behavior, may decrease people's experience of job insecurity in the following week. We explored this possibility since the five stages of proactive coping are theoretically connected through several feedback loops (cf. Aspinwall & Taylor, 1997). Testing the proactive coping model with a combined coping measure showed that this was not the case: a combined measure of all five coping behaviors was not related to any of the job insecurity types (all *p*s > .05).

Second, we tested the possibility that the unexpected findings were the result of the level of analysis. That is, prior research findings were based on between-level analyses, while our findings are based on within-level analyses. Yet, it may be possible that relationships at the between-level differ from relationships at the within-level (e.g., Wanberg et al., 2010). We therefore examined the proactive coping model at the between-person level. Results indicated that all proactive coping behaviors were positively related to all job insecurity types (all *p*s < .01, *B*s ranged between .37 and .97, see S1a-S1e in Table 2.4), with the exception of cognitive qualitative job insecurity (all *ps* > .05). Thus, workers who generally engage more in proactive coping,

Table 2.3

Results of the Multilevel Path Analyses of the Reactive Coping Models

	Job insecurity type			
	Cognitive quantitative	Cognitive qualitative	Affective quantitative	Affective qualitative
Career planning				
Direct relationships:				
Psychological strain T-1 → Psychological strain T	-0.144**	-0.140**	-0.130**	-0.139**
Job insecurity T → Psychological strain T	0.119**	0.110**	0.127**	0.174**
Career planning T → Psychological strain	0.012	0.024	0.007	-0.012
Within-level moderation:				
Job insecurity T * Career planning T → Strain T	0.000	0.030	-0.061*	-0.021
Estimate [CI] for high Career planning	-	-	0.073 [0.010, 0.137]	-
Estimate [CI] for low Career planning	-	-	0.180 [0.103, 0.257]	-
Scenario thinking				
Direct relationships:				
Psychological strain T-1 → Psychological strain T	-0.144**	-0.139**	-0.131**	-0.139**
Job insecurity T → Psychological strain T	0.116**	0.111**	0.127**	0.169**
Scenario thinking T → Psychological strain	0.017	0.037	0.014	-0.002
Within-level moderation:				
Job insecurity T * Scenario thinking T → Strain T	0.009	0.029	-0.020	0.009
Career consultation				
Direct relationships:				
Psychological strain T-1 → Psychological strain T	-0.145**	-0.136**	-0.132**	-0.141**
Job insecurity T → Psychological strain T	0.124**	0.100**	0.135**	0.175**
Career consultation T → Psychological strain	-0.054**	-0.031	-0.057**	-0.059**
Within-level moderation:				
Job insecurity T * Career consultation T → Strain T	0.026	0.051*	-0.002	0.053
Estimate [CI] for high Career consultation	-	0.140 [0.084, 0.197]	-	-
Estimate [CI] for low Career consultation	-	0.060 [0.009, 0.110]	-	-
Networking				
Direct relationships:				
Psychological strain T-1 → Psychological strain T	-0.144**	-0.136**	-0.130**	-0.140**
Job insecurity T → Psychological strain T	0.120**	0.110**	0.128**	0.168**
Networking T → Psychological strain	0.009	0.029	0.005	0.002
Within-level moderation:				
Job insecurity T * Networking T → Strain T	-0.022	0.034	-0.026	0.031
Reflecting				
Direct relationships:				
Psychological strain T-1 → Psychological strain T	-0.143**	-0.139**	-0.130**	-0.138**
Job insecurity T → Psychological strain T	0.121**	0.110**	0.127**	0.171**
Reflecting T → Psychological strain	0.005	0.028	0.002	-0.010
Within-level moderation:				
Job insecurity T * Reflecting T → Strain T	0.045	0.032	-0.029	-0.010

Note. $^{**}p < .01$ $^{*}p < .05$ (2-tailed). $N = 1007$ (within-person)

Table 2.4

Between-person Findings of the Multilevel Path Analyses of the Proactive Coping Models.

	Job insecurity type			
	Cognitive quantitative	**Cognitive qualitative**	**Affective quantitative**	**Affective qualitative**
Career planning				
Direct relationships:				
Resources → Job insecurity	0.155	-0.687**	0.344	0.063
S1a: Career planning → Job insecurity	0.424**	-0.111	0.405**	0.454**
S3: Job insecurity → Strain	0.292**	0.307**	0.318**	0.489**
Career planning → Strain	-0.008	0.153**	-0.014	-0.101**
Between-level moderation:				
S2: Career planning * Resources → Job insecurity	-0.182**	0.027	-0.228**	-0.178**
Estimate [CI] for high resources	0.257 [0.096, 0.417]	-	0.195 [0.042, 0.349]	0.290 [0.163, 0.417]
Estimate [CI] for low resources	0.591 [0.432, 0.749]	-	0.614 [0.471, 0.757]	0.618 [0.513, 0.722]
Between-level moderated mediation:				
S4a: Career planning * Resources → Job insecurity → Strain	-0.053**	-	-0.072**	-0.087**
Estimate [CI] for high resources	0.075 [0.025, 0.125]	-	0.062 [0.011, 0.113]	0.142 [0.076, 0.208]
Estimate [CI] for low resources	0.172 [0.103, 0.241]	-	0.195 [0.129, 0.262]	0.302 [0.233, 0.371]
Scenario thinking				
Direct relationships:				
Resources → Job insecurity	0.102	-0.835**	0.314	0.054
S1b: Scenario thinking → Job insecurity	0.525**	-0.042	0.511**	0.527**
S3: Job insecurity → Strain	0.288**	0.212**	0.317**	0.492**
Scenario thinking → Strain	0.001	0.170**	-0.011	-0.104*
Between-level moderation:				
S2: Scenario thinking * Resources → Job insecurity	-0.171**	0.070	-0.227**	-0.180**
Estimate [CI] for high resources	0.368 [0.193, 0.542]	-	0.303 [0.128, 0.4767	0.362 [0.221, 0.503]
Estimate [CI] for low resources	0.683 [0.518, 0.847]	-	0.720 [0.578, 0.861]	0.693 [0.586, 0.799]
Between-level moderated mediation:				
S4b: Scenario thinking * Resources → Job insecurity → Strain	-0.049*	-	-0.072**	-0.088**
Estimate [CI] for high resources	0.058 [0.049, 0.163]	-	0.095 [0.036, 0.156]	0.178 [0.103, 0.253]
Estimate [CI] for low resources	0.130 [0.117, 0.276]	-	0.226 [0.152, 0.304]	0.341 [0.269, 0.413]
Career consultation				
Direct relationships:				
Resources → Job insecurity	0.145	-0.724**	0.254	0.029
S1c: Career consultation → Job insecurity	0.493**	-0.104	0.475**	0.435**
S3: Job insecurity → Strain	0.296**	0.292**	0.322**	0.459**
Career consultation → Strain	-0.029	0.137**	-0.034	-0.075
Between-level moderation:				
S2: Career consultation * Resources → Job insecurity	-0.246**	0.052	-0.279**	-0.228**
Estimate [CI] for high resources	0.267 [0.057, 0. 0.477]	-	0.218 [0.003, 0.433]	0.225 [0.070, 0.381]
Estimate [CI] for low resources	0.719 [0.497, 0.942]	-	0.731 [0.533, 0.9309]	0.645 [0.473, 0.816]
Between-level moderated mediation:				
S4c: Career consultation * Resources → Job insecurity → Strain	-0.073**	-	-0.090**	-0.105**
Estimate [CI] for high resources	0.078 [0.013, 0.145]	-	0.070 [-0.001, 0.141]	0.103 [0.029, 0.178]
Estimate [CI] for low resources	0.213 [0.122, 0.304]	-	0.235 [0.1509, 0.320]	0.296 [0.206, 0.385]

Table 2.4 (continued)

	Job insecurity type			
	Cognitive quantitative	Cognitive qualitative	Affective quantitative	Affective qualitative
Networking				
Direct relationships:				
Resources → Job insecurity	0.094	-0.660**	0.197	0.010
S1d: Networking → Job insecurity	0.429**	-0.081	0.404**	0.372**
S3: Job insecurity → Strain	0.296**	0.298**	0.321**	0.452**
Networking → Strain	-0.028	0.117**	-0.029	-0.056
Between-level moderation:				
S2: Networking * Resources → Job insecurity	-0.219**	0.026	-0.245**	-0.212**
Estimate [CI] for high resources	0.227 [0.065, 0.388]	-	0.178 [0.011, 0.346]	0.177 [0.051, 0.303]
Estimate [CI] for low resources	0.630 [0.429, 0.831]	-	0.629 [0.456, 0.802]	0.567 [0.414, 0.719]
Between-level moderated mediation:				
S4d:Networking * Resources → Job insecurity → Strain	-0.065**	-	-0.078**	-0.096**
Estimate [CI] for high resources	0.067 [0.016, 0.118]	-	0.057 [0.001, 0.113]	0.080 [0.020, 0.140]
Estimate [CI] for low resources	0.187 [0.103, 0.270]	-	0.202 0.127, 0.277]	0.256 [0.175, 0.336]
Reflecting				
Direct relationships:				
Resources → Job insecurity	0.094	-0.726**	0.276	0.039
S1e: Reflecting → Job insecurity	0.501**	-0.103	0.484**	0.442**
S3: Job insecurity → Strain	0.294**	0.300**	0.319**	0.459**
Reflecting → Strain	-0.020	0.154**	-0.026	-0.067
Between-level moderation:				
S2: Reflecting * Resources → Job insecurity	-0.209**	0.048	-0.265**	-0.215**
Estimate [CI] for high resources	0.308 [0.121, 0.495]	-	0.240 [0.042, 0.437]	0.245 [0.102, 0.387]
Estimate [CI] for low resources	0.693 [0.502, 0.885]	-	0.728 [0.556, 0.899]	0.640 [0.501, 0.778]
Between-level moderated mediation:				
S4e: Reflecting * Resources → Job insecurity → Strain	-0.062**	-	-0.085**	-0.098**
Estimate [CI] for high resources	0.091 [0.031, 0.150]	-	0.077 [0.010, 0.143]	0.112 [0.042, 0.183]
Estimate [CI] for low resources	0.204 [0.124, 0.283]	-	0.232 [0.154, 0.311]	0.293 [0.215, 0.372]

Note. $^{**}p < .01$ $^{*}p < .05$ (2-tailed). $N = 259$ (between-person).

generally experience more job insecurity – except for cognitive qualitative job insecurity.

Next, we found that, overall, the positive relationships between proactive coping and job insecurity were moderated by resources (all *p*s < .01, *B*s ranged between -.10 and -.28, see S2's in Table 2.4). That is, the positive relationship between proactive coping behaviors and job insecurity was weaker for workers high in resources than for workers low in resources (Table 2.4). Further, we found that all types of job insecurity were positively related to psychological strain (all *p*s < .01, *B*s ranged between .21 and .60, see S3's in Table 2.4). Finally, in the cases that a moderating effect of resources was present, the results yielded a significant moderated mediation effect (all *p*s < .01, *B*s ranged between -.05 and -.11, see S4a-S4e in Table 2.4), which implies that the positive indirect relationship between proactive coping behaviors and psychological strain via job insecurity was stronger for workers with relatively few resources (Table 2.4).

Discussion

Guided by Aspinwall and Taylor's (1997) conceptual framework, we adopted a proactive intra-individual perspective to uncover if and how workers can manage their future experience of job insecurity. We investigated whether weekly proactive coping related to job insecurity in consecutive weeks and explored whether weekly proactive coping behaviors could also function in a reactive manner to buffer the negative consequences of job insecurity. Lastly, we explored whether the relationships we proposed on the within-person level (i.e., over time) were similar at the between-person level (i.e., between individuals). We found that weekly proactive coping was mostly unrelated to subsequent job insecurity at the within-person level, but positively related to job insecurity at the between-person level (although less so for those with high resources). Additionally, we found that proactive coping behaviors did not function reactively, i.e., could not weaken the relationship between job insecurity and psychological strain.

Major Findings and Theoretical Implications

Our results extend the job insecurity and coping literature in four ways. First, by examining the job insecurity process at the within-person level, we contributed to the limited knowledge of job insecurity as an intra-individual malleable experience (e.g., Lee et al., 2018). While we expected that weekly proactive coping would relate negatively to job insecurity in the following week, results showed that weekly proactive coping was mostly unrelated to job insecurity. We see two possible explanations for these results. A first possibility is that proactive coping may not have been 'wise' in the specific context of the COVID-19 pandemic. As highlighted by Parker et al. (2019), proactivity is not always positive: It may not be "wise" when the context is not ready for change. In this study, it may have been rather difficult to initiate change due to the pandemic, or it may have felt insignificant in the bigger picture (e.g., What good is a career plan if there may be another lockdown soon?).

A second possibility is that it may require more time before proactive coping can manifest itself: Our within-level results indicate that proactive coping does not decrease job insecurity after one week, and our between-level results indicate that people who used more proactive coping during the full 5-week period experienced higher levels of job insecurity. These findings are in line with recent suggestions that proactive coping may have no effects or even adverse effects in the short term due to consumption of resources, but beneficial effects in the long term due to gaining new resources (Bolino et al., 2010; Cangiano et al., 2021; Giunchi et al., 2019). To

illustrate, networking may cost time and resources, but one week of networking does not immediately result in a large and reliable network; creating a network that can further one's career opportunities takes time. Another reason why proactive coping may need more time to manifest itself, lies in its definition: future-oriented coping that aims to manage stressors as well as to detect stressors in an early stage (Aspinwall & Taylor, 1997). Possibly, proactive coping helped to detect threats to one's job and therefore increased rather than decreased people's feelings of job insecurity. That is, talking about one's career with a manager, colleague, or business partner (career consultation) may have made threats to job security more salient.

It is important to note that the between-level findings indicated positive relationships between all proactive coping behaviors and job insecurity. While the arguments above may explain these positive relationships, the results can also raise a question about potential reverse directionality, such that job insecurity may instigate more proactive coping efforts. Given that coping is a self-regulatory behavior and thus implies self-regulatory loops (the process of using behaviors to improve the fit between desired and current state, and consequently modifying behaviors based on the evaluation of that fit, cf. Lord et al. 2010), this is indeed a possibility. However, recent longitudinal evidence suggests a negative relationship between job insecurity (or striving for security) as a predictor and proactive behavior as a consequence, not a positive one (Huang et al., 2021; Koen & Bezouw, 2021; Probst et al., 2021; Tuan, 2022). More importantly, we accounted for the relationship between initial job insecurity and proactive coping in our research design: in examining the within-level relationships between proactive coping and subsequent job insecurity, we controlled for people's initial levels of job insecurity. As such, −while weekly planning, scenario thinking, consultation, networking and reflection may indeed have resulted from initial feelings of job insecurity− we can still conclude that these proactive behaviors did not result in significant changes in job insecurity in the week thereafter.

A second contribution is that our study further unravels the difference between proactive and reactive coping. Conceptually, proactive coping is aimed at reducing the development of a potential stressor itself, while reactive coping is aimed at reducing the negative consequences of that stressor (Aspinwall & Taylor, 1997). Yet, the literature is inconclusive regarding the nature of these behaviors: do proactive and reactive coping require different behaviors to be successful, or may certain behaviors be useful in both a proactive and a reactive manner? We showed that proactive behaviors were ineffective as reactive coping strategies: proactive career behavior did

not mitigate the relationship between the stressor (job insecurity) and its consequences (psychological strain). Yet, these behaviors were also ineffective as proactive coping strategies as they failed to reduce job insecurity itself. We therefore argue that the difference between proactive and reactive coping is purely conceptual (i.e., referring to the aim of the coping behavior), while coping success is an empirical matter −regardless of its reactive or proactive nature. Put differently, we conclude that the difference between proactive and reactive coping lies in its proposed function, not in the type of behavior or its effectiveness.

A third contribution is that our study adds to existing knowledge about the role of resources in the proactive coping process. While Aspinwall and Taylor's (1997) stated that proactive coping is more likely to be successful when individuals have more resources, our results did not indicate such a moderating effect at the within-person level, with one exception: Workers high in resources were less likely to experience cognitive quantitative job insecurity as a result of weekly reflecting than workers low in resources. At the between-person level we found comparable results: The positive relationship between proactive coping and job insecurity was weaker for workers high in resources than for workers low in resources. As such, proactive coping seems to be more harmful in the short run for workers with relatively few resources. This is in line with Hobfoll's (1989) concept of loss spirals that postulates that individuals who lack resources are most vulnerable to additional resource losses.

A fourth contribution is that our study underlines the value of differentiating between four job insecurity types, because these types rendered different results. Specifically, the results for cognitive qualitative job insecurity (i.e., people's assessment of the likelihood that their job will change) differed from the results for the other three types of job insecurity at the between-person level (see Table 2.4). Also, the relatively high mean of cognitive qualitative job insecurity (see Table 2.1) indicated that it was experienced more strongly in our sample than the other three types of job insecurity. The timing of our study, i.e., during the COVID-19 pandemic and worldwide shift to working from home, may have particularly influenced the level of cognitive qualitative job insecurity and its relationship with proactive coping: people may have been particularly aware of the chance that their job may change due to the pandemic. Yet, their affective qualitative job insecurity seemed to be less affected by this. Taken together, these findings signal that dichotomies consisting of either quantitative and qualitative, or cognitive and affective, may not suffice to understand the full job insecurity experience.

Limitations and Future Research Recommendations

Despite its contributions, our study also has some limitations. First, our study was limited by its 5-week timespan. Within-person research with longer time lags is necessary to investigate whether proactive coping behaviors can reduce the development of job insecurity in the long term. Such research may also be able to uncover our suggestion that proactive coping may first consume resources, before it creates new resources (Bolino et al., 2010; Cangiano et al., 2021). A recently published meta-analytic study of Jiang et al. (2021) underlines this idea, as their results suggested that resources are an important determinant of job insecurity. An important advantage of using within-person research with longer time lags is that it allows future researchers to further uncover the potentially high cycle level under which these processes operate: While we initially considered proactive coping with job insecurity to be about the direct effect of actions, which generally function at the intermediate self-regulation level, proactive coping may actually comprise reconstructing oneself into a better prepared version of oneself through acquiring new resources, suggesting self-regulation at the high level (Lord et al., 2010).

Second, we assessed the quantity of people's proactive coping behavior with the assumption that "more is better". Yet, individuals may benefit more from a little proactive coping for a prolonged period of time than from high levels of proactive coping for a short amount of time. By spreading one's proactive coping efforts, individuals still gather information and may manage potential stressors, without depleting their resources. It is also possible that some proactive coping behaviors backfire when applied too intensively: well-intended behaviors of scenario-thinking, reflecting, and career planning may result in rumination, absorption in the past, or fantasies and anxieties about the future (Cangiano et al., 2019; Pingel et al., 2019; Richter et al., 2020). Additionally, the quality instead of the quantity of coping behaviors deserves empirical attention. It may be more fruitful to build a few high-quality relationships than to simply engage in high levels of relationship building (cf. Bolino et al., 2010). Likewise, the outcome of certain behaviors may be more important than the quantity of such behaviors: Some individuals may try to build new relationships without actually gaining relationships.

Third, the unexpected finding that proactive behavior did not result in significant changes in future job insecurity may raise concern about the validity of our measures: are the measures for planning, scenario thinking, career consultation, networking, and reflection an appropriate way to assess Aspinwall and Taylor's (1997) concept of proactive coping? For the measures in this study,

we ensured content validity through the careful selection of measures based upon the example behaviors for the proactive coping stages described in Aspinwall and Taylor's (1997) paper, and used scales that have been used in prior - high-quality - proactivity research which illustrated convergent validity and reliability of all scales (Strauss et al., 2012; Bindl et al., 2012). We therefore believe that our non-significant findings cannot be ascribed to its measures, but should be interpreted as what they are: insight into what does not work to minimize job insecurity (i.e., weeks of proactive coping) and a prelude to discover what does work to minimize job insecurity (possibly: months or years of proactive coping).

Fourth, it is important to note that Aspinwall and Taylor's (1998) stages of proactive coping are not as sharply divided as it may seem in the current study. That is, these stages are interconnected and different stages may benefit from the same coping behavior: a conversation with one's supervisor could be used to assess the situation (initial appraisal) or to influence the development of that situation (preliminary coping). While the coping behaviors here fit the theoretical framework, we do not exclude the possibility that similar coping behaviors can be used to pursue different coping goals. Future research aimed at scale development may be a valuable pursuit in order to discern what coping behaviors and subscales can most accurately reflect Aspinwall and Taylor's (1997) stages of proactive coping.

Fifth, our research sample consisted of workers who worked at least, on average, 20 hours per week. We made this choice with the intention to exclude workers that are less dependent on their work (e.g., for their identity or financial reasons). However, this does mean that our results cannot be generalized to the entire working population. More research is needed to investigate whether proactive coping with job insecurity functions in a similar manner among those who spend less than half their workweek on work.

Lastly, our results are based on correlational data, which implies that causality can only be inferred on theoretical, rather than empirical, grounds. At the within-level, we tried to prevent resulting uncertainties regarding directionality by controlling for prior job insecurity in the proactive model and controlling for prior psychological strain in the reactive model. However, at the between-person level, directionality can only be assumed based on theory.

Practical Implications

The finding that proactive coping does not decrease and may even increase the amount of job insecurity and strain that individuals experience, points to the importance of recovery and self-care. While our study could not provide evidence for positive outcomes of proactive coping in the short term, extant research has shown repeatedly that the behavioral tendency to act proactively is related to all kinds of beneficial long-term outcomes, such as increased objective and subjective career success (for a meta-analytic review, see Fuller & Marler, 2009). Hence, it is advisable not to cease proactive behaviors in order to prevent temporary discomfort, but to keep engaging in proactive behaviors while trying to minimize discomfort. In fact, emotional (reactive) coping strategies such as seeking emotional support from friends and family may be of particular use to ease the short-term discomfort and maintain well-being (Kato, 2015). In addition, our study highlights the importance of supporting individuals with relatively few resources: on the between-person level, proactive coping related to more job insecurity and strain for individuals with fewer resources. Yet, it is especially important for these individuals to act proactively to ensure more resources in the future. A possible solution lies in granting vulnerable individuals 'start-up resources', from which they can further grow their resources independently. For example, these individuals may benefit from buddy systems (social resource), a small allowance (financial resource), or time slots in which there is time to think (temporal resource).

Conclusion

Our study showed that weekly proactive coping did not decrease the experience of job insecurity, nor did it help to mitigate the strain that typically results from job insecurity. We argue that the positive outcomes of proactive coping may need more time to establish, and that prolonged proactive coping efforts are needed despite the short-term discomfort. We hope that, with our clarification of the conceptual and empirical difference between proactive and reactive coping, future research will be inspired to further examine which time span and under what circumstances proactive coping does succeed to manage potential threats to job security.

Appendix 2A

Items of the Resources Measure

Item	Resource type
1. On an average day, I have enough time to do all the tasks I want to do.	Temporal
2. I have a financial buffer to help me through unexpected hardship.	Financial
3. I have friends, family, or relatives who can help me if I need them.	Social
4. I have a clear image of my career goals and how to achieve them.	Career planning
5. I have a clear image of my different career options.	Scenario thinking
6. I have a network which can advise me about my career.	Career consultation
7. I have a clear image of how my past activities have influenced my career prospects.	Reflecting

Note: Respondents answered on 7-point scales, ranging from "*strongly disagree*" to "*strongly agree*".

Items of the Job Insecurity Measure

Item Could you please indicate, how often you, in the last week…	Job insecurity type
1. … were aware of the chance you will soon lose your work?	Cognitive quantitative
2. … were sure you can keep your work? *	Cognitive quantitative
3. … thought you might lose your work in the near future?	Cognitive quantitative
4. … were worried about having to lose your work before you would like to?	Affective quantitative
5. … felt uneasy about losing your work in the near future?	Affective quantitative
6. …felt insecure about the future existence of your work?	Affective quantitative
7. … found your future career opportunities favorable? *	Cognitive qualitative
8. … found your pay development promising? *	Cognitive qualitative
9. … were convinced that this work can provide you with stimulating job content (in the future)? *	Cognitive qualitative
10. …worried about your career development?	Affective qualitative
11. … worried about your future pay development?	Affective qualitative
12. … worried about getting less stimulating work tasks in the future?	Affective qualitative
13. … felt insecure about what your work will look like in the future?	Affective qualitative

Note: * signals the item was reverse-coded. Respondents answered on 7-point scales, ranging from "*(almost) never"* to *"(almost) always"*.

Items of the Coping Behaviors Measure

Item Could you please indicate, how often you, in the last week …	**Coping behavior**
1. … engaged yourself with how you want to organize your career in the next few years?	Career planning
2. … thought about the coming years and what steps you want to take for your career?	Career planning
3. … engaged yourself with your career planning?	Career planning
4. … thought about different possible scenarios for your career?	Scenario thinking
5. … viewed your work situation from different angles?	Scenario thinking
6. … went through different scenarios in your head, about how best to obtain information that can help you with your career?	Scenario thinking
7. … gained advice from your network on what skills or work experience you require to improve your career opportunities?	Career consultation
8. … spoke someone in your network about what training or assignments you can do to develop skills that can improve your career opportunities?	Career consultation
9. … made clear to your manager, colleagues and/or business partners what your ambitions and career goals are?	Career consultation
10. … engaged in building and/or maintaining a social network, in order to obtain information about your work and what is expected of you?	Networking
11. … engaged in building and/or maintaining a social network that can help or advise you with your career?	Networking
12. … engaged in building and/or maintaining a network that you can ask for support in your career?	Networking
13. … monitored the impact of previous activities aimed at improving your career opportunities?	Reflecting
14. … sought feedback from others about your previous activities aimed at improving your career opportunities?	Reflecting
15. … reflected on the outcomes of previous efforts aimed at improving your career opportunities?	Reflecting

Note: Respondents answered on 7-point scales, ranging from "*(almost) never*" to "*(almost) always*".

Items of the Psychological Strain Measure

Item Could you please indicate, how often you, in the last week …
1. … felt capable of making decisions about things? *
2. … were able to enjoy your normal day-to-day activities? *
3. … were able to face up to problems? *
4. … were able to feel reasonably happy? *
5. … felt you couldn't overcome your difficulties?
6. … felt unhappy or depressed?
7. … lost confidence in yourself?
8. … thought of yourself as a worthless person?

Note: * signals the item was reverse-coded. Respondents answered on 7-point scales, ranging from "*(almost) never*" to "*(almost) always*".

Chapter 3

Don't Wait for the Storm to Pass:

A Meta-analytic Review on Proactive Coping with Job Insecurity

Abstract
Job insecurity can have detrimental outcomes for both individuals and organizations, such as decreased health and poor job performance. To help minimize job insecurity, we complement prior meta-analytic reviews on its antecedents by synthesizing and meta-analytically investigating the available evidence on the relationship between proactive coping and job insecurity. Specifically, we propose a proactive coping framework and investigate how six types of proactive coping (i.e., behavioral engagement, mental engagement, adaptive behavioral disengagement, maladaptive behavioral disengagement, adaptive mental disengagement, and maladaptive mental disengagement) relate to job insecurity, and whether the found relationship strengths depend upon the type of job insecurity (i.e., quantitative, qualitative, cognitive, affective) and study design (i.e., longitudinal, cross-sectional). Based on 324 independent samples comprising data from over 300,000 workers, the meta-analytic results indicate that – regardless of job insecurity type or study design – behavioral and mental engagement (e.g., performing well, cognitive restructuring) and adaptive behavioral and mental disengagement (e.g., recovery activities, mindfulness) are associated with lower amounts of job insecurity. Maladaptive behavioral and mental disengagement (e.g., counterproductive work behaviors, avoidance) are associated with higher amounts of job insecurity. We provide future research recommendations regarding unexplained heterogeneity, directionality, and possible theoretical mechanisms through which proactive coping affects the development of job insecurity.

This chapter is based on: Langerak, J. B., Koen, J., & Van Hooft, E. A. J. (under review). Don't wait for the storm to pass: A meta-analytic review on proactive coping with job insecurity.

Life isn't about waiting for the storm to pass. It's about learning to dance in the rain.

- Vivian Greene

Insecurity about the future of one's job is no longer a temporary setback in contemporary careers, but rather an enduring experience that can be present for prolonged periods of time (Wu et al., 2020). Such job insecurity is generally defined as "a perceived threat to the continuity and stability of employment as it is currently experienced" (Shoss, 2017, p. 1914). Job insecurity has increased over the past decades due to cost-saving practices (e.g., outsourcing, restructuring) and temporary and contract-based employment (Kalleberg, 2011). Even workers with permanent contracts cannot be guaranteed of stable job content (Koen & Parker, 2020). While flexible work arrangements may seem financially attractive for organizations, research has shown that the experience of job insecurity has detrimental outcomes for both individuals and organizations. For example, prior meta-analytic studies show a negative relationship between job insecurity and physical and psychological health, job satisfaction, organizational commitment, and work performance (Cheng & Chan, 2008; Hur, 2022; Jiang & Lavaysse, 2018; Sverke et al., 2002; Sverke et al., 2019). In fact, Kim and Von dem Knesebeck's (2015) systematic review indicates that the experience of job insecurity can be as harmful to individual health as having no job at all.

To understand the emergence of job insecurity and thereby prevent its onset among workers, prior systematic and meta-analytic reviews have uncovered various antecedents that relate to lower levels of job insecurity (Jiang & Lavaysse, 2018; Jiang et al., 2021; Keim et al., 2014; Shoss, 2017). Such antecedents include national characteristics (e.g., employment protection legislation), organizational characteristics (e.g., organizational communication, less organizational change), job characteristics (e.g., permanent work, white-collar jobs), and individual characteristics (e.g., having an internal locus of control, being younger, positive affectivity). While these findings are essential for managers and policymakers to create a less insecure environment, prior reviews leave a gap regarding whether and how individual workers can manage the experience of job insecurity by their own means. For example, waiting for better national employment protection or clearer organizational communication (i.e., "waiting for the storm to pass") does not help to decrease the current, ongoing, threat to the continuity and stability of employment. Moreover, although Jiang et al. (2021) provide a comprehensive overview of the relationships between demands and resources and job insecurity, including personal resources (e.g., psychological capital, self-efficacy), their meta-analytic review does not answer the

important question how individuals may influence these demands and resources, and consequently reduce their job insecurity. Building upon proactive coping theory (cf. Aspinwall & Taylor, 1997), we aim to fill this gap with systematic insight and future research directions as to how workers can proactively change their job insecurity experience. As such, the present work sets the stage for future research on how workers – despite existing individual, organizational, or national characteristics – can take matters more into their own hands, and, hence, "learn to dance in the rain".

To this end, we developed a conceptual framework delineating six types of proactive coping based on proactive coping theory and traditional coping theories (Aspinwall & Taylor, 1997; Tobin et al., 1989; Kraaij & Garnefski, 2019; Garnefski et al., 2001), we accumulated research that reports relationships between proactive coping and job insecurity, and conducted meta-analyses to uncover the magnitude of the associations between the six proactive coping types and job insecurity. Moreover, because prior research has illustrated that results can differ depending upon the type of job insecurity (cf. De Witte et al., 2010; Jiang & Lavaysse, 2018), we investigated whether the relationships between proactive coping and job insecurity vary per job insecurity type. Lastly, to address the question of directionality, we compared longitudinal evidence where proactive coping is measured prior to job insecurity with cross-sectional evidence where proactive coping and job insecurity are measured at the same time.

Our review extends the existing literature in four ways. First, by proposing a proactive coping framework and re-assessing the existing job insecurity literature accordingly, we provide a new perspective that may direct future research. While human behavior and cognition have been extensively investigated from the perspective of traditional reactive coping, our meta-analytic review aims to expand the scientific narrative by uncovering that many behaviors can also be investigated and interpreted from a proactive perspective. Second, by charting how workers' behaviors and cognitions may have a proactive function that help predict levels of job insecurity (cf. Aspinwall & Taylor, 1997), we supplement the existing literature in which job insecurity is often considered a consequence of external factors, with a less deterministic perspective. This involves synthesizing a new group of variables that has not yet been meta-analytically examined as predictors before. Third, by investigating whether the relationship between proactive coping and job insecurity depends upon job insecurity type (i.e., quantitative vs. qualitative; cognitive vs. affective), our research provides resolution for prior inconclusive results. For example, proactive

coping has been found to relate more negatively to qualitative than to quantitative job insecurity (Stiglbauer & Batinic, 2015), but there is also evidence that these two types have relations of equal magnitude (Niesen et al., 2018; Urbanavičiūtė et al., 2015). At the same time, our research corresponds to a much-heard call to explore predictors of different forms of job insecurity (e.g., Jiang & Lavaysse, 2018; Shoss, 2018; Sverke et al., 2002) and fits the reality of contemporary careers in which job insecurity is a multi-faceted stressor (Urbanaviciute et al., 2021). Fourth, by comparing cross-sectional and longitudinal results, we uncover whether extant research supports the idea that proactive coping can affect the further development of job insecurity. In addition to these theoretical contributions, this meta-analytic review is of value to human resource management practice because it synthesizes all prior research about what workers can do to minimize their experience of job insecurity, which is essential input for training activities and career guidance in today's uncertain world of work.

Proactive Coping with Job Insecurity: Definition and Operationalization

Proactive coping refers to all future-oriented coping that tries to detect and manage the development of stressors (Aspinwall & Taylor, 1997). Proactive coping theory is at the base of a recent paradigm shift in which job insecurity is no longer viewed as an uncontrollable stressor of which the consequences must be mitigated (e.g., Giunchi et al., 2019; Menéndez-Espina et al., 2019; Koen & Parker, 2020), but rather as an experience that depends upon one's position within work situations and one's perception thereof. At the core of proactive coping theory lies the premise that individuals can anticipate stressful situations before they occur by taking steps to avoid or minimize these situations – even when potential threats have not yet been identified. Examples of proactive coping are saving money for potential financial setbacks or increasing one's skill repertoire for a potential career shift. This new proactive paradigm in the job insecurity literature takes on an agentic, prevention-focused perspective in which workers are viewed as active agents who can minimize their future job insecurity. Research has shown that proactive coping in the form of career planning, career consultation, skill development, self-management behavior, and impression management can be successful in this regard (e.g., Alisic & Wiese, 2020; Huang et al., 2013; Koen & Parker, 2020; Koen & Van Bezouw, 2021; Probst et al., 2019).

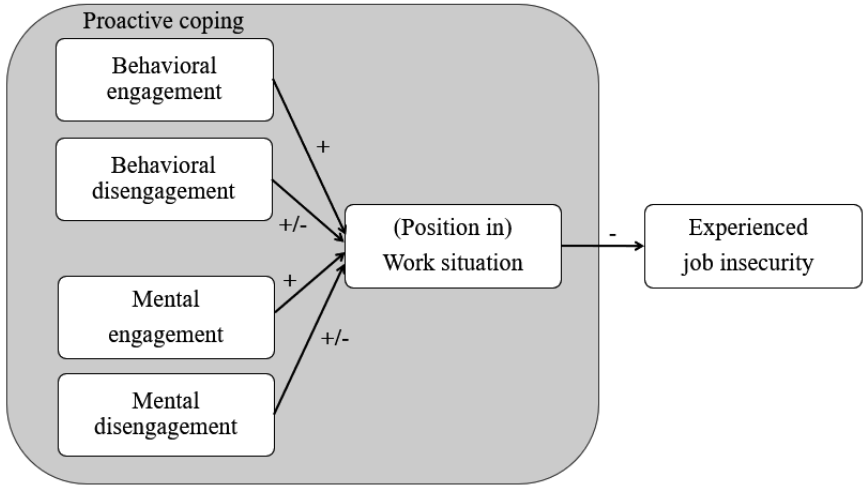
Most job insecurity research, however, is founded upon other theories in which job insecurity is, conceptually, considered to be a predictor. In fact, Shoss (2017) identified four main overarching theoretical perspectives that are used in job insecurity literature, of which only one −

proactive coping theory − is about managing job insecurity itself. Instead, stress theories (e.g., Bakker & Demerouti, 2017; Folkman et al., 1986; Hobfoll, 1989), social exchange theories (e.g., De Cuyper & De Witte, 2006; Cropanzano & Mitchell, 2005), and job preservation theory (cf. Shoss, 2017; Shoss et al., 2022) have been playing the lead in job insecurity research, due to prior assumptions such as "employees often have little control over the source or origin of job insecurity" (Probst et al., 2021, p. 24) and "one of the characteristics of job insecurity is that it is a non-controllable stressor" (Menéndez-Espina et al., 2019, p. 7). Not surprisingly, meta-analytic reviews on job insecurity have been from these same perspectives: stress theories (e.g., affective events theory, appraisal theory, and the job-demands resources model; cf. Sverke et al., 2002; Jiang & Lavaysse, 2018; Jiang et al. 2021), social exchange theory (cf. Jiang et al., 2022; Keim et al., 2014), and job preservation theory (cf. Jiang et al., 2022). However, the growing evidence that job insecurity is not an uncontrollable given, but instead a potentially controllable stressor, calls for systematic insight into how proactive coping relates to job insecurity.

The main reason for the apparent scarcity of literature regarding proactive coping with job insecurity may lie in the vastness of the proactive coping construct: the content of proactive coping is context-dependent, can consist of all kinds of behaviors, and the target stressor is not necessarily already identified (cf. Aspinwall & Taylor, 1997). Scholars have included many behaviors under the umbrella of "proactive coping", even some that can be considered a reaction to existing job insecurity and thus a form of reactive coping (e.g., impression management, reflecting; Probst et al., 2019; Langerak et al., 2022). In response to this ambiguity, recent research from Langerak et al. (2022; see Chapter 2) has further delineated the concept of proactive coping. After longitudinally investigating the impact of five coping behaviors in two different research models – the first depicting the behaviors as proactive coping, the second depicting the behaviors as reactive coping – the authors suggest that "the difference between proactive and reactive coping lies in its proposed function, not in the type of behavior or its effectiveness" (p. 13). Thus, proactive coping has the potential to influence potential stressors (e.g.., job insecurity) and reactive coping has the potential to influence an existing stressor's consequences (e.g., psychological strain). Both can contain any behavioral or mental effort to realize this influence. Conceptually, proactive coping asserts influence by changing the potential situation or one's position in it. Therefore, proactive coping with job insecurity can include any behavior or thought that may change (one's position in) the work situation and consequently influence future job insecurity (see Figure 3.1).

Figure 3.1

A Conceptual Model of Proactive Coping with Job Insecurity



Proactive Coping Types: A Conceptual Framework

The notion that proactive coping can consist of *any* behavior or thought with the potential to influence the job insecurity experience implies that there is much more evidence available on proactive coping with job insecurity than previously presumed. Moreover, defining proactive coping by its purpose instead of by its effectiveness suggests that workers may use proactive coping strategies that are ineffective: much in the same way that traditional "reactive" coping consists of both effective and ineffective strategies (Kato, 2015). However, because prior research has generally approached proactive coping as an active coping strategy that is inherently effective in influencing future stressors, there are no frameworks available to categorize proactive coping. Yet, such a framework is essential to discern what types of proactive coping can be helpful and may decrease future job insecurity, and what types of proactive coping can be harmful and may increase future job insecurity.

Therefore, we apply the coping dimensions of Tobin and colleagues (i.e., engagement and disengagement, 1989) and coping types of Kraaij and Garnefski (i.e., behavioral and mental, 2019) to create a framework that helps to categorize proactive coping efforts. Specifically, we included scientific records in our review based on the definition of proactive coping (Aspinwall & Taylor,

1997) and then both we (i.e., the three members of research team) and a group of subject matter experts (i.e., five work and organizational psychologists who are familiar with the occupational health literature) evaluated whether and how the included proactive coping efforts would theoretically fit the categories of the framework.

Engaged and Disengaged Proactive Coping

While Tobin et al.'s (1989) engaged and disengaged coping are efforts to deal with or escape existing stressors and their consequences, we propose the same distinction can be applied to proactive coping efforts. The only difference is that the efforts used in proactive coping are not initiated to control or avoid existing stressors and their consequences, but to control or avoid *potential or ongoing* stressors and their consequences. Applying Tobin et al.'s (1989) structure of coping to proactive coping, engaged proactive coping thus includes all "active efforts to manage both problem- and emotion- focused aspects of the [*potential*] stressful person/environment transaction (…) individuals engage in active efforts to control, manage, or change [*potential*] stressful circumstances" (p. 350), such as problem solving and cognitive restructuring. In contrast, disengaged proactive coping includes all efforts to avoid contact with the stressful person/environment transaction in which "thoughts about the [*potential*] situation are avoided, behaviors that might change the [*potential*] situation are not initiated" (p. 350), such as problem avoidance and self-criticism.

Applied to the context of job insecurity, engaged proactive coping can be discussing with one's supervisor whether a planned reorganization poses a threat to one's current position and if so, what would be a fruitful course of action to increase the probability of maintaining one's job. Other examples of engaged proactive coping are efforts aimed at showing (enhanced) job performance or discussing other career options with friends. Through engaged proactive coping, workers may influence the situation or their position in the situation, and consequently minimize the amount of experienced job insecurity. In contrast, disengaged proactive coping involves all efforts to avoid confrontation with potential stressful person/environment transactions and comes in two forms. The first is maladaptive: this type can let the situation deteriorate or create problems of their own (Carver & Connor-Smith, 2010). Examples of maladaptive disengagement could be being absent from work to avoid confrontation with one's supervisor, the use of alcohol to suppress one's thoughts about the future, and engagement in counterproductive work behaviors. The second

is adaptive disengagement: this more recently introduced form of disengagement does not create problems and does not deteriorate the situation (Waugh et al., 2020). Examples of adaptive disengagement are recovery activities, mindful behavior or seeking positive distraction (e.g., exercising), which can help sustain the well-being that is needed to perform optimally (Sianoja et al., 2018; Sonnentag & Fritz, 2007).

Mental and Behavioral Coping

Coping efforts can consist of both thoughts (e.g., planning, cognitive restructuring) and actions (e.g., carrying out a plan, addressing issues with colleagues). Although some traditional coping scales combine thought and actions in the same coping dimension (e.g., Folkman et al., 1986), this practice may not be suited for all research purposes as "thinking and acting are different processes used at different points in time" (Kraaij & Garnefski, 2019, p. 56). To train or stimulate certain coping skills, it is important to know whether the coping skill is about cognitive or behavioral efforts. Moreover, cognitive efforts may require different resources (e.g., cognitive space) than behavioral efforts (e.g., knowing the right people). As the current meta-analytic review aims to chart how workers can use proactive coping to change their job insecurity experience, we differentiate between mental and behavioral coping. Therefore, we distinguish in both engaged and disengaged coping between mental and behavioral efforts. Table 3.1 presents an overview of our proposed proactive coping framework and the proactive coping efforts we included in this review.

Types of Job Insecurity

Many scholars have called to explore predictors of different forms of job insecurity (e.g., Jiang & Lavaysse, 2018; Shoss, 2018; Sverke et al., 2002). We therefore do not only investigate the relationships between proactive coping and job insecurity overall, but also investigate whether the effectiveness of proactive coping depends upon the type of job insecurity. This will indicate whether all types can be influenced to same extent and whether this can be done with similar coping strategies. Specifically, we differentiate between quantitative and qualitative job insecurity(cf. De Witte et al., 2010), and cognitive and affective job insecurity (cf. Jiang & Lavaysse, 2018). An overview of the four job insecurity types and examples of measures we included can be found in Table 3.2.

Table 3.1

Overview of the Proactive Coping Framework: Categories, Definitions, and Included Proactive Coping Efforts

Category	Definition	Included efforts	Example measures and items
Behavioral engagement	All behavioral efforts that may influence levels of job insecurity, that are aimed at changing the work situation or one's position in it.	Job performance[123]; how the quality of work is evaluated by workers or their supervisors.	- Abramis (1994), originally 4 items, e.g., "How well did you fulfil the following tasks during your last working week? - Make decisions". - Chirumbolo & Areni (2010), originally 11 items, e.g., "I achieved all my job goals in the last six months". - Williams & Anderson (1991), originally 7 items, e.g., "Adequately completes assigned duties".
		Increased work effort: all extra effort put into work such as increasing devotion or work hours.	- Brown & Leigh (1996), originally 5 items, e.g., "When there's a job to be done, I devote all my energy to getting it done". - Cui et al. (2020), 2 items, e.g., "How many hours have you worked overtime on average every week last month?". - Goldenhar (2003), 1 item, i.e., "How often on this job did you feel that you had to work harder than others in order to 'prove' yourself?".
		Organizational citizen behaviors (OCB)[13]; all behaviors done to help the organization or colleagues, which are outside the job description.	- Van Dyne et al. (1994), originally 34 items, e.g., "I share ideas for new projects or improvements widely". - Moorman & Blakely (1995), 5 items, e.g., "Goes out of his/her way to help co-workers with work-related problems". - Podsakoff et al. (1990), 5 items, e.g., "Helps others who have heavy workloads".
		Proactive career behaviors: all future-oriented behaviors in attempt to improve one's career, such as planning, career consultation, and job crafting.	- Claes & Ruiz-Quintanilla (1998), 11 items, e.g., "I have developed skills which may be needed in future positions'' - Strauss et al., originally 12 items, e.g., "I make my supervisor aware of my work aspirations and goals". - Tobin et al. (1989), 2-item subscale, e.g., "I made a plan of action and followed it".

		Innovative work behaviors[1]; generating new ideas or implementing these to improve the performance of the organization.	- De Jong & Den Hartog (2010), originally 17 items. e.g., "During the last six months, how often have you enacted the following acts in the workplace? Finding new approaches to execute tasks" - De Jong & Kemp (2003), 8 items, e.g., "In my work, I often come up with ideas". - Kleysen & Street (2001), originally 14 items, "How often do you experiment with new ideas and solutions?".
		Voice behaviors; making suggestions to improve work methods and speaking up when there is something on your mind.	- Maynes & Podsakoff (2014), originally 20 items, e.g., "I frequently make suggestions about how to improve work methods and practices". - Van Dyne & LePine (1998), 6 items. E.g., "This particular co-worker speaks up and encourages others in this group to get involved in issues that affect the group". - Van Dyne et al. (2003), 15 items, e.g., "This employee communicates his/her opinions about work issues even if others disagree".
Mental engagement	All cognitive efforts that may influence levels of job insecurity, that are aimed at changing the work situation or one's position in it.	Cognitive restructuring, including positive reinterpretation, accommodation, and self-enhancing humor.	- Izadpana et al. (2017), 4 items, e.g., "I changed my feelings by looking differently at the situation". - Martin et al. (2003), 8 items, e.g., "Even when I'm by myself, I'm often amused by the absurdities of life". - Tobin et al. (1989), 2-item subscale, e.g., "I reorganized the way I looked at the situation, so things didn't look so bad".
		Adaptive thoughts that go with adaptive performance, compliance, cooperation, and championing.	- Metselaar (1997), 4 items, e.g., "I'm willing to convince my colleagues of the benefits the change will bring". - Griffin et a. (2007), 3-item subscale, e.g., "Coped with changes to the way you have to do your core tasks". - Lavigne et al. (2019), 8 items, e.g., "[Employee] strives to learn new processes".
Behavioral disengagement	All behavioral efforts that may influence levels of job insecurity, that are not aimed at changing the	**Adaptive:**	
		General recovery and self-care; all behaviors aimed at healthy recovery	- Personal Resources Questionnaire (PRQ; Osipow & Spokane, 1987), 10-item subscale, items unknown.

potential work situation or one's position in it.	and relaxation, such as sleep and exercise.	- RESTQ-Work-55 (Jiménez & Kallus, 2016), 7 items, e.g., "In the past 7 days and nights… I was able to relax during my breaks". - Sonnentag & Fritz (2007), 8-item subscale, e.g., "I take time for leisure".
	Maladaptive:	
	Counterproductive work behaviors (CWB)[123]; behavior that affects the organization's performance or colleagues negatively.	- Bennett & Robinson (2000), originally 19 items, e.g., "Intentionally worked slower than you could have worked". - Chand & Chand (2012), 23 items, e.g., "Stolen something belonging to your employer". - Kelloway et al. (2002), 10 items, e.g., "Blamed your coworkers for your mistakes".
	Giving up; stopping to put efforts into the problem.	- Carver et al. (1989), 4 items, e.g., "I reduce the amount of effort I'm putting into solving the problem". - Van Dyne et al. (2003), 5-item subscale, e.g., " This employee passively withholds ideas, based on resignation".
	Being absent from work (with or without calling in sick)[3].	- Staufenbiel & König (2010), days of absence according to personnel files, excluding scheduled holidays and vacation. - Johns (2011), 1 item, "How many days were you absent from work in the past six months? This refers to absenteeism for any reason excluding vacations and scheduled days off".
	Alcohol consumption, tobacco use and eating changes.	- Grunberg et al. (2001), 3 items, e.g., "Have you eaten significantly more or less than you're used to?". - Marchand et al. (2015), 1 item asking about the average number of cigarettes per week. - McDonough (2000), 1 items asking the average amount of alcoholic drinks per week.

Mental disengagement	All cognitive efforts that may influence levels of job insecurity, that are not aimed at changing the potential work situation or one's position in it.	**Adaptive:**	
		Detachment from work after working hours.	- Sonnentag & Fritz (2007), 8-item subscale, e.g., "In my free time after work I decide my own schedule". - Mohr et al. (2005), 3 items, e.g., "Even on my vacations I think about my problems at work" (reverse-scored). - King (2000), 1 item, "Even when I am not at work, I spend time thinking about ways to improve my company's performance" (reverse-scored).
		Mindfulness; paying attention to the experiences and actions of the moment.	- Brown & Ryan (2003), 5 items, e.g., "It seems I am running on automatic, without much awareness of what I'm doing". - Cheyne et al. (2006), 12 items, e.g., "I have absentmindedly placed things in unintended locations" (reverse scored). - Demerouti et al. (2007), 4 items, e.g., "My thoughts are wandering to other things during the task" (reverse-scored).
		Maladaptive:	
		Avoidance; trying not to think about the situation.	- Brough et al. (2005), items, e.g., "I try to avoid thinking about the problem". - Edwards & Baglioni (1993), 6-item subscale, e.g., "I tried to just forget the whole thing". - Guppy et al. (2004), 4-item subscale, e.g., "I try to keep my mind off the problem".
		Rumination and self-blame; blaming yourself for something that is happening or may happen in the future without trying to change anything.	- Hermans et al. (2006), 3 items, e.g., "I ruminate about that the future of my job is not ensured". - Tobin et al. (1998), 2-item subscale, e.g., "I blamed myself".

Note. Marked variables have also been included as outcome variables in prior reviews by: [1] Jiang and colleagues (2022), [2] Sverke and colleagues (2019), [3] Jiang and Lavaysse (2018). A reference list of the sample measures can be found in Supplemental Material C.

Quantitative and Qualitative Job Insecurity

Job insecurity can concern a threat to a job as a whole (i.e., quantitative job insecurity) or a threat to favorable job features (i.e., qualitative job insecurity). Jiang et al.'s (2021) meta-analytic review shows that certain predictors relate differently to these two types of job insecurity. For example, organizational resources and demands (e.g., job autonomy, work pressure) showed significantly stronger relations with qualitative job insecurity than with quantitative job insecurity. However, personal (e.g., self-esteem) and social resources (e.g., trust in organization) showed similar relations with quantitative and qualitative job insecurity. Jiang et al. (2021) conclude that "the relative strength of the associations of antecedents with quantitative JI and qualitative JI is contingent upon the nature of the predictors" (p. 14). Relatively little is known about the nature of proactive coping as a predictor of job insecurity types. Empirical studies on proactive coping generally use one overall job insecurity scale or one scale for one job insecurity type. The few studies that include both types of job insecurity show inconclusive results: Engaged proactive coping has been found to relate more negatively to qualitative than to quantitative job insecurity (Stiglbauer & Batinic, 2015), but there is also evidence that indicates the two types have relations of equal magnitude (Niesen et al., 2018; Urbanavičiūtė et al., 2015). Through investigating job insecurity type as a meta-analytic moderator, our review enables a comparison of the correlations from empirical studies that measured only quantitative job insecurity with the correlations from studies that measured only qualitative job insecurity.

Cognitive and Affective Job Insecurity

Both thoughts (the perceived probability, i.e., cognitive job insecurity) and feelings (worries or fears, i.e., affective job insecurity) create the experience of job insecurity. Jiang and Lavaysse's (2018) meta-analytic review indicates that affective job insecurity generally has stronger relations with outcomes and correlates than cognitive job insecurity. Regarding correlates that - following our proactive framework - may be applied as proactive behavior, the meta-analytic review reports results for job performance and OCB. Both have negative relations of equal magnitude with cognitive job insecurity and affective job insecurity (cf. Jiang & Lavaysse, 2018). However, proactive coping includes many more variables than job performance and OCB, and many studies have been published on affective and cognitive job insecurity this past quinquennium. Therefore, our review provides a first comprehensive comparison between the relations of proactive coping and cognitive versus affective job insecurity.

Table 3.2

Overview of Job Insecurity Types, Definitions, and Example Measures

Job insecurity type	Definition	Example measures and items
Quantitative	An individual's perceived threat to the *continuity* of one's employment as it is currently experienced or planned, the emotions related to this perception, or a combination of this perception and related emotions.	- Hellgren et al. (1999), originally 3 items, e.g., "I'm afraid that I'm going to lose my job in the near future" and "I am worried that I will have to leave my job before I would like to". - Huang et al. (2010, 2012), 7 and 10 items, e.g., "I am troubled by the thought of losing my job" and "I am very unsure that I can remain employed with this company for as long as I wish". - Karasek et al.'s (1998) Job Content Questionnaire, 2 items, "General job insecurity" and "Skill obsolescence". - Probst (2003, 2013), The Job Security Index, originally 18 items, e.g., "My job is almost guaranteed" and "Up in the air". - Vander Elst et al. (2014), originally 4 items, e.g., "Chances are, I will soon lose my job" and "I think I might lose my job in the near future".
Qualitative	An individual's perceived threat to the *quality* of one's employment as it is currently experienced or planned, the emotions related to this perception, or a combination of this perception and related emotions.	- Caplan et al., (1980), 4 items, e.g., "How certain are you about what your future career picture looks like?" and "How certain are you that opportunities for promotion and advancement will exist in the next few years?". - Hellgren et al. (1999), 4 items, e.g., "My future career opportunities in this organization are favorable" and "My pay development in this organization is promising" (reverse scored). - Höge and Schnell (2012), 4 items, e.g., "I am not sure whether I shall achieve my career goals" and "I consider my professional development to be secure" (reverse scored). - Niesen et al. (2018), 4 items, e.g., "I feel insecure about the characteristics and conditions of my job in the future" and "Chances are, my job will change in a negative way" - Van den Broeck et al. (2014), 3 items, e.g., "I think my job will change for the worse" and "I feel insecure about the characteristics and conditions of my job in the future"

Cognitive	An individual's *perceived threat* to the continuity or quality of one's employment as it is currently experienced or planned.	- Armstrong-Stassen (1993), 2 items: "To which extent do you feel your job is secure?" and "To what extent do you feel your future in the company is secure?". - Caplan et al., (1980), 4 items, e.g., "How certain are you about what your future career picture looks like?" and "How certain are you that opportunities for promotion and advancement will exist in the next few years?". - Oldham et al. (1986), originally 10 items, e.g., "I'll be able to keep my present job as long as I wish" and "I am secure in my job" (reverse scored). - Probst (2003, 2013), The Job Security Index, originally 18 items, e.g., "My job is almost guaranteed" and "Up in the air". - Vander Elst et al. (2014), originally 4 items, e.g., "Chances are, I will soon lose my job" and "I think I might lose my job in the near future".
Affective	An individual's *worries or fear* stemming from a perceived threat to the continuity or quality of one's employment as it is currently experienced or planned	- Cook & Wall (1980), 3 items, e.g., "How satisfied are you with your job security?" - Hellgren et al. (1999), originally 3 items, e.g., "I'm afraid that I'm going to lose my job in the near future" and "I am worried that I will have to leave my job before I would like to". - Huang et al., (2010, 2012), 7 or 10 items, e.g., "I lose sleep worrying about my future with this company" and "I am scared by the thought of losing my job". - Jiménez et al. (2017), 1 item: "I am afraid to lose my current job". - Probst (2003), The Job Security Satisfaction Scale, originally 20 items, e.g., "Nerve-wracking" and "Upsetting how little job security I have".

Note. A reference list of the sample measures can be found in Supplemental Material C.

The Issue of Directionality

The current meta-analytic review synthesizes all existing findings about the relationship between proactive coping and job insecurity from the perspective of proactive coping theory (Aspinwall & Taylor, 1997). The underlying assumption is that proactive coping can affect the experience of job insecurity by exerting influence on work situations and workers' positions therein. However, since most prior research reports cross-sectional data, this may raise questions of directionality: Could the relationship be the other way around, such that the experience of job insecurity influences the behaviors workers display? Considering this possibility, we conduct separate meta-analyses for the available longitudinal findings. If the meta-analytic results indicate similar relationships for studies based on cross-sectional data as studies based on longitudinal data, this can be interpreted as preliminary support for the idea that proactive coping relates to future job insecurity. However, we do not rule out reverse directionality, since coping is a self-regulatory behavior and thus implies self-regulatory loops (i.e., the process of using behaviors to improve the fit between desired and current state, and consequently modifying behaviors based on the evaluation of that fit; cf. Lord et al. 2010).

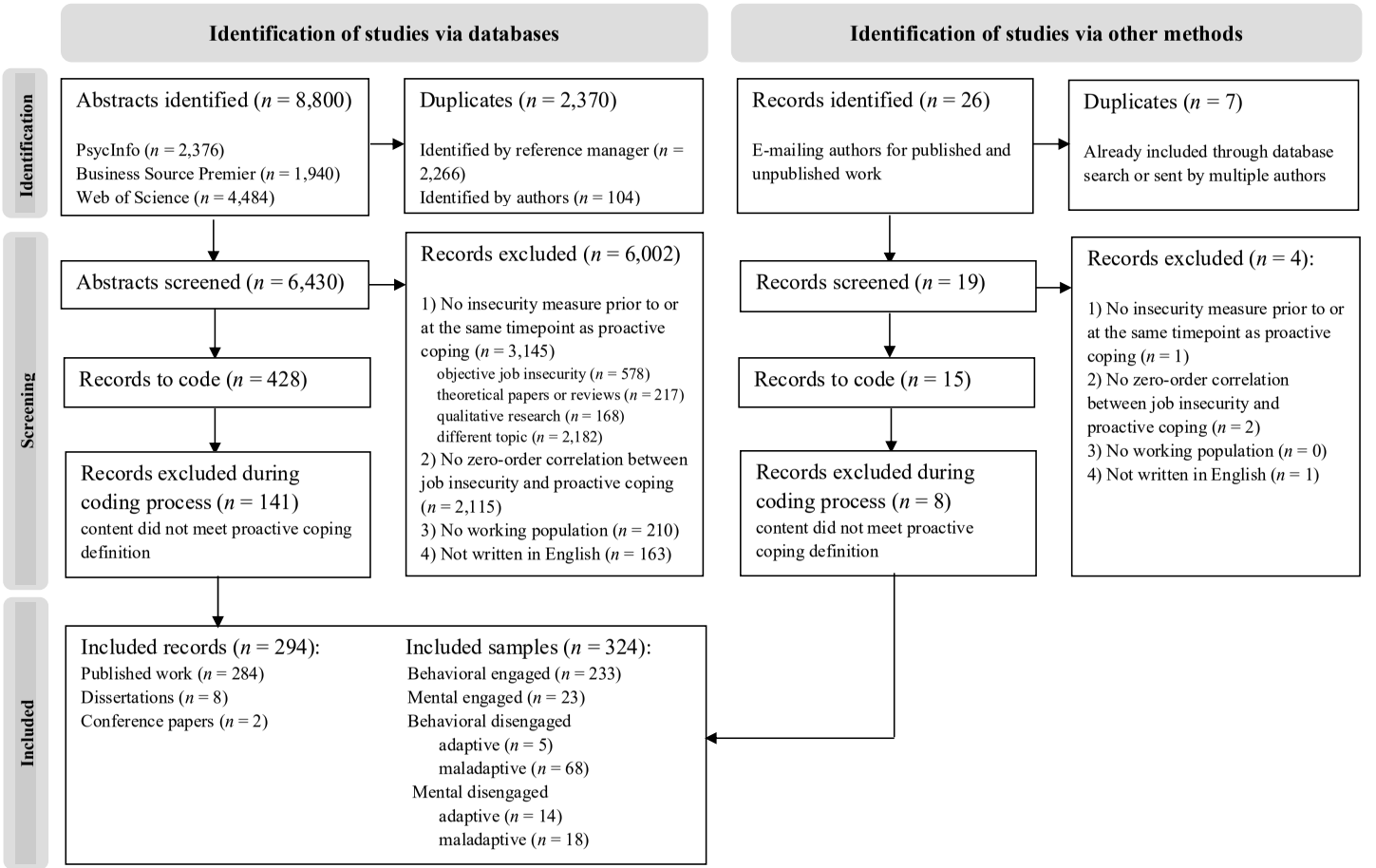
Method

Literature Search, Screening, and Inclusion Criteria

The PRISMA Diagram (cf. Page et al., 2021) depicted in Figure 3.2 provides an overview of the literature search and screening process. In consultation with a librarian specialized in systematic reviews, we constructed a comprehensive, yet specific, search query to find all published articles and dissertations that include job insecurity. We used this search query in April 2019, June 2022, and January 2023 to conduct literature searches in Web of Science, PsycInfo, and Business source premier (see Supplemental Material A). The search query included keywords such as job (in)security, employment (in)security, job (un)certainty, but also less evident keywords such as layoff threat, worry over job continuity, job future ambiguity, and career uncertainty. After removing duplicates, this search resulted in 6,430 articles. We screened the abstracts and content of these articles to decide whether they met our inclusion criteria. Specifically, to be included

Figure 3.2

PRISMA Diagram of the Literature Search and Screening Process



studies had to 1) measure job insecurity[3] later or at the same timepoint as proactive coping[4] was measured, 2) report zero-order correlations between proactive coping and job insecurity on a between-individuals level, 3) concern the working population, and 4) be written in English. We have excluded studies using coping measures that asked explicitly about responses to past stressors or events, because this implies the measures concerned reactive coping. Moreover, we contacted twenty authors whose name appeared at least three times in our database to verify completeness and request unpublished work. Our search resulted in 294 eligible articles, conference papers, and dissertations, with 324 independent samples (N = 313,118). Included studies were published between 1988 and 2023, with 33% conducted since 2020 and 82% since 2010. Designs were either cross-sectional (87%) or longitudinal (13%). A reference list of all included records can be found in Supplemental Material B.

Coding Procedure

From the included studies we coded the strength and direction of correlations, the type of job insecurity, the type of proactive coping, study and sample characteristics, and the reliability of the measures. All ambiguities we encountered were discussed and solved in meetings with all authors. As an additional quality check, 10 articles were coded independently by both the first author and a research assistant who had no further involvement in the project. Apart from that the assistant coded two extra relationships that did not concern a coping variable (i.e., perceived organizational judgement, trait psychological flexibility), the resulting codes were identical. After the coding process, we (i.e., the three members of research team) evaluated whether and how the coded proactive coping efforts fit the categories of the proactive coping framework. To further increase the validity of the framework, we asked five subject matter experts (i.e., work and organizational psychologists who are familiar with the occupational health literature) to independently categorize the efforts along the same framework. The evaluations of the subject matter experts resulted in 79% overall agreement, and 88% agreement when not taking the differentiation between behavior and cognition into account. The proactive coping framework and corresponding behavioral and cognitive efforts are presented in Table 3.1.

[3] For job insecurity we used the following definition: "an individual's self-reported perceived threat to the continuity or quality of one's own employment as it is currently experienced or planned, the emotions related to this perception, or a combination of this perception and related emotions".
[4] For proactive coping we used the definition "behaviors or thoughts with the potential to influence the job insecurity experience".

Outliers and Publication Bias

After categorizing the coded data into the proactive coping categories, we visually inspected all correlations for outliers. For all outliers we checked whether a) it was a coding error, b) it may have been a reporting error, and c) it could be explained on theoretical or methodological grounds. We added our conclusion as a comment in the corresponding coding files (available upon request) and corrected the correlation value when it was a coding or reporting error. Notably, all correlations in the behavioral engagement category were negative or non-significant, except for those depicting job search. A moderation analysis (0 = no job search, 1= job search) confirmed that job search ($\bar{r}$ = 0.22, 95% *CI:* [0.17, 0.27]) displays a significantly different mean-sample-weighted correlation with job insecurity than other behavioral engaged coping efforts ($\bar{r}$ = -0.11, 95% *CI:* [-0.14, -0.09]). Looking back at our definition of proactive coping with job insecurity, we concluded job search is generally not initiated to minimize "the threat to one's employment as it is currently experienced or planned" (see Table 3.2), and we consequently excluded job search from the proactive coping framework.

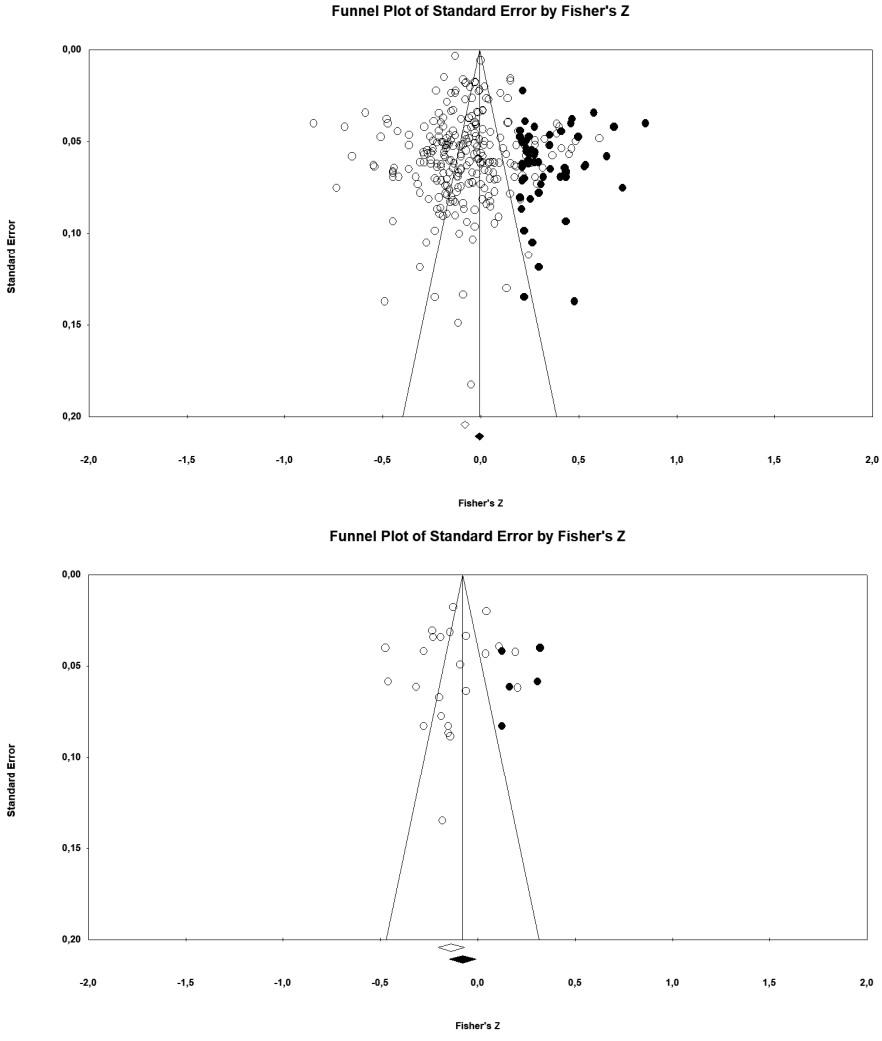
To estimate the presence of publication bias, we conducted analyses with Egger's (1997) test, Rosenthal's (1979) Fail-Safe *N* and Duval, and Tweedie's (2000) trim and fill method for each proactive coping category. For the trim and fill method, we treated the few unpublished records we found as published studies and searched for missing records right of the mean for engagement and adaptive disengagement, and left of the mean for maladaptive disengagement (see Figure 3.3). Where applicable, we have reported the for publication bias corrected findings in the results section.

Meta-Analytic Calculations

Prior to conducting meta-analyses, we averaged multiple effect sizes for the same relationship within a single sample to ensure statistical independence (cf. Nye et al., 2012; Schmidt & Hunter, 2014). For example, if multiple correlations for "behavioral engagement" measures were reported in one study, these correlations were averaged to create one "behavioral engagement" correlation for that sample. We then conducted meta-analyses in Comprehensive Meta-Analysis software version 3 (CMA; Borenstein et al., 2013), which is founded upon the Hedges and Olkin approach (Hedges & Olkin, 1985). We chose this approach because this makes it possible to correct for publication bias, while publication bias correction methods are absent in

Figure 3.3

Funnel Plots of the Found (white dots) and Imputed (black dots) Correlations between Behavioral Engagement (top), Mental Engagement (bottom), and Job Insecurity



psychometric approaches (Siegel et al., 2022). We considered a thorough publication bias analysis including the possibility to correct vital, since proactive coping has priorly been described by its effectiveness instead of its purpose – which may have increased the likelihood of publication bias (Langerak et al., 2022).

We assumed a random-effects meta-analytic model, because the included studies vary greatly in characteristics (e.g., country, type of workers) and hence the true variance between studies is greater than zero (Hunter & Schmidt, 2000), and because we wish to make inferences that generalize beyond the studies included in our meta-analytic review (Hedges & Vevea, 1998). Monte Carlo simulations by Field (2005) have indicated that the random-effects methods as used in CMA generally[5] provide accurate estimations of population effect sizes, similar to the random-effects methods used by Hunter and Schmidt (2004). In contrast to methods used by Hunter and Schmidt, CMA does not consider artifact correction an integral part of the computations, but approaches artifacts as any other continuous moderator that can be added to the model (Brannick et al., 2019). We checked for the potential effect of measurement reliability by conducting meta-regressions with predictor and outcome measure reliabilities moderators. We found reliability had no influence on the found effects, except for the effects of maladaptive behavioral disengagement, which led us to correct for unreliability for that category (cf. Wiernik et al., 2020). We calculated meta-analytic results for all relationships of interest (i.e., for all proactive coping categories and job insecurity types) but note that results represented by < 15 studies present an image of prior findings and do not give reliable estimates of significance for population effects due to the high probability of Type 1 errors (Field, 2001). To conduct moderator analyses we followed the same steps as Howard et al. (2020). Specifically, we first calculated separate meta-analytic results for relationships at each category of the moderator, allowing for the comparison of confidence intervals. Then, to test whether moderators resulted in significant different effect sizes, we conducted meta-regressions with dummy-coded moderator values as predictor.

[5] In extreme situations, i.e., when the population correlation was large and the standard error of correlations was also large, and when the population correlation was small and the standard deviation of correlations were at their maximum value, Hedges' method showed small (less than .052 above the population correlation) overestimations of the population correlation (p. 674, Field & Gillet, 2010).

Results

The data presented in bold in Table 3.3 show the meta-analytic results regarding the relationship between the six proactive coping categories and job insecurity. These categories are behavioral engagement, mental engagement, adaptive behavioral disengagement, adaptive mental disengagement, maladaptive behavioral disengagement, and maladaptive mental disengagement. Relationships are interpreted as significant when the 95% confidence interval (CI) does not include zero. Below, we first address the general findings for each category, after which we discuss the moderator analyses we conducted for job insecurity type (see Table 3.4) and study design (see Table 3.5). Lastly, we address the supplemental analyses we conducted for the individual efforts that are included within the proactive coping categories (see Table 3.3).

Proactive Coping Types

Without considering potential publication bias, the meta-analytic results indicate that the total efforts of engagement are negatively related to job insecurity, both in its behavioral ($\bar{r}$ = -0.10, 95% *CI:* [-0.12, -0.08]) and mental ($\bar{r}$ = -0.08, 95% *CI:* [-0.10, -0.06]) forms. However, Duval and Tweedie's (2000) trim and fill method pointed towards the possibility that studies with non-significant or positive correlations may be missing from the analyses (see Figure 3.3). After imputing these studies, the relationship between the total efforts of behavioral engagement and job insecurity becomes non-significant ($\bar{r}^{\,p}$ = -0.02, 95% *CI:* [-0.04, 0.003]) and the relationship between the total efforts of mental engagement and job insecurity increases in magnitude ($\bar{r}^{\,p}$ = -0.14, 95% *CI:* [-0.20, -0.07]).

We found relatively few studies that reported correlations between adaptive disengagement and job insecurity, which prevents us from drawing conclusions about population effects. However, the available data shows that the total efforts of adaptive behavioral disengagement ($\bar{r}$ = -0.15, 95% *CI:* [-0.23, -0.07]) and adaptive mental disengagement ($\bar{r}$ = -0.26, 95% *CI:* [-0.36, -0.14]) are both negatively related to job insecurity. For adaptive mental disengagement, Egger's test indicated that small studies were disproportionately associated with larger effect sizes, which can be an indication of publication bias. However, in our case it seemed the result of including two relatively large samples from Wood et al. (2020; *N*'s = 1,038). There were no other indications of publication bias.

Table 3.3

Meta-analytic Overview of Specific Proactive Coping Efforts and Job Insecurity

Proactive coping type	Included Efforts	Sample info			Effect sizes					Heterogeneity statistics			
		k	k^p	*N*	$\bar{r}$	$\bar{r}^p$	$\bar{r}^u$	*95% CI*	*95% CI p, u*	*Q*	I^2	*Tau*	*95% PI*
Behav. engagement	**Total**	**243**	**300**	**232.275**	**-0.10**	**-0.02**	**n/a**	**[-0.12, -0.08]**	**[-0.04, 0.003]**	**4432***	**95**	**0.15**	**[-0.37, 0.19]**
Job performance		89	n/a	118.412	-0.16	n/a	n/a	[-0.19, -0.14]	n/a	658*	91	0.11	[-0.37, 0.06]
OCB		49	60	19.852	-0.11	-0.06	n/a	[-0.15, -0.07]	[-0.10, -0.02]	380*	87	0.13	[-0.36, 0.15]
Proactive career behaviors		37	47	57.044	-0.03	0.03	n/a	[-0.07, 0.01]	[-0.01, 0.07]	497*	93	0.11	[-0.25, 0.18]
Innovative work behavior		19	n/a	8.247	-0.11	n/a	n/a	[-0.19, -0.02]	n/a	248*	93	0.18	[-0.46, 0.27]
Voice behavior		17	n/a	5.896	-0.26	n/a	n/a	[-0.32, -0.08]	n/a	785*	98	0.39	[-0.81, 0.52]
Increased effort		17	19	11.431	0.03	0.06	n/a	[-0.03, 0.09]	[-0.01, 0.12]	157*	90	0.12	[-0.23, 0.29]
Mental engagement	**Total**	**23**	**29**	**15.803**	**-0.08**	**-0.14**	**n/a**	**[-0.15, -0.01]**	**[-0.20, -0.07]**	**372***	**94**	**0.16**	**[-0.44, 0.19]**
Adaptive thoughts		*13*	*17*	*5.288*	*-0.15*	*-0.07*	n/a	*[-0.26, -0.04]*	*[-0.19, 0.04]*	*194**	*94*	*0.07*	*[-0.55, 0.29]*
Cognitive restructuring		*10*	*n/a*	*10.250*	*-0.15*	*n/a*	n/a	*[-0.23, -0.06]*	*n/a*	*148**	*94*	*0.13*	*[-0.43, 0.17]*
Adapt. behav. diseng.	**Total**	***5***	**n/a**	***30.187***	***-0.15***	**n/a**	**n/a**	***[-0.23, -0.07]***	**n/a**	***19****	***79***	***0.08***	***[0.42, 0.14]***
Relaxation		*3*	*n/a*	*29.717*	*-0.10*	*n/a*	n/a	*[-0.14, -0.06]*	*n/a*	*3*	*24*	*0.04*	*[-0.43, 0.25]*
Recovery activities		*3*	*n/a*	*976*	*-0.21*	*n/a*	n/a	*[-0.35, -0.07]*	*n/a*	*10**	*80*	*0.12*	*[-0.96, 0.92]*
Adapt. mental diseng.	**Total**	***14***	***n/a***	***11.444***	***-0.26***	***n/a***	***n/a***	***[-0.36, -0.14]***	***n/a***	***62****	***89***	***0.13***	***[-0.60, 0.16]***
Mindfulness		7	n/a	3.595	-0.31	n/a	n/a	[-0.42, -0.19]	n/a	85*	93	0.04	[-0.65, 0.14]
Detachment from work		7	n/a	7.849	-0.09	n/a	n/a	[-0.13, -0.05]	n/a	14	57	0.04	[-0.19, 0.02]
Mal. behav. diseng.	**Total**	**68**	**n/a**	**65.421**	**0.20**	**n/a**	**0.25**	**[0.16, 0.24]**	**[0.20, 0.31]**	**1936***	**96**	**0.18**	**[-0.16, 0.51]**
CWB		48	n/a	18.937	0.26	n/a	0.31	[0.20, 0.32]	[0.24, 0.38]	1039*	95	0.23	[-0.21, 0.63]
Work absence		*9*	*n/a*	*27.908*	*0.03*	*n/a*	*n/a*	*[-0.02, 0.09]*	*n/a*	*78**	*90*	*0.07*	*[-0.14, 0.20]*
Alcohol, tobacco, eating		*8*	*n/a*	*14.206*	*0.06*	*n/a*	*n/a*	*[0.004, 0.11]*	*n/a*	*47**	*47*	*0.07*	*[-0.11, 0.23]*
Giving up		*3*	*n/a*	*3.883*	*0.17*	*n/a*	*n/a*	*[0.11, 0.24]*	*n/a*	*5*	*57*	*0.05*	*[-0.49, 0.71]*
Mal. mental diseng.	**Total**	**18**	**n/a**	**13.961**	**0.16**	**n/a**	**n/a**	**[0.09, 0.22]**	**n/a**	**218***	**93**	**0.13**	**[-0.13, 0.42]**
Avoidance		16	n/a	12.886	0.15	n/a	n/a	[0.09, 0.22]	n/a	190*	92	0.13	[-0.12, 0.41]
Rumination and self-blame		*4*	*n/a*	*2.066*	*0.21*	*n/a*	*n/a*	*[-0.07, 0.45]*	*n/a*	*118**	*97*	*0.28*	*[-0.81, 0.91]*

Note. Numbers in italics are based on data from fewer than 15 samples. These numbers give an image of prior findings but do not give reliable estimates of population effects (cf. Field, 2001). k = number of samples, N = number of workers, $\bar{r}$ = mean-sample-weighted correlation, CI = Confidence Interval: the range in which the mean of all comparable studies is expected to be, Q = statistic to test whether all studies in the analysis share a common effect size. Significant values (* = $p < .01$) indicate the true effect size differs between studies, which signals the relevance of investigating moderators that can explain more of the variance in observed effects sizes. I^2 = statistic to estimate what percentage of variance in observed effects reflects variance in true effects rather than sampling error. For example, an I^2 of 95 tells us that 95% of the variance in observed effects reflects variance in true effects rather than random error variance. Tau = the estimated standard deviation of true effect sizes in Fisher's Z units, PI = Prediction Interval: the range in which the true effect size of 95% of comparable populations is expected to be. Where applicable, for publication bias corrected data is provided (k^p and $\bar{r}^p$): samples were imputed with Duval and Tweedie's (2000) trim and fill method. Where applicable, for unreliability corrected data is provided ($\bar{r}^u$): effects were corrected by dividing the observed correlation by the product of the square root of the reliabilities (cf. Wiernik et al., 2020).

Without correcting for measurement unreliability, the meta-analytic results show a positive relationship between the total efforts of maladaptive disengagement with job insecurity, both in their behavioral ($\bar{r}$ = 0.20, 95% *CI*: [0.16, 0.24]) and mental ($\bar{r}$ = 0.16, 95% *CI*: [0.09, 0.22]) forms. Because moderation analyses revealed that measurement unreliability had a significant influence on effect size in the maladaptive behavioral disengagement category, we corrected for unreliability in that category (cf. Wiernik et al., 2020) and found a stronger positive relationship than initially calculated ($\bar{r}^{u}$ = 0.25, 95% *CI*: [0.20, 0.31]). For maladaptive behavioral disengagement, Egger's test indicated that small studies were disproportionately associated with larger effect sizes, which again could be attributed to a large sample size (*N* = 16,697) from Wood et al. (2020). There were no other indications of publication bias.

Job Insecurity Types

We further examined the relationship between the total efforts of the six proactive coping categories and job insecurity, by investigating whether the found relationships strengths depend upon the type of job insecurity that studies measured (see Table 3.4). Our results show that researchers have predominately measured quantitative job insecurity (*k*'s range between 5 and 192 across the 6 categories) rather than qualitative job insecurity (*k*'s range between 0 and 27 across the 6 categories) in combination with proactive coping. We found similar relationship strengths for studies that measured quantitative job insecurity as for studies that measured qualitative job insecurity, for all proactive coping categories (see Table 3.4; overlapping confidence intervals indicate no significant difference). This was confirmed by meta-regressions with job insecurity type as dummy (0 = quantitative, 1= qualitative) used as predictor. Second, our results show that researchers have predominantly measured cognitive job insecurity (*k*'s range between 1 and 110 across the 6 categories) rather than affective job insecurity (*k*'s range between 3 and 23 across the 6 categories). Without accounting for potential publication bias, we found similar relationship strengths for studies that measured cognitive job insecurity as for studies that measured affective job insecurity, for all proactive coping categories. This was confirmed by meta-regressions with job insecurity type as dummy (0 = cognitive, 1= affective) used as predictor. However, Duval and Tweedie's (2000) trim and fill method pointed towards the possibility that approximately 4 studies with non-significant or positive correlations between behavioral engagement and affective job insecurity may be missing from the analyses. After imputing these studies, the results indicate a

Table 3.4

Meta-analytic Overview of Proactive Coping Types and Job Insecurity

Proactive coping type	Job insecurity type	Sample info			Effect sizes					Heterogeneity statistics			
		k	k^p	*N*	$\bar{r}$	$\bar{r}^{p}$	$\bar{r}^{u}$	*95% CI*	*95% CI* ^{p,u}	*Q*	I^2	*Tau*	*95% PI*
Behavioral engagement	Quantitative	192	n/a	213.543	-0.12	n/a	n/a	[-0.14, -0.10]	n/a	3344*	94	0.13	[-0.37, 0.14]
	Qualitative	27	n/a	11.384	-0.15	n/a	n/a	[-0.20, -0.10]	n/a	141*	82	0.11	[-0.36, 0.08]
	Cognitive	110	n/a	54.298	-0.12	n/a	n/a	[-0.16, -0.08]	n/a	2105*	95	0.20	[-0.47, 0.26]
	Affective	23	27	120.831	-0.05	-0.01	n/a	[-0.10, -0.00]	[-0.06, 0.04]	582*	96	0.10	[-0.26, 0.16]
Mental engagement	Quantitative	20	25	13.299	-0.13	-0.06	n/a	[-0.21, -0.05]	[-0.14, 0.07]	352*	95	0.16	[-0.46, 0.23]
	Qualitative	*3*	n/a	*3.623*	*-0.11*	n/a	n/a	*[-0.24, 0.02]*	n/a	*11**	*82*	*0.10*	*[-0.93, 0.90]*
	Cognitive	*6*	n/a	*5.840*	*-0.14*	n/a	n/a	*[-0.23, 0.05]*	n/a	*43**	*88*	*0.10*	*[-0.42, 0.16]*
	Affective	*3*	n/a	*1666*	*0.05*	n/a	n/a	*[-0.22, 0.31]*	n/a	*57**	*97*	*0.24*	*[-1.00, 1.00]*
Adaptive behavioral disengagement	Quantitative	*5*	n/a	*30.187*	*-0.15*	n/a	n/a	*[-0.23, -0.07]*	n/a	*19**	*79*	*0.08*	*[0.42, 0.14]*
	Qualitative	*0*	n/a	*0*	*n/a*	n/a	n/a	*n/a*	n/a	*n/a*	*n/a*	*n/a*	*n/a*
	Cognitive	*1*	n/a	*222*	*-0,01*	n/a	n/a	*[-0.14, 0.12]*	n/a	*n/a*	*n/a*	*n/a*	*n/a*
	Affective	*3*	n/a	*29.459*	*-0.21*	n/a	n/a	*[-0.36, -0.06]*	n/a	*16**	*88*	*0.13*	*[0.97, 0.94]*
Adaptive mental disengagement	Quantitative	*12*	*n/a*	*10421*	*-0.17*	*n/a*	*n/a*	*[-0.24, -0.09]*	*n/a*	*139**	*92*	*0.12*	*[-0.43, 0.12]*
	Qualitative	*2*	n/a	*579*	*-0.29*	n/a	n/a	*[-0.49, -0.06]*	n/a	*n/a*	*n/a*	*n/a*	n/a
	Cognitive	*5*	n/a	*2.144*	*-0.17*	n/a	n/a	*[-0.32, -0.01]*	n/a	*49**	*92*	*0.17*	*[-0.66, 0.42]*
	Affective	*0*	n/a	*0*	*n/a*	n/a	n/a	*n/a*	n/a	*n/a*	*n/a*	*n/a*	*n/a*
Maladaptive behavioral disengagement	Quantitative	52	n/a	56.914	0.18	n/a	0.22	[0.13, 0.23]	[0.16, 0.28]	1632*	97	0.18	[-0.18, 0.50]
	Qualitative	*7*	n/a	*11.182*	*0.14*	n/a	*0.19*	*[0.06, 0.23]*	*[0.07, 0.29]*	*75**	*92*	*0.11*	*[-0.15, 0.41]*
	Cognitive	35	n/a	45.424	0.13	n/a	0.16	[0.09, 0.18]	[0.11, 0.20]	535*	94	0.12	[-0.11, 0.36]
	Affective	*8*	*n/a*	*3864*	*0.20*	*n/a*	*0.24*	*[0.11, 0.29]*	*[0.12, 0.35]*	*41**	*83*	*0.12*	*[-0.11, 0.47]*
Maladaptive mental disengagement	Quantitative	*13*	*n/a*	*10.821*	*0.19*	*n/a*	*n/a*	*[0.11, 0.27]*	*n/a*	*188**	*94*	*0.14*	*[-0.13, 0.47]*
	Qualitative	*1*	n/a	*410*	*0.54*	n/a	n/a	*n/a*	n/a	*n/a*	*n/a*	*n/a*	*n/a*
	Cognitive	*4*	n/a	*5254*	*0.22*	n/a	n/a	*[0.05, 0.38]*	n/a	*92**	*97*	*0.17*	*[-0.55, 0.79]*
	Affective	*3*	n/a	*1.750*	*0.22*	n/a	n/a	*[-0.13, 0.53]*	n/a	*113**	*98*	*0.31*	*[-1.00, 1.00]*

Note. Numbers in italics are based on data from fewer than 15 samples. These numbers give an image of prior findings but do not give reliable estimates of population effects (cf. Field, 2001). *k* = number of samples, *N* = number of workers, $\bar{r}$ = mean-sample-weighted correlation, CI = Confidence Interval: the range in which the mean of all comparable studies is expected to be, *Q* = statistic to test whether all studies in the analysis share a common effect size. Significant values (* = $p < .01$) indicate the true effect size differs between studies, which signals the relevance of investigating moderators that can explain more of the variance in observed effects sizes. I^2 = statistic to estimate what percentage of variance in observed effects reflects variance in true effects rather than sampling error. For example, an I^2 of 95 tells us that 95% of the variance in observed effects reflects variance in true effects rather than random error variance. Tau = the estimated standard deviation of true effect sizes in Fisher's *Z* units, PI = Prediction Interval: the range in which the true effect size of 95% of comparable populations is expected to be. Where applicable, for publication bias corrected data is provided (k^p and $\bar{r}^{p}$): samples were imputed with Duval and Tweedie's (2000) trim and fill method. Where applicable, for unreliability corrected data is provided ($\bar{r}^{u}$): effects were corrected by dividing the observed correlation by the product of the square root of the reliabilities (cf. Wiernik et al., 2020)

Table 3.5

Meta-analytic Overview of Cross-sectional and Longitudinal Findings

Proactive coping type	Study design	Sample info			Effect sizes					Heterogeneity statistics			
		k	k^p	*N*	$\bar{r}$	$\bar{r}^{p}$	$\bar{r}^{u}$	*95% CI*	*95% CI* $^{p, u}$	*Q*	I^2	*Tau*	*95% PI*
Behavioral engagement	Cross-sectional	235	287	230.456	-0.10	-0.03	n/a	[-0.12, -0.08]	[-0.05, -0.01]	4372*	95	0.15	[-0.37, 0.18]
	Longitudinal	25	n/a	13.130	-0.11	n/a	n/a	[-0.15, -0.06]	n/a	139*	83	0.10	[-0.31, 0.10]
Mental engagement	Cross-sectional	21	n/a	13.547	-0.13	n/a	n/a	[-0.20, -0.05]	n/a	352*	94	0.17	[-0.45, 0.22]
	Longitudinal	*3*	*n/a*	*2.256*	*-0.16*	*n/a*	*n/a*	*[-0.20, -0.12]*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Adaptive behavioral disengagement	Cross-sectional	*5*	*n/a*	*30.187*	*-0.15*	*n/a*	*n/a*	*[-0.23, -0.07]*	*n/a*	*19**	*79*	*0.10*	*[0.42, 0.14]*
	Longitudinal	*0*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Adaptive mental disengagement	Cross-sectional	*14*	*n/a*	*11.444*	*-0.26*	*n/a*	*n/a*	*[-0.36, -0.14]*	*n/a*	*62**	*89*	*0.17*	*[-0.60, 0.16]*
	Longitudinal	*0*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Maladaptive behavioral disengagement	Cross-sectional	60	n/a	59.473	0.20	n/a	0.25	[0.16, 0.24]	[0.20, 0.31]	1936*	96	0.18	[-0.16, 0.51]
	Longitudinal	*10*	*n/a*	*5.948*	*0.23*	*n/a*	*0.27*	*[0.11, 0.34]*	*[0.11, 0.42]*	*191**	*95*	*0.20*	*[-0.24, 0.62]*
Maladaptive mental disengagement	Cross-sectional	*14*	*n/a*	*12.759*	*0.15*	*n/a*	*n/a*	*[0.08, 0.21]*	*n/a*	*166**	*92*	*0.12*	*[-0.12, 0.39]*
	Longitudinal	*4*	*n/a*	*301*	*0.24*	*n/a*	*n/a*	*[0.10, 0.37]*	*n/a*	*15**	*80*	*0.13*	*[-0.38, 0.71]*

Note. Numbers in italics are based on data from fewer than 15 samples. These numbers give an image of prior findings but do not give reliable estimates of population effects (cf. Field, 2001). *k* = number of samples, *N* = number of workers, $\bar{r}$ = mean-sample-weighted correlation, CI = Confidence Interval: the range in which the mean of all comparable studies is expected to be, *Q* = statistic to test whether all studies in the analysis share a common effect size. Significant values (* = $p < .01$) indicate the true effect size differs between studies, which signals the relevance of investigating moderators that can explain more of the variance in observed effects sizes. I^2 = statistic to estimate what percentage of variance in observed effects reflects variance in true effects rather than sampling error. For example, an I^2 of 95 tells us that 95% of the variance in observed effects reflects variance in true effects rather than random error variance. Tau = the estimated standard deviation of true effect sizes in Fisher's *Z* units, PI = Prediction Interval: the range in which the true effect size of 95% of comparable populations is expected to be. Where applicable, for publication bias corrected data is provided (k^p and $\bar{r}^{p}$): samples were imputed with Duval and Tweedie's (2000) trim and fill method. Where applicable, for unreliability corrected data is provided ($\bar{r}^{u}$): effects were corrected by dividing the observed correlation by the product of the square root of the reliabilities (cf. Wiernik et al., 2020).

negative relationship between the total efforts of behavioral engagement and cognitive job insecurity ($\bar{r}$ = -0.12, 95% *CI:* [-0.16, -0.08]), but no significant relationship between these same efforts and affective job insecurity ($\bar{r}$ ^{p} = -0.01, 95% CI: [-0.06, 0.04]).

Cross-Sectional versus Longitudinal Designs

Additionally, we investigated whether the found relationship strengths between the total efforts of the six proactive coping categories and job insecurity, depend upon the study design of the included studies (i.e., longitudinal or cross-sectional design, see Table 3.5). Our results showed that studies with longitudinal designs in which proactive coping is measured at a timepoint before job insecurity are relatively scarce (*k*'s range between 0 and 25 across the 6 categories), compared to studies with cross-sectional designs (*k*'s range between 5 and 244 across the 6 categories). Most included longitudinal studies investigated the relationship between behavioral engagement and job insecurity. Without correcting for publication bias, the total efforts of behavioral engagement show a negative relationship with job insecurity of similar magnitude for the longitudinal studies ($\bar{r}$ = -0.11, 95% *CI:* [-0.15, -0.06]) as for the cross-sectional studies (*k* = 235*,* $\bar{r}$ = -0.10, 95% *CI:* [-0.12, -0.08]). However, Duval and Tweedie's (2000) trim and fill method pointed towards the possibility that approximately 52 cross-sectional studies with non-significant or positive correlations between behavioral engagement and job insecurity may be missing from the analyses. After imputing these studies, the results showed a negative relationship of greater magnitude for longitudinal studies ($\bar{r}$ = -0.11, 95% *CI:* [-0.15, -0.06]) than for cross-sectional studies ($\bar{r}$ ^{p} = -0.03, 95% *CI:* [-0.05, -0.01]). For the other proactive coping categories we found similar associations for longitudinal and cross-sectional relationships, but these results are less reliable estimates for the entire working population due to the low amount of longitudinal samples.

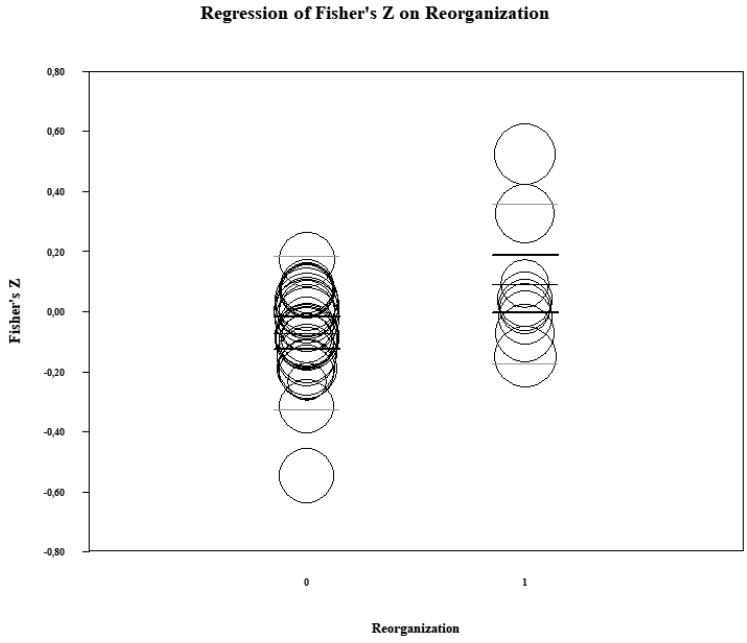
Supplemental Analyses

In addition to investigating the relationships of the total efforts of each of the six proactive coping categories with job insecurity, we conducted supplemental analyses to investigate how individual efforts within the proactive coping categories relate to job insecurity. For all proactive coping categories, we found that the corresponding individual efforts showed similar relationships with job insecurity (see Table 3.3, overlapping confidence intervals indicate no significant difference), with two exceptions: proactive career behaviors and increased effort did not show the significant negative relationships with job insecurity that the other behavioral engagement efforts

showed. Since especially proactive career behavior is generally considered positive for career success (e.g., Alisic & Wiese, 2020; Huang et al., 2013; Koen & Parker, 2020; Koen & Van Bezouw, 2021; Kriz et al., 2021; Probst et al., 2019), and the significant *Q*-values signal that the true effect size differs between studies, we explored whether external influences may be able to explain these unexpected results by conducting additional moderation analyses. Specifically, building upon Parker et al.'s (2019) notion that proactive career behavior may not be the wise course of action when the context is not ready for change, we investigated whether the relationships between proactive career behavior and job insecurity and increased effort and job insecurity, depend upon the year of data collection (0 = before the COVID-19 pandemic, 1 = during the COVID-19 pandemic) and reorganization presence (0 = no reorganization or no reorganization reported,

Figure 3.4

Scatterplot Depicting Found Effect Sizes of the Relationship Between Proactive Career Behavior and Job Insecurity for Studies that Did and Did Not Report Undergoing a Reorganization



Note. The outer black lines depict confidence intervals and the middle black line depicts the regression line. The grey lines depict prediction intervals.

1 = reorganization reported). We only conducted the moderator analysis for year of data collection for proactive career behavior, because all included studies regarding increased effort were published before the COVID-19 pandemic. This showed that the 7 studies that had collected data during the COVID-19 pandemic, did not report significantly different relationships as the 37 studies that had collected data before the COVID-19 pandemic ($Q = 2.63$, $df = 1$, $p = 0.10$). The moderator analysis for reorganization presence did reveal a significant difference ($Q = 16.10$, $df = 1$, $p < 0.01$): As shown in Figure 3.4, the 8 studies that reported a reorganization ($\bar{r} = 0.19$, 95% *CI:* [0.10, 0.28]), showed a positive relationship between proactive career behavior and job insecurity, while the 37 studies that did not report a reorganization showed the expected negative relationship ($\bar{r} = -0.07$, 95% *CI:* [-0.11, -0.03]). Lastly, the relationship between increased effort and job insecurity was not significantly affected by reorganizations ($Q = 0.84$, $df = 1$, $p = 0.36$).

Discussion

Integrating proactive coping theory (Aspinwall & Taylor, 1997) and more traditional coping frameworks (Tobin et al., 1989; Kraaij & Garnefski, 2001), we developed a framework for proactive coping types to achieve systematic insight into what we know regarding proactive coping with job insecurity and what areas are in need of further investigation. The corresponding meta-analytic results based on 324 independent samples comprising data from over 300,000 workers indicated support for the conceptual model of proactive coping with job insecurity (see Figure 3.1): behavioral and mental engagement (e.g., performing well, cognitive restructuring) and adaptive behavioral and mental disengagement (e.g., recovery activities, mindfulness) were associated with lower amounts of job insecurity – regardless of job insecurity type or study design. Maladaptive behavioral and mental disengagement (e.g., counterproductive work behaviors, avoidance) were associated with higher amounts of job insecurity. All results show high heterogeneity, pointing towards true differences between studies that have yet to be identified to make more reliable estimates for specific groups or situations. Taken together, these results show the first meta-analytic indication that workers can proactively change their experience of job insecurity, while pointing towards important directions for future research to answer questions regarding unexplained heterogeneity, directionality, and the integration and compatibility of theoretical mechanisms through which proactive coping may affect change.

Theoretical Contributions

Our meta-analytic review provides four contributions to existing theory and research. As a first contribution, our review provides a more complete and in-depth understanding of proactive coping by documenting the (in)effectiveness of concrete proactive behaviors and cognitions within the context of job insecurity. Building upon the perspective that the difference between proactive and reactive coping lies in its proposed function (here: influencing future job insecurity) rather than in the type of behavior (Langerak et al., 2022), our review identifies substantially more forms of proactive coping that can influence job insecurity than previously assumed. For example, we found clear negative relationships with job insecurity for voice behavior ($\bar{r}$ = -0.26), mindfulness ($\bar{r}$ = -0.31), and recovery activities ($\bar{r}$ = -0.21). While it is evident that engagement such as voice behavior can affect the future work situation, the influence of adaptive disengagement such as mindfulness and recovery may be less intuitive because it does not directly influence the future work situation but rather one's position in it. As such, our findings support and further specify Aspinwall and Taylor's (1997) notion that proactive coping involves the accumulation of resources such as attention and energy by suggesting that also adaptive disengagement efforts (i.e., relaxation, recovery activities, mindfulness, and detachment from work) are potential means to achieve this. At the same time, our results contradict the prior assumption that "effective proactive coping is virtually always active" (Aspinwall & Taylor, 1997, p. 417) by illustrating that not only engaged (active), but also disengaged (passive) forms of proactive coping can be negatively associated with job insecurity.

In contrast, our meta-analytic results indicate that workers who use maladaptive behavioral disengagement (e.g., counterproductive work behaviors) and maladaptive mental disengagement (e.g., avoiding thoughts about the work situation) experience more job insecurity ($\bar{r}$ $^{u}_{behavioral}$ = 0.25, $\bar{r}$ $_{mental}$ = 0.16). To interpret maladaptive disengagement as a proactive effort, we assume that workers can display counterproductive work behaviors (CWB) for temporary relief of their own deteriorating work situation (e.g., bullying an intern may temporarily keep one's thoughts away from one's own negative performance reviews). However, these behaviors may diminish resources that are essential to alleviate job insecurity (e.g., supervisor support; cf. Jiang et al., 2021). In addition, the strength of this relationship may depend upon its direction: In prior meta-analytical reviews (Jiang et al., 2022), CWB has been investigated as an outcome and showed relations of smaller magnitude ($\bar{r}$ = 0.16 and corrected $\bar{r}$ = 0.19) than in our analyses, in which CWB was

investigated as a predictor ($\bar{r}$ = 0.26 and corrected $\bar{r}$ = 0.31). We further address the possibility of reversed directionality in the limitations and future research section.

The meta-analytic results also pointed towards proactive efforts that did not seem to relate to job insecurity, namely behavioral engagement in the form of proactive career behavior ($\bar{r}^{p}$ = 0.03) and increased effort ($\bar{r}$ = 0.03). Yet, the supplemental analyses revealed that the non-significant finding of proactive career behavior can be explained by reorganization presence (see Figure 3.4). Studies that reported a reorganization showed a positive relationship between proactive career behavior and job insecurity ($\bar{r}$ = 0.19), whereas studies that reported no reorganization showed a negative relationship ($\bar{r}$ = -0.07). Consistent with Parker and colleagues' (2019) notion that proactive career behavior may not be the wise course of action when the context is not ready for change, our results show the importance of using proactive career behaviors under the right circumstances in order to prevent that well-intended proactive career efforts backfire. Increased efforts showed non-significant relationships with job insecurity regardless of reorganization presence. Considering that job performance ($\bar{r}$ = -0.16) and organizational citizen behaviors ($\bar{r}^{\,p}$ = -0.06) do show negative relations, this may be because increased effort can only be shown temporary, while prolonged efforts may be needed for proactive coping to be effective (El Khawli et al., 2022).

As a second contribution, our results provide resolution for prior inconclusive results regarding the relationship between proactive coping and different types of job insecurity. That is, quantitative and qualitative job insecurity show similar relationship strengths for all proactive coping categories. This is in line with Jiang and colleagues' (2021) findings that personal, constructive, and social resources display similar relations with quantitative and qualitative job insecurity, considering that one plausible means through which proactive coping affects job insecurity is through influencing these resources. However, since they also found that structural resources and structural demands (organizational practices and conditions) show stronger relations with qualitative job insecurity than with quantitative job insecurity, it is conceivable that specific efforts that target organizational practices (e.g., voice behavior) can have stronger relations with qualitative job insecurity.

For cognitive and affective job insecurity, results revealed similar relationship strengths for all proactive coping categories when not taking publication bias into account. However, when correcting for potential publication bias, behavioral engagement correlated negatively with

cognitive job insecurity ($\bar{r}$ = -0.12) and was unrelated to affective job insecurity ($\bar{r}^{\,p}$ = -0.01). This would imply that workers who show more behavioral engagement efforts experience less cognitive job insecurity than workers who use less behavioral engagement efforts, but that their worries about the possibility of losing their job remain the same. Since affective job insecurity is the strongest and most proximal predictor of negative outcomes (e.g., mental and physical health, work motivation; cf. Jiang & Lavayesse, 2018), it is important to discover how workers may lower their worries about possible job loss at times that their job is not perceived to be at (great) risk. Notably, our review mostly includes studies regarding cognitive and quantitative job insecurity. To gain more insight into the specific differential influence on job insecurity types, however, more primary research is needed that also includes measures of qualitative and affective job insecurity.

As a third contribution, our review underlines the similarities between proactive coping and the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2017), while also providing valuable additions that may help to integrate these two lines. That is, proactive coping in the form of adaptive disengagement and engagement has similarities with the concept of job crafting. Job crafting is defined as the proactive changes employees make in their job demands and resources (Bakker & Demerouti, 2017). In Proactive Coping Theory, the accumulation of resources is an important process through which proactive coping takes effect (Aspinwall & Taylor, 1997). We found that adaptive disengagement efforts (i.e., relaxation, recovery activities, mindfulness, and detachment from work) may represent forms of proactive coping that help the accumulation of resources such as attention and energy. In a similar vein, engagement efforts (e.g., job performance, organizational citizen behaviors) may help accumulate resources such as supervisor and coworker support. As such, our review illustrates that proactive coping offers more possibilities as to how proactive change can be realized than the efforts that job crafting generally entails (cf. the job crafting scale, Tims et al., 2012).

Moreover, maladaptive disengagement efforts may represent an extra route through which job demands and resources are influenced by workers beyond the current JD-R model. While it has similarities with the concept of self-undermining, which is defined as behavior that creates obstacles in the work situation and consequently increases demands (Bakker & Wang, 2020), maladaptive disengagement is a more intentional response to ongoing or potential strain that has the side effect of increasing demands (e.g., rumination about the future creates the personal demand negative affectivity) and decreasing resources (e.g., making harmful remarks lowers the

social resource co-worker support). Thus, our results indicate that integrating Proactive Coping Theory and insights from the JD-R model may be valuable to arrive at a more complete picture of how workers shape their careers. For example, through stimulating research that explores how individuals can shape demands and resources through a wider variety of efforts than job crafting and self-undermining alone.

As a fourth and last contribution, the heterogeneity measures of the meta-analytic results indicate that the effectiveness of proactive coping is likely influenced by the context in which it takes place, uncovering potential boundary conditions. Specifically, even for proactive coping efforts that related significantly to job insecurity and had confidence intervals excluding zero, the predictability intervals generally included both negative and positive values (see Tables 3.3 - 3.5). This means that the true effect sizes of comparable populations can be in a much broader range, even though comparable studies are expected to show relations in the same direction. The significant Q-values and large I^2 values are further evidence of true between-study variance that may be explained by study and sample characteristics. In more applied terms, proactive coping efforts possibly have requirements that must be met to be effective. An illustrative example of this is the supplemental finding that proactive career behaviors are only effective when there is no ongoing reorganization. Next to such organizational characteristics, however, individual differences between workers (e.g., employability) and their social environment (e.g., supervisor characteristics) may also play a role (Forrier et al., 2018).

As a final note, we would like to stress that it is vital that not only significant but also non-significant findings on the relationship between engagement and job insecurity are published to further examine the influence of moderators that can explain between-study variance. As of yet, Duval and Tweedie's (2000) trim and fill method indicates that approximately 57 studies with non-significant or positive findings about engagement are missing (see Figure 3.2). This is troubling, because the absence of study and sample characteristics of these missing studies makes it impossible to conduct moderation analyses to establish reasons behind the diverging findings (Cafri et al., 2010). By bringing this publication bias issue to light and presenting a proactive coping framework in which proactive coping is defined by its purpose (influencing a potential stressor) instead of by its effectiveness, we hope that future researchers can and will report nonsignificant and positive outcomes without the results being rejected by peers, so we can further explore the right conditions to make proactive coping more effective in minimizing job insecurity.

Practical Implications

Our meta-analytic review indicates that workers who aim to minimize their (future) experience of job insecurity benefit most from using engaged efforts (e.g., performing well, speaking up) and adaptive disengaged efforts (e.g., mindfulness and recovery activities) and from avoiding maladaptive disengaged efforts (e.g., counterproductive work behaviors and rumination). However, the effects of these proactive coping efforts on job insecurity may be context dependent. Our findings indicate, for example, that proactive career behaviors such as networking and career planning only minimize the experience of job insecurity when there is no reorganization taking place; however, in times of reorganization, the same proactive career behaviors tend to increase feelings of job insecurity. Possibly, the high level of stress that results from reorganizations obstructs the cognitive resources and future focus needed to successfully engage in proactive behaviors (Koen & Sijbom, 2019; Koen & Van Bezouw, 2021). Since prior research shows that engaged proactive coping is mostly used by workers who experience either very low or very high amounts of job insecurity (Jiang et al., 2022), we highlight the importance of timely action to avoid futile or even deteriorating efforts. Or, in Aspinwall and Taylor's (1997) words, workers would benefit from taking steps to avoid or minimize stressful job insecure situations – even when potential threats to their job have not yet been identified. Organizations can help workers with such proactive coping efforts by creating an environment where proactive coping in the form of engagement and adaptive disengagement is possible, easy, and stimulated throughout careers − also when there is no imminent threat of job loss (Shin et al., 2019).

Limitations and Future Research Recommendations

Although our meta-analytic review creates valuable insights, it is not without limitations. A first limitation is that, while we meta-analytically examined the relationship between proactive coping and experienced job insecurity, we did not include the theoretical mechanism through which proactive coping affects job insecurity in our examination. That is, this review built upon Aspinwall and Taylor's (1997) theoretical proposition that proactive coping asserts its influence by changing the potential situation or one's position in it (see Figure 3.1), but we did not empirically test this premise. To enable such meta-analytic mediation analyses, more primary research testing this mediation is required. This is because meta-analytic mediation results are more reliable when based on primary studies examining the full mediation in question (Vo & Vansteelandt, 2022) – rather than when based on a combination of primary studies investigating

parts of the mediation model (i.e., separate studies depicting predictor-mediator, mediator-outcome, and predictor-outcome relationships).

A second limitation is that the meta-analytic results presented in italics (see Tables 3.3 - 3.5) are based on a small number of samples. The moderator analyses based on these samples are therefore underpowered, which can result in false negatives: the data may not show a significant difference between groups, while there actually is one (Cafri et al., 2010). For example, while the current findings may suggest that proactive coping has similar relationships with job insecurity regardless of the job insecurity type, the lack of differences may also be because qualitative and affective job insecurity are still relatively understudied within the proactive coping literature. By retaining the results in italics in our review, we not only provide an image of prior research, but also point out which topics require more research. Given their relatively strong yet understudied relations, such topics include mental engagement (i.e., cognitive restructuring and thoughts relating to adaptive performance) and adaptive mental disengagement (i.e., mindfulness and detachment from work outside work hours). We note, however, that differentiation between behavior and cognition helps to identify future research areas but may not always be a conceptually valid dichotomy for all variables: The subject matter experts who validated the proactive coping framework indicated that some variables can imply both behavior and cognition. In these cases, we categorized the variable according to the content of the measurement items. More research is required to fully understand the interplay of behaviors and cognitions and possible interdependencies.

Third, the meta-analytic results are based on correlational data. While inferences about directionality can be based on the meta-analytic results from longitudinal samples, our review provides no empirical evidence for causation. Building upon proactive coping theory, we propose that proactive coping can influence the (further) development of job insecurity. However, one can also build reviews upon other theoretical frameworks such as social exchange theory (Cropanzano & Mitchell, 2005) and job preservation motivation (Shoss, 2017), and argue that some of the behaviors that we deemed as proactive coping are in fact a reaction to job insecurity (cf. Table 3.1; Jiang & Lavaysse, 2018; Jiang et al., 2022; Sverke et al., 2019). While it may seem paradoxical, the results from these different theoretical viewpoints can complement one another. For example, Jiang et al. (2022) conclude that employees with more job insecurity display higher task performance and more organizational citizen behaviors (OCB) as a job preservation strategy, and

that these behaviors are likely noticed and valued by employees' supervisors. So, while task performance and OCB can be predicted by the amount of experienced job insecurity, they are still efforts meant to minimize the future experience of job insecurity – and can thus function as proactive coping. Considering that job insecurity is becoming more chronic and is virtually always experienced to at least some extent (Wu et al., 2020), it may not be surprising if the relationship between coping and job insecurity goes both ways (e.g., by using "proactive responses" to job insecurity; Lyu et al., 2022; Zhang et al., 2022). To further explore this potential reverse directionality, we advise future researchers to conduct more longitudinal studies with several measurement points, such as experience sampling methods, autoregressive models or diary studies. Additional insight from qualitative research can also help to unpack the complex interaction between workers' behaviors and job insecurity experiences.

Fourth, the measures of the proactive coping variables included in our review generally do not provide insight into worker's intentions behind the coping efforts. Since the purpose of coping efforts determines whether coping is proactive or reactive (Langerak et al., 2022), we excluded measures regarding responses to past stressors or events. To further extend our knowledge on proactive coping, however, it is necessary to construct and validate a scale that includes the future focus inherent to proactive coping. This scale may form part of the solution to the problem that "*activities in advance of a stressful event may go unstudied because the event itself defines the point of departure*" (p. 418, Aspinwall & Taylor). We recommend that this scale consists of sub-scales that depict the categories of the constructed proactive coping framework (see Table 3.1), so that not only effective but also ineffective proactive coping strategies and their impact can be further investigated. Ideally, this proactive coping scale is focused on undefined future stressors (e.g., 'a potential setback' or 'future threats') and can be adjusted to target specific (career) threats.

Conclusion

By constructing a proactive coping framework and conducting meta-analyses on data from over 324 published articles comprising over 300,000 workers, this review synthesizes the existing research on the relationship between proactive coping and job insecurity. The results support the recent notion that the experience of job insecurity is not completely beyond the control of individual workers. Instead, our findings suggest that job insecurity can be influenced through different types of proactive coping efforts. Our results further highlight opportunities for prevention-focused research and interventions, by showing that proactive coping in the form of

engagement (e.g., voice behavior, showing good performance) and adaptive disengagement (e.g., mindfulness, recovery activities) can alleviate the experience of job insecurity, while proactive coping in the form of maladaptive disengagement (e.g., counterproductive work behaviors) can aggravate the experience of job insecurity. Our perspective and results regarding proactive coping open up the narrative on what proactive coping entails and forms an impulse for future research to further uncover when, under which conditions, and in what form proactive coping is effective to decrease feelings of job insecurity. We encourage future research to report non-significant and unexpected findings to further identify the right conditions to affect change and to adopt longitudinal and qualitative research methods to reveal the theoretical mechanisms through which proactive coping and job insecurity may influence each other.

Chapter 4

What Goes Around, Comes Around? Testing a Cyclic Model of Proactive Coping with Job Insecurity among Non-standard Workers

Abstract

Non-standard workers experience lower subjective wellbeing than workers with permanent contracts due to a higher sense of job insecurity. Since these workers generally lack the "safety net" of organizational arrangements and national policies, the current study investigates how self-employed workers may minimize job insecurity and improve subsequent well-being through their own means. Based on proactive coping theory and conservation of resources theory, we propose a cyclic model in which proactive coping and job insecurity continuously influence each other. We expect that prior proactive coping relates to less job insecurity through the accumulation of career resources and that prior job insecurity relates to less proactive coping through psychological strain. We explore whether self-compassion and recovery can break this paralyzing effect of job insecurity. The within-person level results from our 5-wave monthly survey study among 243 self-employed workers support the hypothesis that monthly proactive coping can decrease subsequent job insecurity via career resources, but indicated no relationship between job insecurity and subsequent proactive coping. Additionally, we found a cross-level interaction of self-compassion and job insecurity on psychological strain and a direct relationship between recovery and proactive coping. Our results underline the pivotal role of career resources and recovery in the proactive coping process. While we did not find support for a cyclic relationship between job insecurity and proactive coping in the current study, we encourage future researchers to further investigate the potentially paralyzing effect of job insecurity among precarious non-standard workers to guard against potential loss cycles.

This manuscript is based on: Langerak, J. B., Koen, J., & Van Hooft, E. A. J. (under review). What goes around, comes around? Testing a cyclic model of proactive coping with job insecurity among non-standard workers.

Over the last decades, non-standard work arrangements are replacing the traditional permanent relationships between employees and employers: In the United States and Europe, the share of workers engaged in non-standard employment has risen to a quarter of the workforce (CBS, 2020; Karpman et al., 2022). Research shows that workers in such non-standard employment experience lower subjective wellbeing than workers in permanent contracts due to the experience of job insecurity (Fabrin-Petersen, 2022). Indeed, prior research has associated job insecurity with various harmful consequences, such as decreased physical and psychological health and decreased work performance (for meta-analytic reviews, see: Cheng & Chan, 2008; Jiang et al., 2022; Sverke et al., 2002, 2019). By looking at the role of national characteristics (e.g., employment protection legislation), organizational characteristics (e.g., organizational restructuring), and job characteristics (e.g., permanent contracts), research has identified potential ways to minimize job insecurity (for meta-analytic reviews, see: Jiang & Lavaysse, 2018; Jiang et al., 2021; Keim et al., 2014). Yet, these insights mostly benefit workers within the regulated work environments and workers who fall under national social security legislations. Non-standard workers generally lack the 'safety net' of such organizational arrangements and national policies (Retkowsky et al., 2023; Van de Ven et al., 2023). Therefore, the current study aims to investigate how non-standard workers can manage their job insecurity and subsequent well-being by their own means.

Job insecurity refers to workers' perceived threat to the continuity and stability of their employment (Shoss, 2017). While job insecurity used to be considered an uncontrollable stressor determined by external factors (e.g., reorganizations, economic crises), an increasing amount of longitudinal evidence supports the premise that workers' individual behavior matters for their experience of job insecurity (e.g., El Khawli et al., 2022; Koen & Parker, 2020; Koen & Van Bezouw, 2021). In addition, longitudinal studies indicate that the subjective experience of job insecurity fluctuates within individuals over time (e.g., Klug et al., 2019; Langerak et al., 2022). However, whether individual behaviors can explain these within-person fluctuations has yet to be discovered. As such, the current study investigates the role of proactive coping − individual efforts undertaken in advance to manage, modify, or prevent potential stressors − in the experience of job insecurity among non-standard workers. Specifically, we integrate proactive coping theory (Aspinwall & Taylor, 1997) with conservation of resources theory (Hobfoll, 1989), to develop a

cyclic model of proactive coping with job insecurity and test this model in a 5-wave monthly survey study.

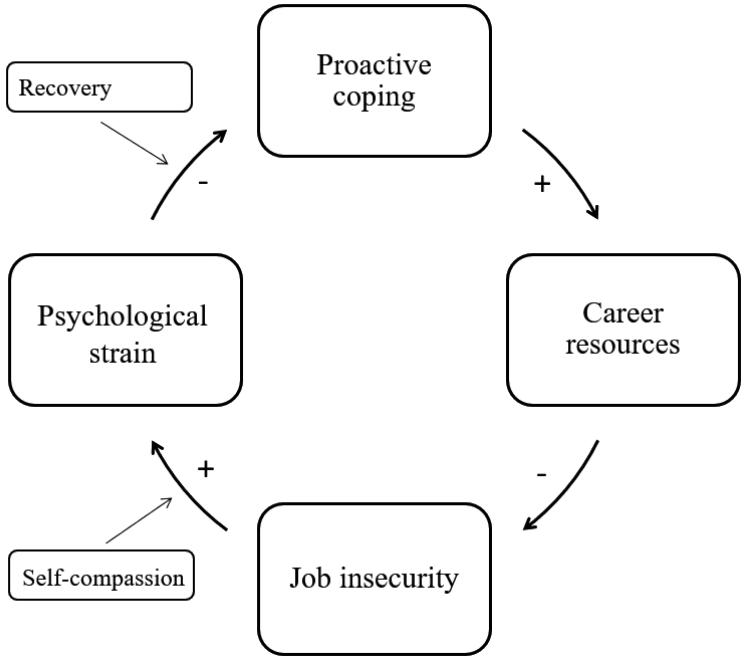
In our cyclic model of proactive coping with job insecurity we propose a reciprocal relationship in which proactive coping and job insecurity continuously influence each other (see Figure 4.1). Based on proactive coping theory, our cyclical model identifies the accumulation of (career) resources as an important mechanism through which prior proactive coping relates to less job insecurity. Revealing the mechanism through which proactive coping can affect change in job insecurity forms an important first step in understanding how we may improve its impact. For example, missing links between proactive coping and job insecurity in prior research may be explained by unsuccessful proactive coping attempts (e.g., networking may not necessarily result in more social resources, which may explain the null effect in Koen & Parker, 2020) or by deficiencies in time (e.g., skill development may take more than weeks to result in more personal resources, which may explain the null effect in Langerak et al., 2022). Based on conservation of resources theory, our model suggests that the experience of job insecurity may trigger a loss cycle in which psychological strain deteriorates workers ability to later engage in proactive coping. To prevent such loss cycles, we explore whether workers can protect themselves against the impact of job insecurity by being self-compassionate (Neff & Vonk, 2009) and whether workers can recover from subsequent psychological strain through recovery experiences (Sonnentag & Fritz, 2007).

By developing a cyclic model of proactive coping with job insecurity and testing the model among non-standard workers in a 5-wave monthly survey study, we make three contributions. First, we extend Jiang and colleagues' (2021) meta-analytic findings that personal and organizational resources play an important role in reducing job insecurity (an even more important role than removing demands), by contributing knowledge on how such resources can be developed. In doing so, we extend prior research that showed relationships between proactive coping and job insecurity (e.g., Koen & Parker, 2020; Koen & Van Bezouw, 2021), by delving into the important question *why* this relationship exists (Hayes, 2018). Second, we provide insight into the experience of job insecurity among non-standard workers. Despite the omnipresence of job insecurity in this group, non-standard workers are generally excluded from prior job insecurity research because the different nature of their work situation does not fit with the traditional assumptions regarding what a job entails (e.g., one employer, guaranteed income, sick leave), which makes off-the-shelf job

insecurity measures unapplicable (Bazzoli & Probst, 2022a). Third, we provide insight into how non-standard workers may sustain proactive coping over time − which may be a prerequisite for proactive coping to be successful (Giunchi et al., 2019). We do this by examining whether loss cycles, in which job insecurity and subsequent psychological strain deteriorates workers' ability to engage in later proactive coping, can be broken through self-compassion and recovery. In sum, the cyclic model of proactive coping with job insecurity aims to reveal how non-standard workers can use and sustain proactive coping, in order to minimize their experience of job insecurity by their own means.

Figure 4.1

Hypothesized Cyclic Model of Proactive Coping with Job Insecurity



Note. "+" denotes a hypothesized positive relationship between variables, "-" denotes a hypothesized negative relationship between variables.

Job insecurity as a Within-person Process

Job insecurity reflects a state in which workers feel threatened regarding the continuity and stability of their employment. As a state, the experience of job insecurity likely varies within individuals across time. Although the vast majority of empirical studies have examined job insecurity as an between-individual difference, recent studies provide empirical evidence for the fluctuation of job insecurity within individuals. For example, Langerak and colleagues (2022; see Chapter 2) found negative within-person relations between current and next week's job insecurity levels, suggesting that job insecurity vacillates. Moreover, Kinnunen et al. (2012) and Klug et al. (2019) found that job insecurity growth trajectories over time can differ depending on work characteristics. For example, workers with permanent contracts and public sector employees experience more stable low levels of job insecurity. This underlines the importance of further unpacking dynamic job insecurity patterns, especially in situations in which permanent contracts are not possible, such as among non-standard workers.

A Cyclic Model of Proactive Coping with Job Insecurity

To uncover how non-standard workers can best manage their job insecurity, we develop and test a cyclic model of proactive coping with job insecurity (see Figure 4.1) that integrates insights from proactive coping theory (Aspinwall & Taylor, 1997) and conservation of resources theory (Hobfoll, 1989). In its core, this cyclic model assumes a reciprocal relationship in which proactive coping and job insecurity continuously influence each other. Below we first explain the path from proactive coping to job insecurity and then the path from job insecurity to proactive coping.

How Proactive Coping Affects Job Insecurity

Based upon proactive coping theory (Aspinwall & Taylor, 1997), we expect a negative relationship between prior proactive coping and current job insecurity. Proactive coping theory posits that individuals can manage, modify, or prevent potential stressors by taking actions before stressors have (fully) developed. Such actions have been termed proactive coping (Aspinwall & Taylor, 1997). The core idea is that proactive coping generates resources that will enable individuals to either prevent or mitigate stressors or better prepare for stressors – which will consequently minimize their impact. In the context of job insecurity, workers can for example build connections in multiple organizations so they feel less threatened in their employment

prospects if a project or contract with the current organization ends. As such, proactive coping is expected to generate career resources, which in turn minimizes the magnitude of later job insecurity. In prior research, it has been assumed yet not tested whether it is indeed the accumulation of career resources that explains relationships between proactive coping and job insecurity (e.g., El Khawli et al., 2022; Langerak et al., 2022). The current research investigates the pivotal role of career resources by testing the following hypotheses:

> **Hypothesis 1:** The amount of proactive coping during the past month relates negatively to the current experience of job insecurity through the current amount of career resources.

How Job Insecurity Affects Proactive Coping

Based on the integration of proactive coping theory and conservation of resources theory, we expect a negative relationship between the current level of job insecurity and later proactive coping. Conservation of resources theory (Hobfoll, 1989) posits that individuals strive to acquire and protect resources to maintain their wellbeing. Resource loss has a relatively large impact on wellbeing compared to resource gain, because resource loss is expected to initiate a chain reaction: After resources are lost, it becomes harder to cope with new stressors, which results in additional loss of resources. While conservation of resources theory specifies loss cycles for reactive coping (response to a stressor), we propose a similar mechanism for proactive coping (anticipation of a stressor). That is, both reactive and proactive coping require the investment of resources (proactive coping theory; Aspinwall & Taylor, 1997) and as such, a loss of resources will not only impede reactive coping but also proactive coping. For example, in the context of proactive coping, workers can work day and night to impress a client because they feel insecure about maintaining employment after their current assignment. However, as a result, they end up depleted of time and energy to be proactive and start looking for new assignments elsewhere. To measure this drained, resource-depleted, state we assess the amount of psychological strain workers experience. As such, we test the following hypotheses:

> **Hypothesis 2:** The experience of current job insecurity relates negatively to proactive coping during the month thereafter through the current amount of psychological strain.

Preventing Loss Spirals: Self-compassion and Recovery

In order to minimize job insecurity, an important question is: How can we prevent the expected loss cycle in which the experience of job insecurity is expected to increase over time due to an inability to engage in proactive coping? To prevent or mitigate loss cycles, conservation of resources theory (Hobfoll, 2018) asserts that individuals must try to protect themselves against the impact of resource loss and try to recover from resource loss. Therefore, we explore two factors that may help protect against resource loss and stimulate recovery.

First, we explore whether non-standard workers can protect themselves against further resource loss initiated by job insecurity, by being compassionate toward oneself. Self-compassion centers around three main components: self-kindness, a sense of common humanity, and mindfulness when considering personal weaknesses or hardships (Neff & Vonk, 2009). Prior research on self-compassion is promising regarding its protective potential: It can mitigate the later experience of exhaustion (Schabram & Heng, 2022) and can reduce cognitive resource depletion (Jennings et al., 2023). In addition, self-compassion has repeatedly been associated with improved mental and physical health (for a review, see Dodson & Heng, 2022). In our cyclic model of proactive coping with job insecurity, self-compassion may function as an indirect investment of personal resources: it is a personal resource that can be applied to offset the loss of other resources (Hobfoll et al., 2018). So, theoretically, self-compassion may compensate for the loss of resources through job insecurity and prevent the drained, resource-depleted, state we measure with psychological strain. To assess whether self-compassion can subsequently weaken or break the expected loss cycle, we explore a potential cross-level interaction with the following question:

> **Exploratory Question 1:** Is the positive relationship between the current experience of job insecurity and current amount of psychological strain weaker for individuals high in self-compassion?

Second, we explore whether non-standard workers can recover from psychological strain through recovery experiences. Conservation of resources theory (Hobfoll, 1989) asserts that if individuals can recover from resource loss, loss cycles can be mitigated or prevented. In our study, we focus on Sonnentag and colleagues' (2022) concept of recovery: A restoration process in which a person's level of strain is being reversed to the pre-stressor level of strain. As such, we explore whether recovery experiences may help non-standard workers recover from the psychological

strain they experience. Theoretically, recovery may function as a direct replacement of personal resources (Hobfoll et al., 2018): The lost vitality is being replenished by new vitality. As such, recovery may weaken the negative relationship between psychological strain and proactive coping. In line with this idea, prior research shows that daily recovery is indeed related to more proactive behavior in consequent days (Ouyang, 2019; Sonnentag, 2003). However, it has yet to be discovered whether recovery can act as a buffer against the inhibitory role of psychological strain for proactive coping. Therefore, we explore the following question:

> **Exploratory Question 2:** Is the negative relationship between the last month's experience of psychological strain and the amount of proactive coping during that month, weaker when individuals have more recovery experiences during that month?

Methods

Study Context

To investigate the cyclic model of proactive coping with job insecurity among non-standard workers, we conducted an online survey study among Dutch self-employed during the COVID-19 pandemic. In the Netherlands, 13% of all workers and 28% of non-standard workers are self-employed (Flexbarometer, 2023). Job insecurity is an important issue for self-employed workers as they lack the 'safety net' of organizational arrangements and national policies, which makes them more vulnerable for unexpected (financial) setbacks. The COVID-19 pandemic and corresponding restrictions presented such an unexpected setback, which brought insecurity about the future of work among self-employed. Among other things, it was unclear when or in what form self-employed were allowed to perform their work and whether they would get by financially. Through investigating proactive coping with job insecurity in this particularly insecure situation, our research can shed light on the question whether non-standard workers are able to influence job insecurity by their own means despite challenging contexts.

Participants and Procedure

We collected[6] data from self-employed in the Netherlands during five weekends, with one month intervals, when COVID-19 restrictions were present. The first survey was administered in

[6] Before data collection, the study had been approved by the Ethics Review Board of the authors' university. Participants were informed about the anonymity and confidentiality of the data and the voluntary nature of their participation before starting the first survey and provided their informed consent.

December 2021 and the last survey in May 2022. We recruited participants via social media and social media advertisements. To be eligible for the study, workers needed to: 1) be between 16 and 65 years of age, 2) not be a full-time student, and 3) spend at least 16 hours per week on their self-employed work activities. We chose these inclusion criteria to select workers who were financially dependent on their work, since those who fell outside these criteria were more likely to earn income through other means (e.g., salaried job, student loans, retirement funds). As a token of appreciation, we sent participants recommendations about coping with job insecurity after study completion, a €5 gift voucher for completing the first survey, and a €10 gift voucher for completing all five surveys.

In total, 260 participants started the first survey. Of these, 17 respondents did not meet the inclusion criteria, resulting in 243 remaining responses. The mean age was 45.2 years (SD = 11.3) and 64.6% was female. Regarding highest level of education, 3.7% finished high school, 51.9% finished vocational education, 10% had a bachelor's degree, 32.8% had a master's degree, 1.7% had a doctorate degree, and 0.8% did not indicate their education level. On average, workers had 22.9 years (SD = 10.9) of overall work experience and 9.2 years (SD = 7.5) work experience as a self-employed. Participants worked in a wide variety of sectors, mostly "culture, sports, and events" (24.1%), "education and research" (12.0%) "communication and marketing" (11.6%), and "care and welfare" (11.6%). Other examples of reported sectors are human resource management, information technology, government, financial services, and some reported being active in multiple sectors. Sample sizes for the subsequent monthly surveys were: N_{T1} = 243; N_{T2} = 217 (89.3%); N_{T3} = 197 (81.1%); N_{T4} = 182 (74.9%); N_{T5} = 176 (72.4%). The final dataset consisted of 988 monthly surveys.

Measures

All study variables[7] were measured monthly (i.e., T1-T5) except for trait self-compassion and demographics, which were only measured at T1. See Appendix 4A for the measure items.

Baseline Variables

Trait self-compassion was measured with the 26-item scale from Neff and Vonk (2009). In the current study, the Cronbach's alpha was .90.

[7] The T1 questionnaire also included measures for neuroticism, proactive personality, employability, and experienced threat from COVID-19, but these variables are not part of the present study.

Weekly Variables

Job insecurity was measured with the 13-item job insecurity scale from Langerak et al. (2022), adapted in such a way that statements regarded the prior month instead of the prior week. While this scale was developed to measure all components of the job insecurity experience for a broad range of workers, including self-employed, we slightly altered some questions to better fit the context of self-employed workers by replacing the expected continuance of work by the expected continuance of demand for a product or service. For example, we changed "I feel insecure about the future existence of my work" to "I feel insecure about whether the demand for my product or service will continue to exist.". The Cronbach's alpha's for job insecurity ranged between .91 and .92.

Proactive coping was measured with fifteen items that covered five proactive coping activities: career planning, skill development, career consultation, networking, and scenario thinking. The measures from the first four activities originate from Strauss et al. (2012) and the scenario thinking measure originates from Bindl et al. (2012). Where necessary, we altered the wording to fit the work context of self-employed. For the total proactive coping activities scale, the Cronbach's alpha's ranged between .93 and .94.

Career resources were measured with fifteen self-developed items that targeted each item of the proactive coping activities scale. For example, the item "How often have you in the past month… made your network aware of your ambitions and career goals?" in the proactive coping activities scale, resulted in the item "My network knows about my ambitions and career goals" in the resources scale. Consequently, the scale measured five career resources: career plan, career skills, career knowledge, social network, and career insight. For the total resources scale, the Cronbach's alpha's ranged between .90 and .92.

Recovery was measured with sixteen items from Sonnentag and Fritz (2007) measuring recovery experiences such as detachment, relaxation, mastery, and control. In the current study, the Cronbach's alpha's ranged between .87 and .90.

Psychological strain was measured with eight items from Kalliath et al. (2004). In the current study, Cronbach's alpha's ranged between .89 and .93.

Analytic Strategy

The data had a two-level structure with repeated monthly measures at the within-person level (i.e., Level 1; $N = 988$), nested within individuals at the between-person level (i.e., Level 2;

$N = 241$). To assess the presence of variance over time we first calculated the proportions of within person variance for all weekly variables. Next, we tested the hypotheses with multilevel path analysis in Mplus 8.8. Lastly, to address the exploratory questions, we complemented the model with moderator variables. We person-mean centered predictor variables (i.e., proactive coping T-2, career resources T-1, psychological strain T-1) for the within-level analyses and grand-mean centered self-compassion for the cross-level moderation analysis (cf. Binnewies et al., 2010).

Results

Table 4.1 displays descriptive statistics, proportions of within person variance, and within-person and between-person correlations of the study variables. We found that 17 percent of the variance in job insecurity resides at the within-person level. It is important to explain this variance in order to discern means through which workers can influence their job insecurity experience. Yet, it also shows that a substantial proportion of variance in job insecurity among self-employed workers resides at the between-person level. For the purpose of this study, we focus on how the within-level factors of the proactive coping cycle (with within-person variances ranging between 20% and 36%) may explain within level-variance of job insecurity.

Main Findings

The results of the multi-level path analyses testing the cyclic model of proactive coping with job insecurity are reported in Figure 4.2. Because we were interested in changes over time, we controlled for prior amounts of proactive coping, career resources, job insecurity and strain for the within-level analyses. A summary of most important findings can be found in Figure 4.3.

Hypotheses Testing

The results from the multi-level path analyses indicate a positive relationship between the amount of proactive coping during the past month and the current amount of career resources of self-employed workers ($B = 0.11$, 95% CI: [0.05; 0.17], $p < .01$) and a negative relationship between the current amount of career resources and the current experience of job insecurity ($B = -0.31$, 95% CI: [-0.44; -0.18], $p < .01$). Our results support Hypothesis 1, as the indirect relationship between proactive coping and job insecurity via career resources was significantly negative ($B = -0.03$, 95% CI: [-0.05, -0.01], $p < .01$). We found no direct relationship between proactive coping and job insecurity ($B = -0.01$, 95% CI: [-0.08; 0.07], $p = .89$), which implies a full mediation by workers' amount of career resources.

Table 4.1

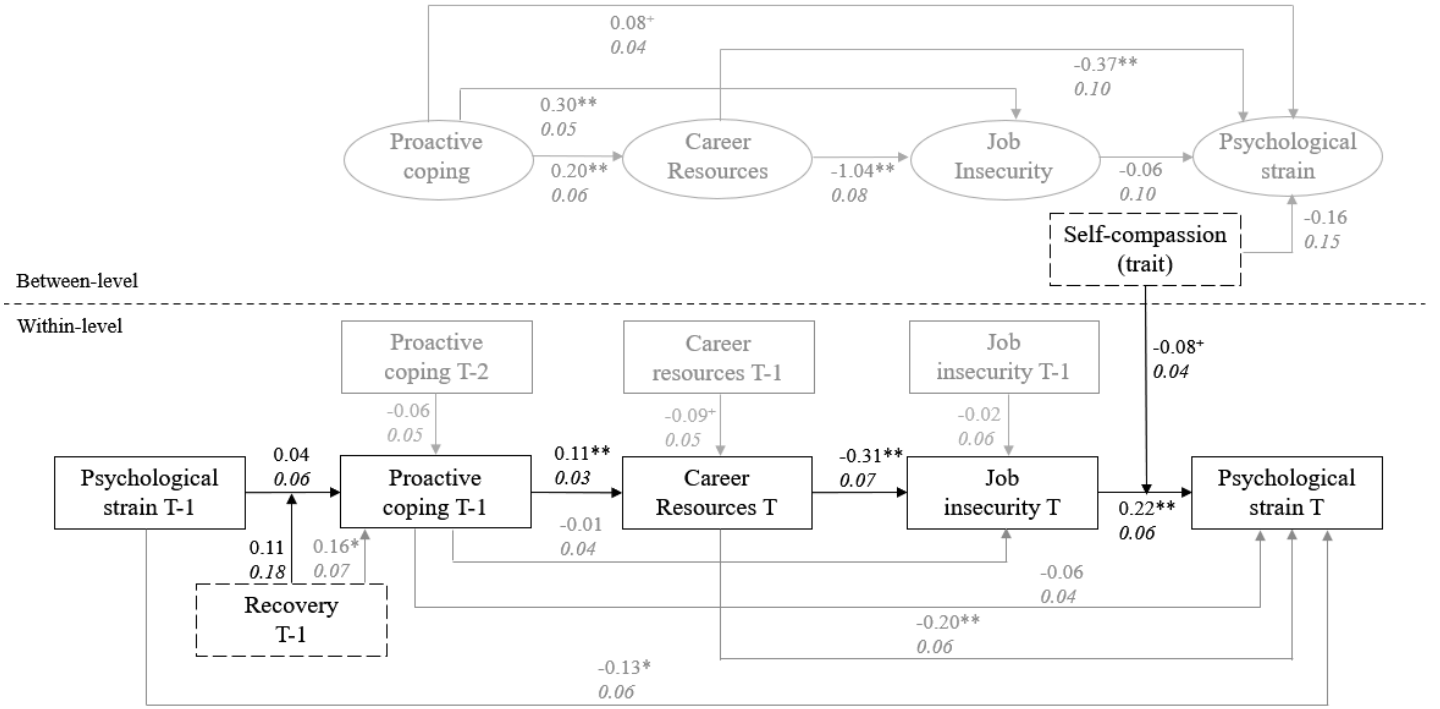
Means, Standard Deviations, Proportions of Within-person Variance, and Correlations for the Study Variables

	M	SD	% wpv	1	2	3	4	5	6	7	8	9
1. Age	45.23	11.25	-	-	-	-	-	-	-	-	-	-
2. Gender[a]	1.66	0.48	-	-0.05	-	-	-	-	-	-	-	-
3. Education[b]	2.77	1.00	-	0.01	0.09	-	-	-	-	-	-	-
4. Proactive coping	3.80	1.16	0.31	-0.25**	-0.09	0.14*	-	0.29**	0.02**	-0.05**	-	0.14**
5. Career resources	5.27	0.88	0.20	0.23**	-0.17**	0.05	0.31**	-	-0.58**	-0.43**	-	0.28**
6. Job insecurity	3.28	1.14	0.17	-0.23**	0.14*	0.04	0.04	-0.58**	-	0.56**	-	-0.36**
7. Psychological strain	2.07	0.85	0.23	-0.38**	0.12	-0.03	-0.01	-0.49**	0.51**	-	-	-0.41**
8. Self-compassion	4.66	0.78	n/a	0.26**	-0.06	0.08	0.07	0.36**	-0.37**	-0.63**	-	-
9. Recovery experiences	4.59	0.84	0.34	0.21**	-0.14*	0.08	0.11	0.33**	-0.30**	-0.43**	0.42**	-

Note: Correlations below the diagonal represent between-person correlations at T1 (N = 235-241) and correlations above the diagonal are within-person correlations (N = 988). All measures with the exception of age, gender, and education, were measured on 7-point Likert scales. Wpv = within-person variance. [a] 1 = Male, 2 = Female. [b] 1 = Primary education or high school, 2 = Vocational education, 3 = Bachelor education, 4 = Master education, 5 = PhD degree.

Figure 4.2

Results of the Multilevel Path Analysis



Note: Hypothesized relationships are depicted in black, exploratory variables are indented, other relationships are depicted in grey. SE's of estimates are noted in italics. $^{+}p < 0.10$, * $p < .05$, ** $p < 0.01$ (two-tailed). $N_{between} = 241$, $N_{Within} = 988$

Next, the results show a positive relationship between the current experience of job insecurity and the current experience of psychological strain (B = 0.22, 95% CI: [0.10; 0.34], p < .01). Additionally, next to the relation of job insecurity, we found that the current amount of career resources (B = -0.20, 95% CI: [-0.33; -0.06], p < .01) and psychological strain experienced in the prior month (B = -0.13, 95% CI: [-0.24; -0.01], p < .01) are negatively related to the current experience of psychological strain. The results further show that the expected negative relationship between the current experience of psychological strain and proactive coping during the upcoming month was absent (B = 0.04, 95% CI: [-0.08; -0.16], p = .54). As such, the results do not support Hypothesis 2, which stated an indirect relationship between job insecurity and proactive coping via psychological strain. Concludingly, our results do not support the expected cycle depicted in Figure 4.1 among the self-employed workers in our sample.

Exploratory Results

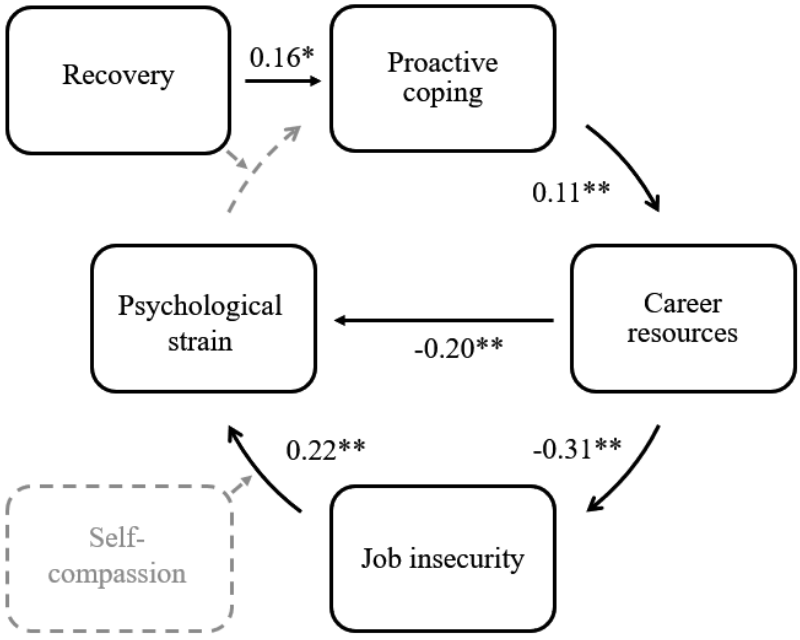
To explore how workers can break the hypothesized cycle of Figure 4.1, we investigated the moderating roles of self-compassion and recovery. We found a cross-level interaction between self-compassion and job insecurity on psychological strain (B = -0.08, 90% CI: [-0.15; -0.01], p = .05; see Figure 4.4). The positive relationship between job insecurity and psychological strain tended to be weaker for workers high in self-compassion (i.e., 1*SD* above the mean; B = 0.16, 95% CI: [0.03, 0.28], p = .02]) in comparison to workers low in self-compassion (i.e., 1*SD* below the mean; B = 0.28, 95% CI: [0.14, 0.42], p < 0.01], p = < .01). Recovery did not moderate the relationship between psychological strain and proactive coping (B = 0.11, 95% CI: [-0.24; 0.46], p = .53). However, we did find a positive direct relationship between recovery and proactive coping (B = 0.16, 95% CI: [0.02; 0.31], p = .03), indicating that spending time on recovery helps self-employed workers to engage in proactive coping.

Discussion

To discover how non-standard workers can manage their job insecurity and subsequent well-being by their own means, the present study developed and tested a cyclic model of proactive coping with job insecurity based on proactive coping theory (Aspinwall & Taylor, 1997) and conservation of resources theory (Hobfoll, 1989). We tested this model in a 5-wave monthly survey study among self-employed workers during the COVID-19 pandemic. We hypothesized a reciprocal relationship in which monthly proactive coping could decrease future job insecurity

Figure 4.3

Identified Model for Proactive Coping with Job Insecurity

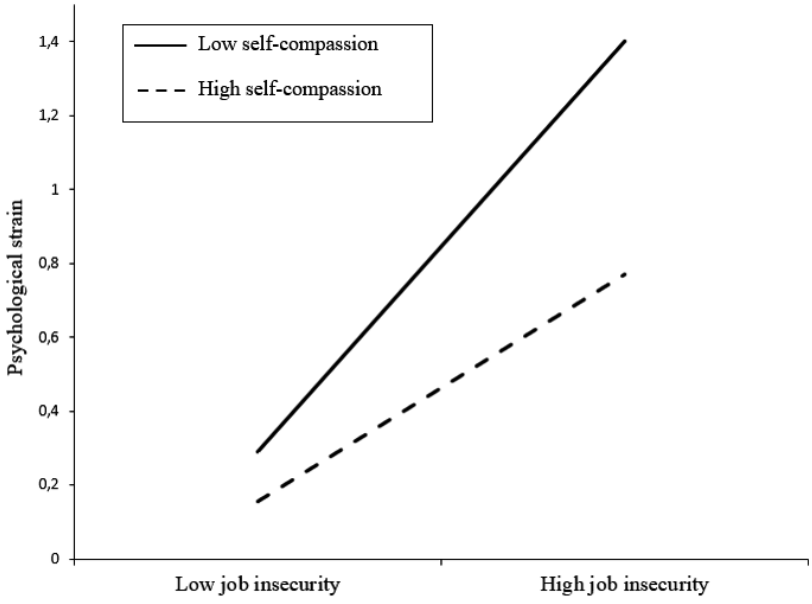


Note. $N = 739$ observations (within clusters of 214 persons). Black arrows indicate found relationships, grey indented arrows indicate relationships that need further investigation.
* $p < .05$, ** $p < 0.01$ (two-tailed).

through the accumulation of career resources, while, in turn, the experience of job insecurity could decrease workers' ability to engage in proactive coping during the month thereafter through increases in psychological strain. To explore how this cycle can be broken, we investigated the moderating roles of self-compassion (Neff & Vonk, 2009) and recovery (Sonnentag & Fritz, 2007). The results from the multi-level path analyses support our cyclical model in that prior proactive coping was negatively related to current job insecurity via the accumulation of career resources. However, no support was found for the predicted negative relationship between current job insecurity and subsequent proactive coping. Additionally, we found a cross-level interaction of self-compassion and job insecurity on psychological strain and a direct relationship between recovery and proactive coping. Figure 4.3 provides an overview of the main findings and the relationships that are in need of further investigation.

Figure 4.4

Cross-level Interaction at the 90% Confidence Level Between Self-compassion and Job Insecurity on Psychological Strain



Note. N = 739 observations (within clusters of 214 persons).

Theoretical Implications

Our results have four main theoretical implications. First, our findings uncover the within-person process of how proactive coping may relate to decreased job insecurity through the pivotal role of accumulation of career resources. Not only do the results support the hypothesis that career resources mediate the relationship between proactive coping and subsequent job insecurity, they also indicate that career resources directly relate to subsequent amounts of psychological strain. This is in line with proactive coping theory, which states that resources can both mitigate potential stressors themselves and the impact of those potential stressors (Aspinwall & Taylor, 1997).

Second, our results inform us about the possible time path of such resource accumulation. Whereas Langerak and colleagues (2022) did not find a relationship between proactive coping and later job insecurity within a week, both the current research and the research from El Khawli and

colleagues (2022) indicate that proactive coping can mitigate later job insecurity over the course of a month. This echoes the idea that proactive coping creates positive outcomes only in the (relatively) long term, since proactive coping may first consume resources before it results in a gain of new resources (Cangiano et al., 2021; Giunchi et al., 2019; Stiglbauer & Batinic, 2015).

Third, our findings provide preliminary insight into the relationship between recovery and proactive coping. That is, we found that in months where self-employed workers had more recovery experiences (e.g., spending time not thinking about work or feeling in control of situations outside of work; Sonnentag & Fritz, 2007), they also engaged in more proactive coping. However, considering the relatively scarce knowledge of the relation between recovery and coping (Sawhney et al., 2018), these results may imply multiple things. A first interpretation is that recovery can, albeit not as a moderator, indeed function as a direct replacement of lost personal resources as we hypothesized (Hobfoll et al., 2018). As such, recovery may replenish resources and subsequently foster workers' ability to engage proactive coping. However, since our results showed that psychological strain did not thwart the amount of proactive coping, recovery may not replace vitality as we expected, but other valuable resources that have yet to be investigated by future researchers (e.g., career optimism; Eva et al., 2020). It is also conceivable that recovery can function as an indirect investment: from this perspective, recovery would not replace lost resources, but may help to compensate for the loss of other resources.

A second possibility, as hypothesized by Sonnentag and Fritz (2007), can be that proactive coping − as a coping type that is aimed at solving (potential) problems − may result in more recovery, as our model included recovery data with proactive coping data from the same time wave (see Figure 4.2). For example, because it is easier to detach and relax after a problem has been solved. Thirdly, it may be that both proactive coping and recovery have a common predictor. For example, both may be predicted by the amount of work pressure or home demands. However, because recovery and proactive coping show a positive relationship at the within-person level while controlling for prior proactive coping, but do not show a relationship at the between-person level (see Table 4.1), we deem the first proposition most likely: Recovery can stimulate proactive coping through replacing personal resources or through offsetting the impact of resource loss. More longitudinal research is required to further uncover the relationships between recovery, resources, and proactive coping.

A fourth implication of our findings points towards the situational dependency of loss cycles and calls for more research into the potentially paralyzing effect of psychological strain among workers low in resources. Following conservation of resources theory, we expected that job insecurity would indirectly obstruct workers' ability to engage in proactive coping because of personal resource depletion, which we approximated with a measure of psychological strain. However, while job insecurity indeed heightened psychological strain, this psychological strain was unrelated to the amount of subsequent proactive coping. We see two viable explanations. First, our sample of self-employed workers may have routinized proactive behavior because of the nature of their work. Routinization occurs through the repetition of behaviors and makes behaviors go more automatically and less consuming of cognitive resources (Ohly et al., 2006). Self-employed generally need to be proactive for the acquisition and execution of work, which may have created proactive habits. As such, they may require fewer resources to engage in proactivity and are thus less inhibited by personal resource depletion. Second, since our sample possessed a relatively high amount of career resources (M = 5.27) and low amount of psychological strain (M = 2.07*)*, they may have been better prepared to offset resource loss (Hobfoll et al., 2018). Indeed, prior research confirms conservation of resources theory's assertion that workers who possess more resources are less vulnerable to resource loss in the form of job insecurity (e.g., De Cuyper et al., 2012; Langerak et al., 2022). As such, while we did not find a relationship between psychological strain and proactive coping in the current study, we cannot rule out the existence of such loss cycles for workers who have not routinized proactive behavior or possess fewer resources.

Limitations and Future Research Directions

Our study has some limitations that should be taken into account. First, while our study sample involves self-employed workers with varying education levels and from various sectors and ages, the relatively high amount of career resources may raise questions about generalizability of the findings to other types of non-standard employees. Apparently, our sample had a fairly good idea of their career prospects, development opportunities, and how to engage their network (M = 5.27). Non-standard work, in contrast, is often associated with precarity: possessing low employability combined with high financial difficulties (Urbanaviciute et al., 2020). However, in the Netherlands, there are at least seven types of non-standard work arrangements (e.g., payrolling, 0-hour contracts, secondments, etc.) and none of these are inherently indicative of low employability combined with high financial difficulties. Whether workers experience precarity

depends on more than the work arrangement alone (e.g., debts, home situation, etc.). Therefore, we do not expect to find different results for self-employed workers than for other non-standard workers. However, we do expect different results for non-standard workers with relatively low career resources, as this may initiate the hypothesized loss cycle (Hobfoll et al., 2018). As such, repeated-measures research among precarious workers can reveal whether this is indeed the case and provide insight into how such loss cycles may be broken.

Second, our results could not provide clear evidence regarding the role of self-compassion in the relationship between job insecurity and psychological strain, as it did not show a significant cross-level moderation effect at the 95% confidence level. However, if self-compassion does indeed mitigate the positive relationship between job insecurity and psychological strain, this may provide a new research direction that can promote well-being among workers, since adopting a self-compassionate mindset can be trained (e.g., Kreemers et al., 2018; Kreemers et al., 2020). Our expectation remains that self-compassion may function as an indirect investment of personal resources (Hobfoll et al., 2018), which implies that self-compassion may compensate for resource loss caused by job insecurity. Next to self-compassion, we deem it likely that other trainable constructs, such as psychological capital, can function as an indirect investment of resources (Darvishmotevalia & Ali, 2020). Therefore, we encourage future researchers to further investigate with longitudinal designs if and how self-compassion and other trainable constructs can be applied to soften the job insecurity experience.

Third, while our results show that non-standard workers can use proactive coping to increase their career resources and consequently decrease job insecurity, we ask readers to stay mindful of contextual factors and not place full responsibility of realizing job security at the level of individual. Despite the positive news that workers could still assert influence on their career experience during the extreme external influence of the pandemic, various studies point towards changes in the context that may be required to further minimize job insecurity (Akkermans et al., 2018; Forrier et al., 2018). Relatedly, we concur with Bazzoli and Probst (2022b) in that we as a discipline should take caution to not reduce job insecurity to an entirely individual cognitive process and ignore power relations and structures that create the detrimental conditions job insecurity generally stems from.

Practical Implications

Our research provides valuable insight into how non-standard workers can manage their experience of job insecurity. That is, our results show that career resources (e.g., having a career plan, having a network that is aware of your ambitions) help to decrease job insecurity and that non-standard workers are able to build these resources through engagement in proactive coping. Since initiating proactive coping costs personal resources (e.g., energy, mental capacity), prolonged proactive coping can be stimulated by making it a habit (routinization makes coping less resource consuming; Ohly et al., 2006) or by creating enough space to recover (recovery regenerates resources; Sonnentag et al., 2022). We recommend some proactive coping for prolonged periods of time, rather than sudden increases in proactive coping when faced with stressful events, because increases in proactive coping relate to increased burnout symptoms in the form of exhaustion (Zacher et al., 2019), while the career resources created with proactive coping may take months, rather than weeks, of proactive coping to establish themselves. While non-standard workers already high in career resources appear to be able to initiate and sustain proactive coping by their own means, we suspect that more precarious workers may require additional resources provided by employers or public organizations to enable proactivity.

Conclusion

Our study showed that monthly proactive coping can minimize later job insecurity among non-standard workers through the accumulation of career resources, and signals that recovery may stimulate this process. We did not find the expected reversed relationship between current job insecurity and later proactive coping, but encourage researchers to further unpack this relationship among precarious workers to guard against potential loss cycles.

Appendix 4A

Measure items

Items of the Proactive Coping Measure (Strauss et al., 2012; Bindl et al., 2012)

Item Please indicate below, how often have you **in the past month**…	Coping type
1. … been planning what you want to do in the next few years of your career?	Career planning
2. … been thinking ahead to the next few years to plan what you want to do for your career?	Career planning
3. … engaged in career path planning?	Career planning
4. … thought about different scenarios for your career?	Scenario thinking
5. … viewed your work situation from different angles?	Scenario thinking
6. … gone through different scenarios in your head about how to best obtain career-related information and feedback?	Scenario thinking
7. … asked your network for advice about additional training or experience you need in order to improve your future work prospects?	Career consultation
8. … spoken to someone in your network about what training or work assignments you need, to develop skills that will help your future work chances?	Career consultation
9. … made your network aware of your work aspirations and goals?	Career consultation
10. … been building and/or maintaining a social network, in order to obtain information about your work and what is expected of you?	Networking
11. … been building and/or maintaining a social network that can help or advise you with your career?	Networking
12. … been building and/or maintaining a network that you can ask for support in your career?	Networking
13. … developed skills which may not be needed so much now, but may be helpful in the future?	Skill development
14. … gained experience in a variety of areas to increase your knowledge and skills?	Skill development
15. … developed knowledge and skills in tasks critical to your future work life?	Skill development

Note: Respondents answered on 7-point scales, ranging from "*(almost) never*" to "*(almost) always*".

Self-developed items of the Resources Measure based on the Proactive Coping Measure

Item	Resource type
1. I have a clear picture of how I want to organize my career the coming years.	Career plan
2. I know what steps I want to take for my career the coming years.	Career plan
3. I have career plan.	Career plan
4. I have a clear picture of possible scenarios in my career.	Career insight
5. I have a complete picture of my current work situation.	Career insight
6. I know the best ways to gain information that helps me with my career.	Career insight
7. I know which skills or work experience I need for a successful career.	Career knowledge
8. I know what training or assignments I can do to improve my career prospects	Career knowledge
9. My network knows about my ambitions and career goals.	Career knowledge
10. I have a network that can provide information about my work and what is asked of me.	Social network
11. I have a network that is able to help or advise me during my career.	Social network
12. I have a network I can ask for support during my career.	Social network
13. I possess skills that may help me in the future.	Career skills
14. I possess knowledge and skills in different areas.	Career skills
15. I possess essential knowledge and skills for work related tasks in the future.	Career skills

Note: Respondents answered on 7-point scales, ranging from "*strongly disagree*" to "*strongly agree*".

Items of the Job Insecurity Measure
Adapted from Langerak et al. (2022)

Item
1. Chances are, the demand for my product or service drops.
2. I am sure my product or service will stay in demand. *
3. I think the demand for my product or service may drop in the near future.
4. I am worried that the demand for my product or service will drop before I would like to.
5. I feel uneasy about a decreased demand for my product or service in the near future.
6. I feel insecure about whether the demand for my product or service will continue to exist.
7. My future career possibilities are favorable. *
8. My income development is promising *
9. I am convinced that this work can provide me with stimulating job content (in the future). *
10. I feel worried about my career development.
11. I worry about my future income.
12. I worry about getting less stimulating work tasks in the future.
13. I feel insecure about what my work will look like in the future.

Note: * signals the item was reverse-coded. Respondents answered on 7-point scales, ranging from "*strongly disagree*" to "*strongly agree*".

Items of the Psychological Strain Measure (Kalliath et al., 2004)

Item
1. I feel capable of making decisions about things. *
2. I enjoy my normal day-to-day activities. *
3. I am able to face up to problems. *
4. All things considered, I feel reasonably happy. *
5. I feel I cannot overcome my difficulties
6. I feel unhappy and depressed.
7. I lost confidence in myself
8. I think of myself as a worthless person.

Note: * signals the item was reverse-coded. Respondents answered on 7-point scales, ranging from "*strongly disagree*" to "*strongly agree*".

Items of the Self-Compassion Scale (Neff & Vonk, 2009)

Item
1. When something painful happens I tend to blow the incident out of proportion. *
2. When I think about my inadequacies it tends to make me feel more separate and cut off from the rest of the world. *
3. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
4. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
5. I'm tolerant of my own flaws and inadequacies.
6. When I fail at something important to me I become consumed by feelings of inadequacy. *
7. I try to be understanding and patient towards those aspects of my personality I don't like.
8. When something painful happens I try to take a balanced view of the situation.
9. When I'm feeling down I tend to feel like most other people are probably happier than I am.*
10. When something upsets me I get carried away with my feelings. *
11. When I'm going through a very hard time, I give myself the caring and tenderness I need.
12. I try to see my failings as part of the human condition.
13. I'm kind to myself when I'm experiencing suffering.
14. When something upsets me I try to keep my emotions in balance.
15. When I'm really struggling I tend to feel like other people must be having an easier time of it. *
16. When I see aspects of myself that I don't like, I get down on myself. *
17. When I fail at something that's important to me I tend to feel alone in my failure. *
18. When I'm feeling down I tend to obsess and fixate on everything that's wrong. *
19. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
20. When times are really difficult, I tend to be tough on myself. *
21. I'm disapproving and judgmental about my own flaws and inadequacies. *
22. When I'm feeling down I try to approach my feelings with curiosity and openness.
23. I'm intolerant and impatient towards those aspects of my personality I don't like. *
24. When I fail at something important to me I try to keep things in perspective.
25. I try to be loving towards myself when I'm feeling emotional pain.
26. I can be a bit cold-hearted towards myself when I'm experiencing suffering. *

Note: * signals the item was reverse-coded. Respondents answered on 7-point scales, ranging from "*strongly disagree*" to "*strongly agree*".

Items of the Recovery Experience Questionnaire (Sonnentag & Fritz, 2007)

Item
Please indicate below, how often have you **in the past month in your leisure time**...
1. ... not thought about your work or work situation at all?
2. … forgotten about your work or work situation?
3. … distanced yourself from your work or work situation?
4. … experienced a break from the demands of your work or work situation?
5. … kicked back and relaxed?
6. … done relaxing things?
7. … used the time to relax?
8. … taken the time for leisure?
9. … learned new things?
10. … sought out intellectual challenges?
11. … done things that challenged you?
12. … done something to broaden your horizons?
13. … felt like you could decide for yourself what to do?
14. … decided your own schedule?
15. … determined for yourself how you spend your time?
16. … taken care of things the way you wanted them done?

Note: Respondents answered on 7-point scales, ranging from "*(almost) never*" to "*(almost) always*".

Chapter 5

Planning Against Qualitative Job Insecurity: Testing Two Online Interventions

Abstract
Many contemporary workers experience job insecurity, which has negative consequences for their well-being. Because societal, organizational, and technological changes do not always imply potential job loss, especially qualitative job insecurity (i.e., worries about maintaining valued job features) is prevalent among workers. Therefore, we investigate whether proactive coping in the form of career planning can lower workers' qualitative job insecurity. Building upon the ambidexterity literature and career development literature, we develop and test a goal-oriented (exploitation) and option-oriented (exploration) career planning intervention in two online experiments with a control group (N_{S1} = 256, N_{S2} = 212). We test the hypotheses that the exploitation intervention results in less qualitative job insecurity through increased goal awareness, and that the exploration intervention results in less qualitative job insecurity through increased option awareness. We further expect that workers' career path commitment and perceived labor market demand moderate these indirect relationships. The Study 1 findings indicate that both the exploitation intervention and the exploration intervention can lower qualitative job insecurity via increased goal/option awareness respectively, regardless of workers' career path commitment or perceived labor market demand. For exploration, engaging with the intentions formulated during the intervention was a prerequisite for this effect. In Study 2, however, these results were not replicated. We expect that the timing of data collection (i.e., during COVID-19 induced lockdowns vs. during labor market shortage 2.5 years later) may explain these differing findings. We discuss possibilities to further improve career planning interventions, such as developing a hybrid career planning intervention which combines activities aimed at exploitation and exploration.

This chapter is based on: Langerak, J. B., Koen, J., Van Hooft, E. A. J., & Parker, S. K. (manuscript in preparation). Planning against qualitative job insecurity: Testing two online interventions.

The past century has shown a shift in how careers unfold during the lifespan. Whereas careers used to form a linear trajectory in which progression was indicated by upward mobility within the same organization, careers are now often characterized by flexibility, more frequent job transitions, and a search for meaningful work (Hall & Rousseau, 2001; Hall, 2004). As a consequence, contemporary workers more often experience insecurity about their jobs for prolonged periods of time (Benz & Frey, 2008; Wu et al., 2020). In addition, digitalization, globalization, and artificial intelligence have changed the way we work. As such, workers do not only worry about potential job loss (i.e., quantitative job insecurity), but also about the potential of losing valued job features, such as stimulating job content and career opportunities (i.e., qualitative job insecurity; De Witte et al., 2010). Previous research showed that both quantitative job insecurity and qualitative job insecurity is problematic for workers' well-being (Cheng & Chan, 2008; Jiang & Lavaysse, 2018; Langerak et al., 2022b; Sverke et al., 2002, 2019; Vander Elst et al., 2014). However, because qualitative job insecurity is more prevalent than quantitative job insecurity (Urbanaviciute et al., 2021), it is imperative to focus on how workers can lower their experience of qualitative job insecurity while navigating their careers (De Witte, 2005; Lee et al., 2018; Shoss, 2017; Sverke et al., 2002).

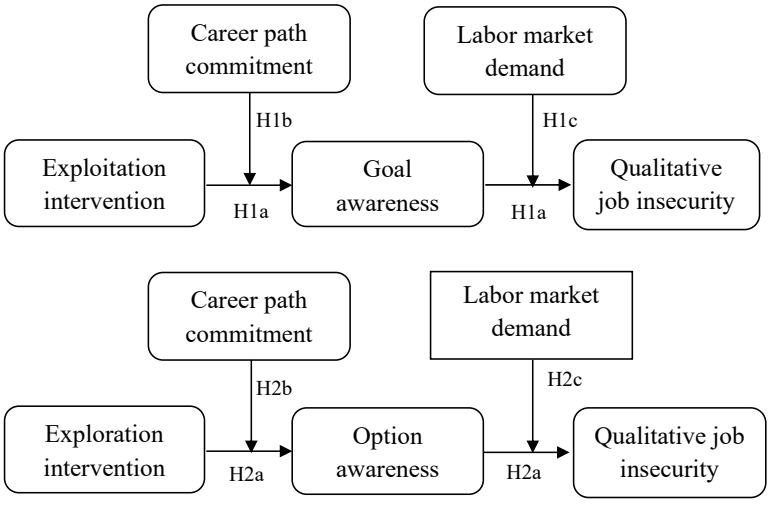
One promising way to minimize qualitative job insecurity among contemporary workers lies in proactive coping: efforts undertaken in advance to manage, modify, or prevent a potential stressor (Aspinwall & Taylor, 1997). Examples of such proactive coping in the context of careers are career self-management (Hirschi & Koen, 2021), job crafting (Tims et al., 2012), and proactive career behavior (Strauss et al., 2012). While prior research has shown that proactive coping can mitigate workers' future experience of quantitative job insecurity (Koen & Parker, 2020), empirical evidence on the relation between proactive coping and qualitative job insecurity is scarce. Yet, because qualitative job insecurity forms a stressor that poses a threat to workers' valued job features, it may just as well be mitigated by proactive coping. For example, one may initiate a conversation with one's supervisor about how to maintain valued job features despite ongoing technological advances. One important caveat, however, is that prior research on proactive coping and job insecurity has remained correlational, prohibiting causal conclusions (Bazzoli & Probst, 2022). This implies that the associations between proactive coping and job insecurity − whether that be quantitative or qualitative − could be in the opposite direction (i.e., the experience of job insecurity may prohibit workers to engage in proactive coping; Koen & van Bezouw, 2022) or that

a third factor may cause both variables (e.g., trait neuroticism may hinder proactivity and foster job insecurity; Langerak et al., 2022a). Our first goal is therefore to advance previous research by examining the causal relationship between proactive coping and qualitative job insecurity.

In addition, our research serves the second goal of developing an evidence-based intervention that can stimulate proactive coping among contemporary workers. To achieve this, we integrate the career development literature (e.g., Bandura; 1991; Ibarra, 2004) with the ambidexterity literature (Almahendra & Ambos, 2015). The ambidexterity literature describes the importance of the extension of existing knowledge (i.e., exploitation) as well as the pursuit of new knowledge (i.e., exploration). Specifically, we develop and test two online proactive coping interventions aimed at career planning against a control group: one goal-oriented career planning intervention based on exploitation and one option-oriented career planning intervention based on exploration. Career planning is a vital part of proactive coping that is often considered a requirement to initiate any other forms of proactivity (Parker et al., 2010). We expect that both interventions can decrease qualitative job insecurity, but through different mechanisms: goal awareness and option awareness, respectively. Figure 5.1 presents an overview of our research models and hypotheses.

Figure 5.1

An Overview of our Research Models and Hypotheses



With its focus, this study makes four contributions. First, by using an experimental control-group design, our study has the potential to unfold the causal relationship between proactive coping and qualitative job insecurity. This strengthens and extends prior studies with insight into how career planning can function as a proactive means against job insecurity. Second, through combining career development literature with ambidexterity literature, we broaden our understanding of the interplay of career planning and worker's career situation. Rather than suggesting that career planning has no or adverse effects on job insecurity during "uncontrollable" contexts (El Khawli, 2022; Langerak, 2022), we investigate the possibility that it is the match between the type of career planning (goal-oriented vs. option-oriented) and the context (career path commitment and labor market demand) that determines the effect of proactive coping on job insecurity. Third, by investigating qualitative rather than quantitative job insecurity, we add to the relative scarcity of literature targeting coping with insecurity about valued job features. Lastly, by testing the two online career planning interventions among workers in a real-life setting, our research can provide easily accessible and dispersible trainings that can be applied in practice to reduce feelings of job insecurity.

Career Planning as Proactive Coping

Proactive coping refers to all efforts undertaken in advance to manage, modify, or prevent a potential stressor (Aspinwall & Taylor, 1997). Proactive coping may increase various resources that can help at a later time during potential setbacks (El Khawli et al., 2022; Parker et al., 2010). Career planning can function as proactive coping through creating cognitive resources such as a plan and a focus on the future. For example, career planning can be used to anticipate technological advances that will affect one's work, providing workers with a plan to maintain their desired job features. We consequently expect that an intervention that stimulates career planning – regardless of which type – has the potential to decrease qualitative job insecurity.

Exploitation and Exploration in Careers

While career planning is considered important for career success (e.g., Koen et al., 2012; Ng et al., 2005; Spurk et al., 2015), actual career trajectories may not always follow the steps delineated in a career plan. In fact, qualitative studies describe how careers often do not unfold according to a plan and how individuals often end up in positions they had not anticipated beforehand (Ibarra, 2004; Koen et al., 2016; Markus & Nurius, 1986). Especially since

contemporary careers have become more flexible and unpredictable, it may be important to not only focus on strengthening skills and knowledge needed to achieve the current career goal, but also to prepare for potentially unexpected events in one's future career. In the ambidexterity literature, coping with such dynamic yet demanding environments is realized through engaging in exploitation activities (i.e., development of existing knowledge, improving existing features, low risk actions) and exploration activities (i.e., pursuit of new knowledge, experimenting, risk-taking) (see Almahendra & Ambos, 2015, for a review). Drawing the parallel with the dynamic and demanding career contexts that contemporary workers find themselves in, workers may benefit from using exploitation and exploration activities to plan their careers in a similar way. As such, we have developed a career planning intervention based on exploitation that draws upon traditional goal-setting theories (e.g., self-regulation theory, Bandura, 1991; goal-setting theory, Locke & Latham, 1990; expectancy theory, Vroom, 1964) and a career planning intervention based on exploration that draws upon possible selves theories (Markus & Nurius, 1986; Ibarra, 2004).

To develop the two career planning interventions and examine their effects on individuals' qualitative job insecurity, we have reviewed the career development literature to determine which processes align with the constructs of exploitation and exploration. We found that career planning generally consists of behaviors that resemble exploitation activities. That is, the majority of the career development literature is grounded in theories that suggest that careers are shaped through a goal-directed process (self-regulation theory, Bandura, 1991; goal-setting theory, Locke & Latham, 1990; expectancy theory, Vroom, 1964). Within this stream of literature, the goals that workers pursue are based mostly on one's current environment and self-image and are relatively low-risk (Jiang et al., 2019). Workers may formulate desired career goals and devise strategies to reach these career goals (goal generation), after which they take corresponding actions to move towards these desired career goals (goal striving). In doing so, workers attempt to decrease discrepancies between the current reality and the desired state.

While less prevalent within the career development literature, there are also studies on career planning behaviors that resemble exploration activities, most notably found in possible selves theories. Within this stream of literature, career planning towards a set goal based on the current environment and self-image is undesirable. It is assumed that workers discover their best career options through back-and-forth learning processes (Ibarra, 2004). In fact, rather than working towards a goal, possible selves theories assert that individuals create various images about

their working selves (identity narratives), including images about the future (future selves). These future selves can be identities one hopes to become, thinks to become, or even fears to become (Markus & Nurius, 1986). The more vivid the images of desired future selves are, the stronger such motivation towards or away from those selves becomes. As such, workers should not thrive to achieve one goal or desired self, but will rather be guided into a certain direction through the existence of multiple possibilities and the process of trying out different roles. Below we explain the exploitation planning intervention and the exploration intervention that we have developed based on the described career planning theories above, and the mechanisms through which we expect that these interventions may affect qualitative job insecurity.

Exploitation Intervention

The exploitation intervention involves making a career plan and formulating actions to realize this plan (based on Koen et al.'s career adaptability intervention, 2012), which is in line with traditional career development literature based on goal-oriented motivation theories (e.g., goal-setting theory, Locke & Latham, 1990). Specifically, participants are asked to formulate one attainable, positive, and specific career goal that they want to achieve in the next ten years. Next, they are presented an example of a career plan following an arrow structure that involves the main goal and six sub-goals, and are instructed to make their own career plan following the arrow structure. After making this career plan, participants are asked to write down six actions they plan to initiate in the next two weeks to work towards their sub-goals. The intervention takes approximately ten to fifteen minutes and participants receive an overview of their answers for future reference. The complete intervention can be found in Appendix 5A.

We expect that this intervention increases workers' awareness of career goals, which consequently lowers their qualitative job insecurity. Having a main goal to work towards provides workers with an image of what their future desired job may look like (i.e., what job features they value and wish to attain) and having sub-goals provides workers a clear path towards realizing this main goal. As such, workers may worry less about potentially losing valued job features such as salary, career opportunities, and stimulating job content because they feel they are actively working on creating their desired work situation (Locke & Latham, 1990).

> **Hypothesis 1a:** Workers in the exploitation intervention group experience less qualitative job insecurity than workers in the control group through increased goal awareness.

Exploration Intervention

The exploration intervention involves writing about multiple future selves and formulating actions to gather information about these future selves, which is in line with possible selves theories (Markus & Nurius, 1986; Ibarra, 2004). Participants receive an explanation of what a future work self is by means of an example, after which they are asked to imagine and write down three possible and positive future work selves of their own (cf. Strauss et al., 2012; yet we ask for multiple selves instead of one). Next, for each possible future work self, participants are instructed to write down what they may need, in terms of materials, skills, or abilities, to become these possible selves. After writing down the three possible future work selves and associated needs, participants are asked to write down six actions they plan to initiate in the next two weeks that would help discover these possible selves. The intervention takes approximately ten to fifteen minutes and participants receive an overview of their answers for future reference. The complete intervention can be found in Appendix 5B.

We expect that this exploration intervention increases workers' awareness of career options, which consequently lowers their qualitative job insecurity. Writing about positive future selves shows workers there are multiple ways through which they can achieve the job features they desire. As such, workers may be less worried about losing such features: If one option becomes threatened, they may choose to pursue another option in line with their values and interests (Ibarra, 2004).

Hypothesis 2a: Workers in the exploration intervention group experience less qualitative job insecurity than workers in the control group through increased option awareness.

Matching Interventions with Individual Careers

While career planning generally consists of behaviors that resemble exploitation, prior research points towards the possibility that this one type of career planning may not be suited for all career situations. That is, exploitation-based career planning is generally related to positive career outcomes such as higher career satisfaction and lower career insecurity (Alisic & Wiese, 2020; Ng et al., 2005), but research conducted during the COVID-19 pandemic showed opposite effects: exploitation-based career planning related to increased, rather than decreased, feelings of job insecurity (Langerak et al., 2022b). Possibly, exploration rather than exploitation is warranted in challenging situations. Put differently, exploring options may be a better choice when goals

become fragile due to obstacles that are encountered in achieving those goals (Lent, 2013). We propose that both exploitation-based career planning and exploration-based career planning can be beneficial for workers, as long as they are used under the right conditions. To further examine what these conditions exactly entail, we investigate two career conditions that may influence the effectiveness of the career planning interventions: career path commitment (Study 1) and perceived labor market demand (Study 2).

Career Path Commitment. Individuals who have found a job that fits their preferences and want to pursue that line of work may particularly benefit from the exploitation intervention, to further strengthen their goal awareness and subsequently lower qualitative job security. Through the outlined exploitation activities (i.e., formulating goals and sub-goals), we expect workers high in career path commitment to become more aware of the career goals they aim to pursue. However, we expect that early career workers or workers with a less outlined career path may not be ready to limit oneself to such goals because they first want to consider their options. The same may be the case for individuals who already have a longer work record, but are unhappy with their current workplace (Ibarra & Otilia, 2016). As such, we expect that workers low in career path commitment will not experience an increase in goal awareness by doing the exploitation intervention. As they are less committed to a career path, they may have trouble identifying what their goals are. Such workers who are less committed to a career path, may particularly benefit from the exploration intervention, to further strengthen their option awareness and subsequently lower qualitative job insecurity. These workers are not limited by pursuing a singular career goal and are thus possibly more open to experiment and consider new possibilities. As such, whereas workers high in career path commitment may have trouble imagining more than one future work self, workers low in career path commitment may more easily imagine these and consequently become more aware of their career opportunities.

> **Hypothesis 1b:** The negative indirect relationship between the exploitation intervention and qualitative job insecurity via goal awareness, is stronger (weaker) for workers high (low) in career path commitment, because of a relatively large (small) increase of goal awareness.

Hypothesis 2b: The negative indirect relationship between exploration intervention and qualitative job insecurity via option awareness, is stronger (weaker) for workers low (high) in career path commitment, because of a relatively large (small) increase of option awareness.

Perceived Labor Market Demand. We expect that the increased goal awareness, stemming from the exploitation intervention, can only lower qualitative job insecurity when there is sufficient demand for one's work in order to realize such goals. When this is not the case, the combination of increased goal awareness and low perceived labor market demand may exacerbate the experience of qualitative job insecurity. In contrast, we expect that the increased option awareness stemming from the exploration intervention can lower qualitative job insecurity when there is insufficient demand for one's current line of work. That is, workers may benefit the most from increased option awareness when scarcity of work in the current field pushes workers to consider pursuing such options. When such scarcity is absent, workers may know options but not really engage with them, which subsequently may not influence levels of job insecurity.

Hypothesis 1c: The negative indirect relationship between the exploitation intervention and qualitative job insecurity via goal awareness, is stronger (weaker) for workers high (low) in perceived labor market demand, because this strengthens (weakens) the negative relationship between goal awareness and qualitative job insecurity.

Hypothesis 2c: The negative indirect relationship between the exploration intervention and qualitative job insecurity via option awareness, is stronger (weaker) for workers low (high) in perceived labor market demand, because this strengthens (weakens) the negative relationship between option awareness and qualitative job insecurity.

Study 1

The purpose of Study 1 was to examine if and how exploitation-based career planning and exploration-based career planning can lower qualitative job insecurity and whether this effect depends upon one's career path commitment. To this end, we conducted an online intervention study in which we tested the indirect relationships between the exploitation and exploration interventions and qualitative job insecurity via goal/option awareness, and the potential moderating effect of career path commitment. As exploratory analyses, we investigated the role of

engaging with the intentions formulated during the interventions and whether found effects were still visible two and six weeks after the interventions took place.

Procedure and Participants

As we were interested in assessing whether hypothesized effects sustained over time, the research design involved three measurement points. At Time 1, participants received an online questionnaire to assess demographics and career path commitment. Next, participants were randomly assigned into three groups to do the exploitation intervention, the exploration intervention, or no intervention (control group). Following the intervention, participants completed measures for goal awareness, option awareness, and qualitative job insecurity. At Time 2, two weeks after the intervention, respondents again completed measures for goal awareness, option awareness, and qualitative job insecurity. In addition, respondents from the intervention groups were asked about their engagement with the intentions they had written down as part of the intervention. At Time 3, six weeks after the intervention, participants again completed measures for goal awareness, option awareness, and qualitative job insecurity.

We used Gpower version 3.1.9.7 to conduct a power analysis for our research models (including two groups and one moderator) in which we aimed for 90% power to detect a medium effect size ($f^2 = 0.15$) with an alpha level of 5%. The power analyses indicated we required 50 participants per intervention group (critical $F = 2.70$), which implied we needed a total sample size of 150 participants. We anticipated a drop-out rate of 50% for completing all surveys (Time 1 – Time 3) and wanted to be on the safe side, so we aimed to recruit 250 respondents. To be eligible to participate, workers had to be fluent in Dutch and work at least 20 hours per week. We recruited participants[8] in November and December 2021 in the Netherlands. We recruited 121 participants via the social networks of six research assistants and recruited 135 more via Prolific to amply reach our target amount. The Prolific sample was paid for participating and the other sample had a chance to win a museum pass.

Out of the 352 participants who started the first survey, 289 participants completed it (82.2%). Of these, 33 participants were excluded, because they worked less than 20 hours per week in the past month or did not do the intervention correctly (i.e., skipped questions or did not finish

[8] The study was approved by the Ethics Review Board of the authors' university (2021-WOP-13063). Participants were informed about the anonymity and confidentiality of the data and the voluntary nature of their participation, and provided their informed consent.

it), resulting in 256 usable responses (72.7%) at Time 1. Of these responses, 78 (30.5%) were from the exploitation group, 73 (28.5%) were from the exploration group, and 105 were from the control group (41.0%). The mean age was 35.2 years (*SD* = 11.7) and 50.8% was female. Regarding highest level of education, 8.6% finished high school, 13.7% finished vocational education, 44.9% had a bachelor's degree, 31.3% had a master's degree, and 1.6% had a doctorate degree. Regarding contract type, 62.5% had a permanent contract, 24.6% had a temporary contract, 5.1% had a flexible contract, and 7.8% were self-employed. The response rates for the follow-up surveys were as follows: $N_{exploitation\ T2}$ = 57 (73.1%), $N_{exploitation\ T3}$ = 53 (67.9%), $N_{exploration\ T2}$ = 63 (86.3%), $N_{exploration\ T3}$ = 50 (68.5%), $N_{control\ T2}$ = 85 (81.0%), $N_{control\ T3}$ = 71 (67.6%).

Measures

The measures used a 7-point Likert scale ranging from "Strongly disagree" to "Strongly agree", unless stated otherwise. All measures[9] were administered at Time 1, Time 2 (two weeks later) and Time 3 (six weeks later), except for career path commitment, which was only measured pre-intervention. Full measurement scales can be found in Appendix 5C.

Career path commitment was measured with the four career identity items from the Career Commitment Measure (Carson & Bedeian, 1994). An example item is: "My line of work is an important part of who I am". The Cronbach's alpha was .92.

Awareness of career goals was measured with six items from Gould's (1979) career planning scale, which were translated to Dutch by Koen et al. (2010). An example item is: "My career objectives are clear". The Cronbach's alpha's for Time 1, 2, and 3 were .86, .85, and .84.

Awareness of career options was measured with five items from Germeijs and De Boeck's (2003) career indecision scale, which were translated to Dutch by Van der Horst et al. (2017). We reverse-scored the responses to calculate awareness of career options instead of career indecision. An example item is: "I can list the alternatives for my career". The Cronbach's alpha's for Time 1, 2, and 3 were .86, .84, and .84.

[9] We also measured self-efficacy regarding the realization of goals and options, to explore whether this moderated the relationship between awareness of career goals/options and job insecurity. Self-efficacy did not have any influence. For clarity and because we did not hypothesize specific effects, we decided not to include self-efficacy in the current paper.

Table 5.1

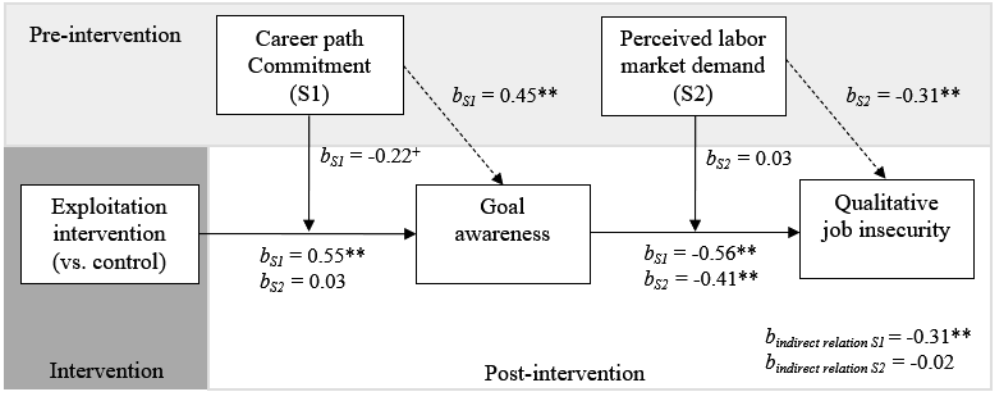
Study 1 Means, Standard Deviations and Correlations of Study Variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	35.15	11.66														
2. Gender[a]	1.51	0.50	-0.10													
3. Education[b]	3.04	0.93	0.08	-0.07												
4. Exploitation[c]	0.43	0.50	-0.08	-0.09	-0.09											
5. Exploitation actions	2.60	1.00	-0.01	-0.03	0.19	NA										
6. Exploration[d]	0.41	0.49	-0.01	-0.01	0.09	NA	NA									
7. Exploration actions	2.10	0.89	-0.04	-0.18	-0.12	NA	NA	NA								
8. T1 Goal awareness	4.55	1.18	0.13*	-0.20**	-0.05	0.20**	0.23^{+}	0.06	0.36**							
9. T2 Goal awareness	4.45	1.12	0.10	-0.13**	-0.00	0.10	0.31*	0.06	-0.46**	0.73**						
10. T1 Option awareness	4.64	1.14	0.14*	-0.19**	0.09	-0.01	0.17	0.07	0.24^{+}	0.57**	0.57**					
11. T2 Option awareness	4.68	1.08	-0.01	-0.16*	0.17*	0.05	0.25	0.10	0.40**	0.50**	0.71**	0.70**				
12. Career identity	4.93	1.32	0.15*	0.00	0.11	-0.10	0.05	0.02	0.11	0.39**	0.32**	0.33**	0.27**			
13. T1 Job insecurity	3.39	1.41	-0.12^{+}	0.14*	-0.00	-0.05	-0.05	-0.03	-0.24^{+}	-0.51**	-0.49**	-0.49**	-0.49**	-0.31**		
14. T2 Job insecurity	3.38	1.29	-0.13^{+}	0.12^{+}	0.02	-0.07	0.01	-0.14	-0.29*	-0.37**	-0.49**	-0.42**	-0.55**	-0.26**	0.79**	
15. T3 Job insecurity	3.46	1.36	-0.15^{+}	0.18*	-0.16*	0.00	-0.04	0.01	-0.14	-0.33**	-0.34**	-0.25**	-0.38**	-0.18*	0.73**	0.72**

Note: Total $N = 256$. [a] 1 = Male, 2 = Female. [b] 1 = Primary education or high school, 2 = Vocational education, 3 = Bachelor education, 4 = Master education, 5 = PhD degree. [c] 1 = exploitation group, 0 = control group, $N = 180$ [d] 1 = exploration group, 0 = control group, $N = 177$.
Exploitation actions and exploration actions are in the paper referred to as “engagement with intentions formulated during the intervention”.
** $p < 0.01$, * $p < 0.05$, $^{+}$ $p < 0.10$ (2-tailed)

Figure 5.3

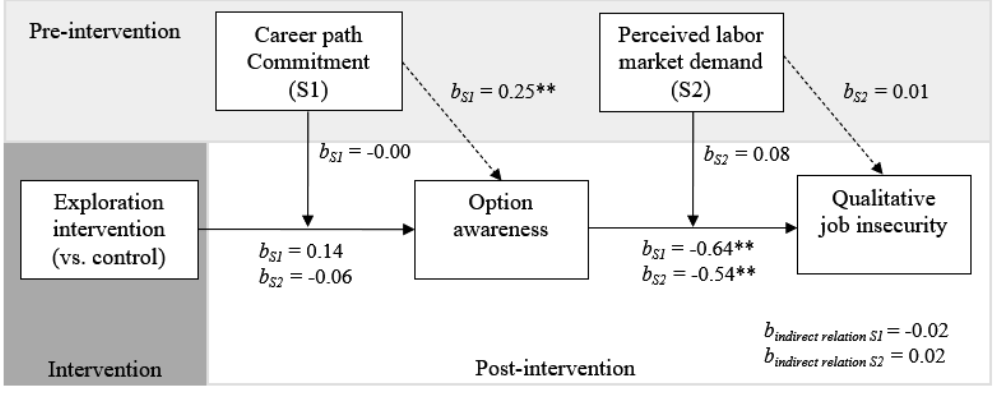
Overview of the Study 1 and 2 Main Results Regarding the Exploitation Intervention



Note. Solid lines represent hypothesized relationships.
** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Figure 5.4

Overview of the Study 1 and 2 Main Results Regarding the Exploration Intervention



Note. Solid lines represent hypothesized relationships.
** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Qualitative job insecurity was measured with four items from Langerak et al. (2022) that we rephrased from questions into statements (e.g., "I worry about getting less stimulating work tasks in the future"). These items reflect the affective component of qualitative job insecurity, i.e. the emotional reactions about the perceived threat to valued job features (Huang et al., 2010; Jiang & Lavayesse, 2018). The Cronbach's alpha's for Time 1, 2, and 3 were .88, .89, and .89.

Engaging with intentions was measured two weeks after the intervention, by asking respondents from the intervention groups to what extent they fulfilled the actions they had written down as part of the intervention (1 = no, 2 = a little, 3 = somewhat, 4 = mostly, 5 = yes).

Results

Table 5.1 presents an overview of the means, standard deviations, and correlations of all Study 1 variables. Overviews of the results are presented in Figure 5.3 (regarding the exploitation intervention) and Figure 5.4 (regarding the exploration intervention).

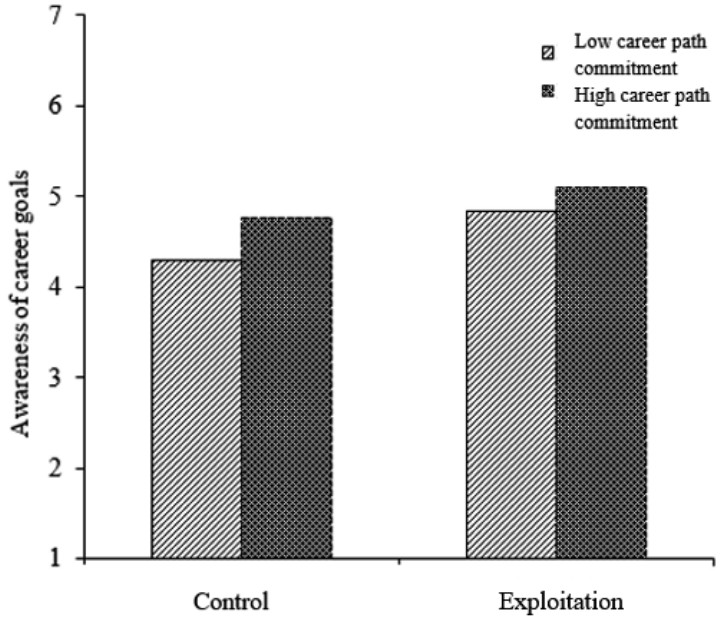
Prior to our main analyses, we conducted a Box's *M* test that indicated that the relationships between the study variables of the two different datasets were not significantly different (Box's $M = 63.36$, $p = .28$), supporting the decision to merge the datasets. We tested the expected indirect effects (Hypotheses 1a and 2a) and moderation effects (Hypotheses 1b and 2b) with Model 7 from PROCESS version 3.3 in SPSS (Hayes, 2017). To this purpose, we created dummy variables to compare the intervention groups with the control group and mean-centered all independent variables.

Hypotheses Testing Exploitation Intervention (H1a, H1b, H1c)

Hypothesis 1a stated that workers in the exploitation group experience less qualitative job insecurity than workers in the control group through increased goal awareness. Our results indicated that workers from the exploitation group indeed showed higher goal awareness than workers in the control group ($b = 0.55$, $SE = 0.16$, $p < .01$, 95% CI: [0.24, 0.85]), and that workers with higher goal awareness experienced less qualitative job insecurity ($b = -0.56$, $SE = 0.08$, $p < .01$, 95% CI: [-0.72, -0.39]). In addition, supporting Hypothesis 1a, we found a negative indirect relationship from exploitation to job insecurity via goal awareness ($b = -0.31$, $SE = 0.09$, $p < .01$, 95% CI: [-0.50, -0.14]). Hypothesis 1b stated that the negative indirect relationship between exploitation and qualitative job insecurity via goal awareness would be stronger (weaker) for

Figure 5.5

Interaction Between the Exploitation Intervention and Career Path Commitment ($p = 0.06$)



Note. $N_{control} = 105$, $N_{exploitation} = 78$.

workers high (low) in career path commitment. We found no support for this hypothesis, as the results displayed a moderation effect of career path commitment in the opposite direction at the 90% confidence level (see Figure 5.5; $b = -0.22$, $SE = 0.12$, $p = .06$, 90% CI: [-0.41, -0.02]): The exploitation intervention increased the goal awareness for workers with an average ($b = 0.56$, $SE = 0.16$, $p < .01$, 95% *CI:* [0.25, 0.86]) or low career path commitment (i.e., 1 SD below average; $b = 0.85$, $SE = 0.22$, $p < .01$, 95% *CI*: [0.41, 1.28]), but did not show a significant effect on goal awareness for participants highly committed to their career path (i.e., 1 SD above average; $b = 0.27$, $SE = 0.22$, $p = .22$, 95% *CI*: [-0.17, 0.70]). Additionally, career path commitment had a positive direct relationship with goal awareness ($b = 0.45$, $SE = 0.09$, $p < .01$, 95% CI: [0.28, 0.62]).

Hypotheses Testing Exploration Intervention (H2a, H2b, H2c)

Hypothesis 2a stated that workers in the exploration group experience less qualitative job insecurity than workers in the control group through increased option awareness. Contrary to our expectations, results showed no significant relationship between exploration and option awareness (b = 0.14, SE = 0.17, p = 0.41, 95% CI: [-0.19, 0.47]), although we did find a negative relationship between option awareness and qualitative job insecurity (b = -0.64, SE = 0.09, p < 0.01, 95% CI: [-0.81, -0.47]). Hypothesis 2b stated that the negative indirect relationship between exploration and qualitative job insecurity via option awareness would be stronger
(weaker) for workers low (high) in career path commitment. The results indicated no such moderation effect of career path commitment (b = -0.00, SE = 0.14, p = 0.98, 95% CI: [-0.27,0.27]). We did find a positive direct relationship between career path commitment and option awareness (b = 0.25, SE = 0.09, p < .01, 95% CI: [0.07, 0.43]).

Exploratory Analyses

The Role of Engaging with Intentions. To further investigate the lack of support for the exploration intervention, we explored whether engaging with the intentions formulated during the intervention, may be a prerequisite for the exploration intervention to have an effect. Since engaging with intentions could not be analyzed as a moderator between the intervention and option awareness, because the control group did not formulate intentions, we conducted our analyses using data from the exploration group only. Subsequently, we applied PROCESS Model 7 to test an adaptation of our research model in which we used engaging with intentions after the intervention as the independent variable and subsequent (T2) option awareness and job insecurity as dependent variables, while controlling for prior (T1) option awareness. We found that engaging with intentions resulted in more option awareness (b = 0.34, SE = 0.12, p < .01, 95% CI: [0.10, 0.58]), regardless of career path commitment (b = -0.07, SE = 0.09, p = .46, 95% CI: [-0.24, 0.11]. We found no direct relationship between career path commitment and option awareness (b = 0.12, SE = 0.08, p = .16, 95% CI: [-0.05, 0.28]). Option awareness was negatively related to job insecurity (b = -0.50, SE = 0.18, p < .01, 95% CI: [-0.85, -0.14]). Overall, we found an indirect effect of engaging with intentions on job insecurity via option awareness, regardless of career path commitment strength (b = -0.17, SE = 0.10, p < .01, 95% CI: [-0.39, -0.01]). We found no direct effect of engaging with intentions on job insecurity (b = -0.09, SE = 0.16, p = .54, 95% CI: [-0.42, 0.22]), which indicates the effect was fully mediated by option awareness.

For comprehensiveness, we also explored the role of engaging with intentions for the exploitation intervention. The results showed that engaging with intentions did not result in more goal awareness when controlling for prior goal awareness (b = 0.17, SE = 0.10, p = .09, 95% CI: [-0.02, 0.36]), regardless of career path commitment (b = 0.05, SE = 0.06, p = .41, 95% CI: [-0.07, 0.17]). We did find a direct relationship between career path commitment and goal awareness (b = 0.14, SE = 0.06, p = .03, 95% CI: [0.01, 0.27]). In addition, goal awareness was unrelated to job insecurity when controlling for prior goal awareness (b = -0.38, SE = 0.23, p = .10, 95% CI: [-0.83, 0.08]). Overall, we found no indirect relationship from engaging with intentions and job insecurity via goal awareness (b = -0.06, SE = 0.05, 95% CI: [-0.18, 0.03]). We also found no direct effect of engaging with intentions on job insecurity (b = 0.19, SE = 0.17, p = .26, 95% CI: [-0.15, 0.53]). These results indicate that participants' goal awareness directly after the intervention was not altered by engaging with their formulated intentions, and that workers goal awareness at Time 2 did not add predictive value beyond the goal awareness measured directly after the intervention at Time 1.

Effects over Time. We explored whether the found effects of the interventions remained visible over time by using job insecurity measures at Time 2 and 3 as outcome variables instead of job insecurity measured at Time 1. Regarding the exploitation intervention, the results indicated that effects remained visible up till two and six weeks later, as we found indirect relationships between the intervention and later job insecurity via goal awareness (for T2 job insecurity: b = -0.20, SE = 0.09, p < .01, 95% CI: [-0.38, -0.05]; for T3 job insecurity: b = -0.18, SE = 0.10, p < .01, 95% CI: [-0.40, -0.03]). As we only found an effect of the exploration intervention when participants actively engaged with their formulated intention, we tested the research model with active engagement with intentions measured at T2 as predictor, and found a significant indirect effect on T3 job insecurity via T2 option awareness (b = -0.24, SE = 0.13, p < .01, 95% CI: [-0.52, -0.02]).

Discussion

Results showed that the exploitation intervention decreased qualitative job insecurity through increasing goal awareness, with effects still visible two and six weeks later. While we expected that this effect would be stronger for workers with a strong career path commitment, we found that the effect may be somewhat stronger for workers with a weak rather than strong career path commitment. Perhaps that workers with stronger career path commitment are already

relatively aware of their career goals without an intervention. Results further showed that the exploration intervention in itself was not sufficient to decrease qualitative job insecurity via increased option awareness. Rather, only workers who actively pursued the exploration intentions that they had formulated as part of the intervention experienced lower qualitative job insecurity. This effect was still visible six weeks after the intervention. Workers' amount of career path commitment did not moderate this relationship.

Study 2

The purpose of Study 2 was to examine whether and how exploitation-based career planning and exploration-based career planning can decrease qualitative job insecurity and whether this effect depends upon worker's perceived labor market demand. To this end, we conducted another online intervention study in which we tested whether there were indirect relationships between the interventions and qualitative job insecurity via goal/option awareness and whether these were moderated by perceived labor market demand. As exploratory analyses, we investigated the role of engaging with the intentions formulated during the interventions and whether found effects were still visible two and six weeks after the interventions took place.

Procedure and Participants

Based on the power analysis, we set the same target amount for participants as in Study 1 (i.e., 250 participants) as we tested a similar research design. We recruited and paid participants via Prolific in May and June 2023 in the Netherlands and Flanders[10]. To be eligible to participate, workers had to be fluent in Dutch, work at least 20 hours per week and could not have participated in Study 1. The procedure of the online questionnaires, random assignment, and interventions was similar to the procedure of Study 1, with one exception: At Time 1 we also measured perceived labor market demand.

Out of the 276 participants who started the first survey, 237 participants completed it (85.9%). Of these, 25 participants were excluded, because they worked less than 20 hours per week in the past month or did not do the intervention correctly (i.e., skipped questions or did not finish it), resulting in 212 usable responses (76.8%) at Time 1. Of these responses, 70 (33.0%) were from

[10] The study was approved by the Ethics Review Board of the authors' university (FMG-3260_2023). Participants were informed about the anonymity and confidentiality of the data and the voluntary nature of their participation, and provided their informed consent.

the exploitation group, 62 (29.2%) from the exploration group, and 80 from the control group (37.7%). The mean age was 31.4 years (*SD* = 7.9) and 36.8% was female. Regarding highest level of education, 6.1% finished high school, 10.8% finished vocational education, 46.2% had a bachelor's degree, 34.9% had a master's degree, and 1.9% had a doctorate degree. Regarding contract type, 60.4% had a permanent contract, 24.1% had a temporary contract, 6.1% had a flexible contract, and 9.4% were self-employed. The response on the follow-up surveys was: $N_{exploitation\ T2}$ = 56 (80.0%), $N_{exploitation\ T3}$ = 52 (74.3%), $N_{exploration\ T2}$ = 51 (82.3%), $N_{exploration\ T3}$ = 46 (74.2%), $N_{control\ T2}$ = 70 (87.5%), $N_{control\ T3}$ = 63 (78.8%).

Measures

The measures used a 7-point Likert scale ranging from "Strongly disagree" to "Strongly agree", unless stated otherwise. All measures were administered at Time 1, Time 2 (two weeks later) and Time 3 (six weeks later), except for perceived labor market demand, which was only measured pre-intervention. Full measurement scales can be found in Appendix 5C.

Perceived labor market demand was measured with four items from Wanberg et al. (2002). An example item is: "There are plenty of jobs open in my field or type of work". The Cronbach's alpha was .90.

Awareness of career goals was measured with the same measure as in Study 1. The Cronbach's alpha's for Time 1, 2, and 3 were .83, .84, and .81.

Awareness of career options was measured with the same measure as in Study 1. The Cronbach's alpha's for Time 1, 2, and 3 were .87, .86, and .88.

Qualitative job insecurity was measured with the same measure as in Study 1. The Cronbach's alpha's for Time 1, 2, and 3 were .84, .88, and .89.

Engaging with intentions was measured in the same manner as in Study 1.

Results

Table 5.2 presents an overview of the means, standard deviations, and correlations of all study variables. Overviews of the results are presented in Figure 5.3 (regarding the exploitation intervention) and Figure 5.4 (regarding the exploration intervention). We tested the expected indirect effects (Hypotheses 1a and 2a) and moderation effect (Hypotheses 1c and 2c) with Model 14 from PROCESS version 3.3 in SPSS (Hayes, 2017). We created dummy variables to compare the intervention groups with the control group and mean-centered all independent variables.

Hypotheses Testing Exploitation Intervention (H1a, H1b, H1c)

Hypothesis 1a stated that workers in the exploitation group experience less qualitative job insecurity than workers in the control group, through increased goal awareness. Results indicated no difference in the amount of goal awareness between the exploitation group and control group (b = 0.03, SE = 0.18, p = .89, 95% CI: [-0.33, 0.38]), although we did find a negative relationship between goal awareness and qualitative job insecurity (b = -0.41, SE = 0.09, p < .01, 95% CI: [-0.59, -0.23]. Hypothesis 1c stated that the negative indirect relationship between exploitation and qualitative job insecurity via goal awareness, would be stronger (weaker) for workers high (low) in perceived labor market demand. Results indicated no moderating effect of perceived labor market demand (b = 0.03, SE = 0.07, p = 0.17, 95% CI: [-0.11, 0.17]). We did, however, find a direct negative relationship between perceived labor market demand and qualitative job insecurity (b = -0.31, SE = 0.08, p < 0.01, 95% CI: [-0.47, -0.15]).

Hypotheses Testing Exploration Intervention (H2a, H2b, H2c)

Hypothesis 2a stated that workers in the exploration group would experience less qualitative job insecurity than workers in the control group through increased option awareness. We found no differences in option awareness between the exploration and control group (b = -0.06, SE = 0.17, p = .74, 95% CI: [-0.40, 0.29]), although we did find a negative relationship between option awareness and qualitative job insecurity (b = -0.54, SE = 0.10, p < .01, 95% CI: [-0.75, -0.34]). Hypothesis 2c stated that the negative indirect relationship between exploration and qualitative job insecurity via option awareness, is stronger (weaker) for workers low (high) in perceived labor market demand. Results showed no moderating effect of perceived labor market demand (b = 0.08, SE = 0.07, p = .30, 95% CI: [-0.07, 0.22]). Notably, while we found a negative direct relationship between perceived labor market demand and qualitative job insecurity in the exploitation group, we did not find this relationship in the exploration group (b = 0.01, SE = 0.08, p = .93, 95% CI: [-0.15, 0.17]).

Table 5.2

Study 2 Means, Standard Deviations and Correlations of Study Variables

	M	*SD*	1	2	3	4	5	6	7.	8.	9.	10.	11.	12.	13.	14.
1. Age	31.45	7.94														
2. Gender[a]	1.37	0.49	0.05													
3. Education[b]	3.16	0.87	0.27**	0.09												
4. Exploitation[c]	0.47	0.50	0.07	0.03	-0.09											
5. Exploitation actions	2.50	1.09	0.02	-0.16	-0.11	NA										
6. Exploration[d]	0.44	0.50	0.05	0.02	-0.12	NA	NA									
7. Exploration actions	2.30	0.80	-0.19	-0.12	-0.20	NA	NA	NA								
8. T1 Goal awareness	4.48	1.10	0.11	-0.13	0.05	0.00	0.29**	-0.07	0.03							
9. T2 Goal awareness	4.44	1.12	0.14^{+}	-0.15*	0.10	0.03	0.29*	-0.02	0.17	0.76**						
10. T1 Option awareness	4.79	1.11	0.06	-0.10	0.09	-0.09	0.34**	-0.05	0.01	0.65**	0.63**					
11. T2 Option awareness	4.73	1.08	0.08	-0.14^{+}	0.17*	-0.21*	0.26*	-0.13	-0.03	0.53**	0.67**	0.72**				
12. Perceived demand	5.36	1.33	-0.16*	0.01	-0.07	-0.13	-0.02	-0.05	-0.04	0.01	-0.03	0.27**	0.19**			
13. T1 Job insecurity	3.39	1.38	-0.09	0.02	0.07	-0.07	-0.37**	0.06	-0.03	-0.32**	-0.37**	-0.45**	-0.37**	-0.18**		
14. T2 Job insecurity	3.44	1.43	-0.06	0.08	0.08	0.07	-0.43**	0.04	-0.13	-0.37**	-0.49**	-0.44**	-0.45**	-0.19*	0.83**	
15. T3 Job insecurity	3.44	1.45	0.03	0.06	0.06	0.13	-0.23	0.03	-0.02	-0.21**	-0.42	-0.35**	-0.46**	-0.22**	0.70**	0.77**

Note: Total $N = 212$. [a] 1 = Male, 2 = Female. [b] 1 = Primary education or high school, 2 = Vocational education, 3 = Bachelor education, 4 = Master education, 5 = PhD degree. [c] 1 = exploitation group, 0 = control group, $N = 155$. [d] 1 = exploration group, 0 = control group, $N = 149$.
Exploitation actions and exploration actions are in the paper referred to as "engagement with intentions formulated during the intervention".
** $p < 0.01$, * $p < 0.05$, $^{+}$ $p < 0.10$ (2-tailed)

Exploratory Analyses

The Role of Engaging with Intentions. Following the unexpected finding that exploitation did not increase goal awareness and exploration did not increase option awareness, we explored whether engaging with the intentions formulated during the interventions may be a prerequisite for such effects. Since engaging with intentions could not be analyzed as a moderator between the intervention and goal/option awareness, because the control group did not formulate intentions, we conducted a multiple regression using data from the intervention groups only. Subsequently, we applied PROCESS Model 14 to test an adaptation of our research model in which we used engaging with intentions after the intervention as the predictor and subsequent (T2) goal/option awareness as dependent variable, while controlling for prior (T1) goal/option awareness. We found no relationship between engagement with intentions and goal awareness (b = 0.06, SE = 0.08, p = .51, 95% CI: [-0.11, 0.23]) and no relationship between goal awareness and qualitative job insecurity (b = -0.30, SE = 0.20, p = .14, 95% CI: [-0.70, -0.22]), when controlling for prior goal awareness. We did find a direct relationship between engagement with intentions and qualitative job insecurity (b = -0.39, SE = 0.12, p < .01, 95% CI: [-0.64, -0.14]). The results indicated no moderation effect of perceived labor market demand (b = 0.14, SE = 0.09, p = .13, 95% CI: [-0.04, 0.32]). We did find a direct negative relationship between perceived labor market demand and qualitative job insecurity (b = -0.46, SE = 0.10, p < .01, 95% CI: [-0.67, -0.25]).

For the exploration group, the results showed no relationship between engagement with intentions and option awareness (b = -0.09, SE = 0.14, p = 0.51, 95% CI: [-0.38, 0.19]), when controlling for prior option awareness. We also found no direct effect of engaging with intentions on job insecurity (b = -0.33, SE = 0.26, p = .20, 95% CI: [-0.85, 0.18]). We did find a negative relationship between option awareness and qualitative job insecurity (b = -0.58, SE = 0.26, p = .03, 95% CI: [-1.10, -0.07]). The results indicated no moderation effect of perceived labor market demand (b = 0.07, SE = 0.12, p = .55, 95% CI: [-0.16, 0.31]).

Effects over Time. Because we found no effects of the interventions, we repeated our analyses with job insecurity measured at Time 2 and 3 to assess whether the relationship between goal/option awareness and job insecurity remained visible over time. Regarding the exploitation intervention, results showed a negative relation between goal awareness and job insecurity measured at Time 2 (b = -0.45, SE = 0.09 p < .01, 95% CI: [-0.64, -0.27]) and job insecurity measured at Time 3 (b = -0.21, SE = 0.11 p = .06, 90% CI: [-0.39, -0.03]). Regarding the

exploration intervention, results showed a negative relation between option awareness and job insecurity measured at Time 2 (b = -0.50, SE = 0.12 p < .01, 95% CI: [-0.73, -0.27]) and job insecurity measured at Time 3 (b = -0.37, SE = 0.12 p < .01, 95% CI: [-0.62, -0.12]).

Potential Unintended Manipulation Effect. Because we found a negative relationship between perceived labor market demand and qualitative job insecurity in the exploitation intervention group, but not in the exploration intervention group, we explored whether doing the interventions may moderate the relationship between perceived labor market demand and job insecurity. This would be important information as it would imply that the positive relation of labor market demand on job insecurity can be broken through interventions. We found that doing the exploration intervention moderated the negative relationship (b = -0.34, SE = 0.13, p < .01, 95% CI: [-0.58, 0.09]) between perceived labor market demand and job insecurity (b = 0.43, SE = 0.17, p < .05, 95% CI: [0.10, 0.77]). That is, the control group showed a negative relationship between perceived labor market demand and job insecurity (b = -0.34, SE = 0.13, p < .01, 95% CI: [-0.58, -0.09]), whereas the exploration group showed no relationship (b = 0.10, SE = 0.11, p = 0.39, 95% CI: [-0.13, 0.32]). We did not find such a moderating effect for the exploitation intervention.

Discussion

The Study 2 results showed that both the exploitation intervention and exploration intervention had no significant effect on workers' experience of qualitative job insecurity. Not the interventions itself, nor engaging with exploitation and exploration intentions affected goal and option awareness. Interestingly, we found no moderating effect of perceived labor market demand, but instead discovered a negative direct relationship between perceived labor market demand and qualitative job insecurity which was no longer present when workers did the exploration intervention.

General Discussion

Societal, organizational, and technological changes have made qualitative job insecurity (i.e., worries about maintaining valued job features) an increasingly prevalent work stressor among contemporary workers. In the current research, we developed two online career planning interventions – the exploitation intervention and exploration intervention – and tested whether these can minimize qualitative job insecurity among workers. The results from Study 1 indicated

that the exploitation intervention was effective in decreasing qualitative job insecurity through increasing workers' goal awareness and that the exploration intervention was effective in decreasing job insecurity via increased option awareness, but, in the latter case, only when workers actively pursued the exploration intentions that they had formulated as part of the intervention. However, these results were not replicated in Study 2. We also did not find evidence for the expected moderating role of career path commitment and perceived labor market demand.

Theoretical Implications

A first theoretical implication comes from interpretating the inconsistent findings of Study 1 and Study 2. Both studies support the idea that increased awareness of one's career goal and/or increased awareness of one's potential career options are negatively related to the experience of qualitative job insecurity. Yet, the interventions developed for the current study did not consistently stimulate such awareness. This indicates that the effects of the interventions may depend upon the characteristics and conditions of workers participating in the intervention. These conditions, however, were not the conditions we investigated as potential moderators (i.e., career path commitment and perceived labor market demand). An important question then is what these characteristics and conditions may be. Although both studies used the same methods, offered the same online interventions, and tested the same indirect effects, there are three differences that may help to answer that question.

First, Study 1 consisted of a sample of workers recruited by research assistants combined with workers recruited via Prolific, whereas Study 2 consisted solely of workers recruited via Prolific. As such, one may conclude that using a Prolific sample is the cause for our null findings. However, this does not seem to be the case: Upon further analysis of Study 1 data, we found that the intervention effects based on the Prolific subsample were larger than the effects based on the other subsample. Second, there were differences in the sample compositions: *t*-tests indicated that the participants from Study 1 were, on average, slightly older and more often female than the participants from Study 2. Third, Study 1 was conducted in a different time period than Study 2. Study 1 took place in November and December 2021, when the COVID-19 pandemic had a large influence on daily work life. During this period, the Netherlands went through increasingly strict lockdowns. Study 2 was conducted in May and June 2023 without such pandemic-related restrictions, but during high labor market shortages and, hence, plenty of work opportunities. While we found similar mean levels of qualitative job insecurity ($t(527)= -0.18$, $p = .85$) among

the sample of Study 1 (M = 3.38, SD = 1.39) and the sample of Study 2 (M = 3.41, SD = 1.35), it is conceivable that the COVID-19 restrictions created a sense of necessity to prepare for the future which made engaging in career planning more effective. As of yet, proactive coping theory (Aspinwall & Taylor, 1997) does not delineate boundary conditions for proactive coping in order to be effective. Our results point towards the possibility that a sense of necessity to prepare for the future may be one such boundary condition. We therefore recommend future research to investigate the boundary conditions for effective proactive coping in general, and a sense of necessity as a boundary condition in particular.

A second theoretical implication stems from the exploratory results from Study 2. These results indicate that perceived labor market demand had a direct negative relation with qualitative job insecurity in both the control group and exploitation group, yet not in the exploration group. As such, exploration-based career planning may have the potential to make workers' experience of qualitative job insecurity less dependent upon labor market conditions.

This is a valuable contribution considering that the relationship between the labor market and job insecurity is often considered an unchangeable given: The less work opportunities there are, the more reason to worry about maintaining a pleasant job (cf. Shoss, 2017). Apparently, even though the exploration intervention did not make workers consciously more aware of their career options, it did make their perception of labor market demand less influential in their experience of job insecurity. More research is needed to replicate this finding and unpack the underlying mechanism. Possibly, thinking about several positive future career possibilities made workers more optimistic about their career potential, which in turn lowered the experience of job insecurity (Eva et al., 2020). If future research can confirm this hypothesis, it would imply that possible selves theories (Markus & Nurius, 1986; Ibarra, 2004) form an additional theoretical perspective from which the development of career optimism can be explained and investigated further.

Limitations and Future Research Recommendations

Our research has some limitations and points towards future research opportunities. The first two limitations lay in our chosen research design. Although brief online interventions have their benefits (e.g., easily accessible and dispersible), the absence of synchronous feedback and limited time invested in career planning may have negatively affected the effectiveness of the interventions. Synchronous feedback, for example from a career counsellor, may help participants

with solving obstacles in their planning and staying motivated. In addition, the short duration of the interventions may be a limiting factor: Proactive coping is not only about the immediate effect of detecting threats and preparing for them, but also about increasing persons' resources (Aspinwall & Taylor, 1997). In the current research, we expected an immediate development in resources in the form of goal and option awareness. However, resource development does theoretically not to occur immediately but after continuous proactive coping over a longer period over time (Cangiano et al., 2021; Langerak et al., 2022). The finding that the exploration intervention from Study 1 was only effective after engaging with the formulated intentions supports this theory.

A recent study from Zammitti and colleagues (2023) provides empirical evidence in line with these suggestions, by illustrating that an online career counselling intervention lasting 45 days, with 3 synchronous career counselling meetings, can increase resources such as career adaptability, optimism, and hope. Because our interventions of ten to fifteen minutes may not be enough time to build resources, we recommend future research to investigate whether repeating career planning activities, for example quarterly or yearly (e.g., comparing, adjusting or complementing plans) and guided by a career counsellor, may be a more effective means to generate resources that can minimize job insecurity. It may also be worthwhile to investigate whether interventions given in person together with peers – rather than online – may be more effective because of a more motivating and inspiring environment. Contact with peers provides opportunities for engaging with exploration activities during the time of the intervention.

As a third limitation we surmise that a perceived lack of necessity of participants may have negatively affected our research findings, as our results pointed to the possibility that such a sense of necessity may be a boundary condition for effective proactive coping. This sense of necessity should not be confused with a sense of urgency. Proactive coping is aimed at mitigating potential stressors or preparing for them and should hence be initiated before a situation is urgent – otherwise there is not enough time to accumulate resources (Aspinwall & Taylor, 1997). However, with necessity, we mean that participants should feel that they need to engage in proactive coping to create a more positive future for themselves. This sense of necessity may be similar to the "reason to" motivational state that Parker and colleagues (2010) describe as being potentially more important in proactive goal generation and goal striving than "can do" states. As most of our participants were paid for participation, they may not have felt such a necessity or reason to.

Therefore, we recommend to recruit participants who subjectively perceive they may be helped with career planning. For example, by specifically targeting these participants in the recruitment text, providing the exercise without financial compensation, and including sectors with low labor market demand or high automatization risk.

Fourth, our interventions were limited in that they did not combine exploitation and exploration activities. Most research based on the ambidexterity literature has built on the assumption that exploration and exploitation are inherently contradictory activities, yet it may be possible to combine the two with so-called paradoxical practices such as hybrid tasks (cf. Papachroni, & Heracleous, 2020). We thus encourage future researchers to investigate the proposition that exploitation and exploration do not need to be addressed with different tasks at different timepoints, but that paradoxical practices can combine the two without such a division. An example of a hybrid career planning task can be creating a planning based on current experience and knowledge (exploitation) which also includes alternative scenario's (e.g., a plan B) that consider the possibility that certain obstacles may occur in the future (exploration). Because we did not find that one type of career planning works better at certain times than others (i.e., results were not different depending on workers' levels of career path commitment and perceived labor market demand), combining the exploitation and exploration in one intervention may be the most beneficial course of action since it may subsequently combine the benefits of both.

Lastly, while our research provides directions to investigate how career planning may lower qualitative job insecurity, the question remains whether such career planning may also be effective to lower other forms of insecurity (e.g., quantitative job insecurity or career insecurity). However, it may be hard to draw hard lines between different types of insecurity because their measures often are confounded. The measurement from Spurk and colleagues (2022), which includes eight sub-scales that each targets a different fragment of insecurity that workers experience in contemporary careers, may offer a solution in this regard.

Practical Implications

Our results underline that being aware of one's career goals and career options relates to decreased qualitative job insecurity. Yet, how such awareness can be stimulated likely depends upon individual boundary conditions that were not examined in the current research. As the Study 1 results indicated that the exploitation and exploration intervention can be effective under the

circumstances presented by the COVID-19 pandemic, we surmise a sense of necessity or "reason to" motivational state (cf. Parker et al., 2010) may be a boundary condition for the effectiveness of career planning interventions. As such, we advise that organizations do not only offer workers the possibility to participate in career planning interventions, but also take time to explain how participating in such interventions may positively affect workers' future. Preferably, participation will be an individual decision and not obligatory or standard-procedure. The content of such career planning interventions consist ideally of exercises that combine the acknowledgement of current skills, experiences, and career trajectory (i.e., based on exploitation) and the investigation of new, relatively unexplored, career possibilities (i.e., based on exploration). During conditions where labor market demand is perceived to be low by workers it is advisable to put the emphasis on exploration. To further increase workers motivation to engage in career planning, it may be worthwhile to arrange an on-site training where workers meet a training facilitator and other workers. As such, workers can receive professional feedback and start exploration activities by sharing experiences with fellow workers.

Conclusion

Combining the career development literature with the ambidexterity literature, we conducted two online experiments to investigate whether and how exploitation-based career planning and exploration-based career planning could decrease qualitative job insecurity. Despite the similar methods and research models, we found inconsistent results across the two studies: The intervention effects from Study 1 were not replicated in Study 2. This may be due to the different timing of data collection (i.e., during COVID-induced lockdowns vs. during labor market shortages). We argue that both types of career planning may only be effective when workers feel a sense of necessity or "reason to" motivation to engage with their career future (Parker at al., 2010), and recommend future research to investigate the potential of hybrid trainings that combine exploitation and exploration.

Appendix 5A: the Exploitation Intervention

We all sometimes think about the future and what we want and can become with our work. What people want to achieve with their work is also called **a career goal** . Some people already have a clear idea of their career goal, while other people have rarely thought about their career goal. In the following assignments, we will ask you to formulate a career goal and then create actions to take steps toward achieving this goal.

Assignment 1
Think about the further course of your career. What career goal would you like to have achieved in 10 years?

Make sure your goal is positive, achievable, and specific. For example, a career goal may relate to a particular job or position (e.g., “being a business owner of have a permanent position"). A goal can also include a combination of factors (e.g. “work at Ikea as a department manager”).

Please provide a brief description of your career goal here:
……
……

Assignment 2
To get a more concrete picture of how you can achieve your career goal, we ask you to draw up a goal tree. A goal tree contains sub-goals that can help achieve the larger career goal.

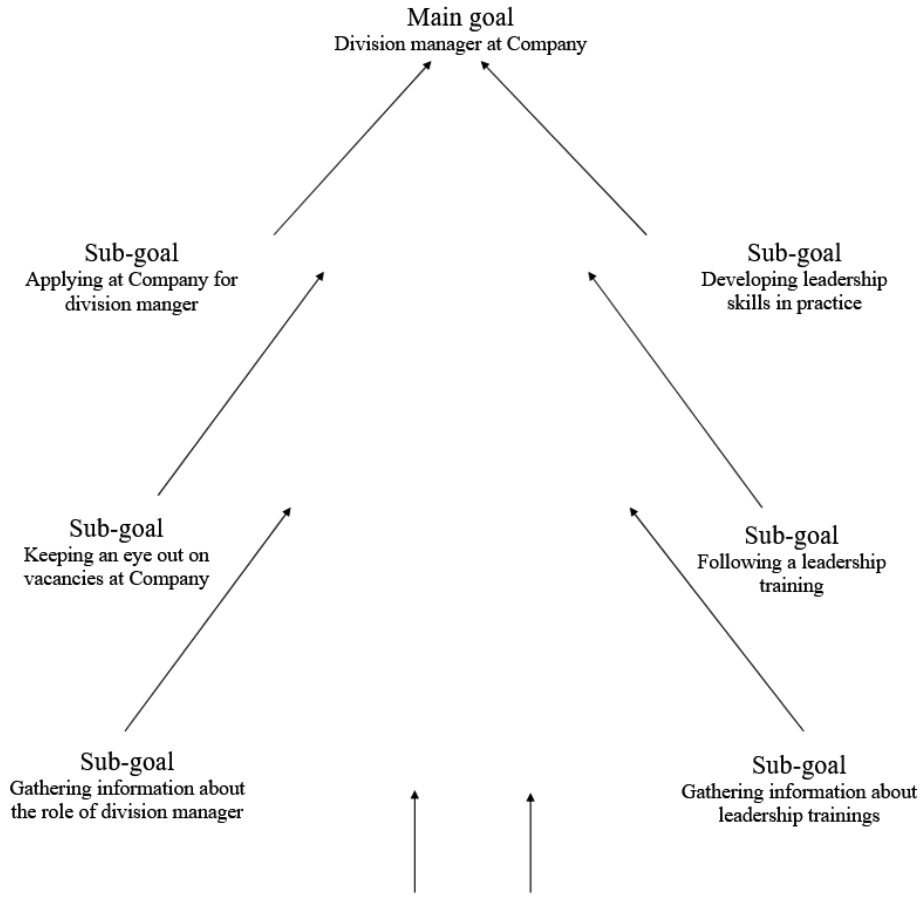
On the back of this A4 is an example of a completed goal tree. The goal tree shows two paths that contribute to achieving the main goal.
Now try to think of 6 sub-goals for your own career goal (described in assignment 1). The intention is that the sub-goals will help you achieve your career goal. You can draw the goal tree or write your own goals in the example.

Assignment 3
Now that you have a more concrete picture of your career goal and sub-goals, we would like to ask you to plan actions to achieve your 5th and 6th sub-goals (3 per goal). You are supposed to plan these actions for **the next 2 weeks.** An action does not necessarily have to directly realize a sub-goal, but it should be a step towards realizing the sub-goal.

Please note that the actions are possible and feasible for you in the next 2 weeks. The actions must also be specific. A specific action names a time indication, specific person, or specific means. Instead of “viewing vacancies”, a better action would be: “look for 2 suitable vacancies on Tuesday evening after dinner”.

Other examples of actions are: “Look up on Sunday afternoon where I want to take a course X”, “Inquire with my aunt on Thursday evening about her experiences in position X”.

When formulating an action, consider: What can you already do and what do you still want to learn to achieve a sub-goal? What are you missing to achieve your sub-goal, and how can you get it?
Example goal tree:



Space for notes (e.g. actions for assignment 3):

……
……
……

Note: The interventions tested in Chapter 5 were administered online via Qualtrics and subsequently the above assignments were optimized for that specific online environment. The interventions were administered in Dutch, and for the purpose of this dissertation translated to English by Google Translate (https://translate.google.com/).

Appendix 5B: the Exploration Intervention

We all sometimes think about the future and what we want and can become. People create mental images of different possible work futures.

Some people have one clear vision of their work future ("I'm going to be a dentist"), but many people have multiple possible futures in mind. For example, someone can imagine three different work futures, in which he or she is a visual artist, art teacher, or policy officer. Work futures may also be more distant. For example, someone can envision possible work futures as an IT consultant, polar expedition leader, and childcare worker.

We would like to ask you to imagine 3 possible (positive) work futures for you. Try to look as far into the future as possible, but in such a way that you can still see a somewhat clear picture of that future.

It can be difficult to imagine more than one work future. To get inspiration, you can think of, for example: What did you want to be when you were a child? What hobbies would you perhaps like to take up further or more seriously? What kind of work do your role models (if any) do? Have you done tasks in the past that you particularly enjoyed? What kind of work would you like to do if everything were possible?

Try to imagine 3 different work futures and not multiple variants of the same future ("department leader of department A in company X" is too close to "department leader of department B in company

What do your 3 work futures look like? In any case, describe below what your tasks/activities are per work future and what a normal working day might look like. Also consider things such as environment, atmosphere, commuting, transport, colleagues, building/office, etc.

Example:
Work future 1: *In this work future I have my own clothing store. It is only a small shop, but we sell enough and there is a nice atmosphere. As an owner, I am involved in the purchasing of clothing (traveling to manufacturers, assessing quality, negotiations), financial administration, and managing the staff. There is no such thing as a normal working day, but I enjoy the days most when I am in my store and can see customers enjoying what I have purchased.*

Again, to get inspiration you can think of, for example: What did you want to be when you were a child? What hobbies would you perhaps like to take a step further? What do any role models of yours do for work? Have you done tasks in the past that you particularly enjoyed? What would you like to do if everything were possible?

Assignment 1a
Describe your Work Future 1 in approximately 50 words:
……
……
……

Assignment 1b
Describe your Work Future 2 in approximately 50 words:
……
……
……

Assignment 1c
Describe your Work Future 3 in approximately 50 words:
……
……
……

Assignment 2
Great that we managed to come up with 3 work futures! For this follow-up assignment, we would like to ask you to consider these 3 work futures one by one. What do you think you need to make these work futures a reality? Think of skills and characteristics. But also resources such as information, money and space, or people in/outside your network.

Example:
Work Future 1: *To make this reality a reality, I still have to learn many skills, such as accounting, negotiating and leadership. But I think what would especially help me for this future is more self-confidence. I would also like to have more information, to know whether I have a realistic idea of what it means to have a clothing store. And of course I will need money and space to make my shop physically possible.*

a. What do you think you need to make this Future of Work 1 a reality?
   ……
   ……
   ……

b. What do you think you need to make this Future of Work 2 a reality?
   ……
   ……
   ……

c. What do you think you need to make this Future of Work 3 a reality?
   ……
   ……
   ……....

Assignment 3
Now that you have a more concrete picture of possible work futures and what is required for them, we would like to ask you to plan actions aimed at these work futures. The intention is that you plan 2 actions per work future that you will carry out **in the next two weeks** . An action should be a step towards realizing a work future. To come up with actions, it helps to look back at the skills, attributes, and resources you described in the previous assignment.

Example:
Actions for the future of work 1:1. My friends and family WhatsApp and call to ask if they know a clothing store owner I can get in touch with.2. Search online for online training courses that focus on entrepreneurship (and ideally self-confidence).

a. In assignment 2, you described skills, characteristics, and resources that you need for Work Future 1. What actions are you planning for the next two weeks to get closer to Work Future 1?
1. ……
……
2. ……
……

b. In assignment 2, you described skills, characteristics, and resources that you need for Work Future 2. What actions are you planning for the next two weeks to get closer to Work Future 2?
1. ……
……
2. ……
……

c. In assignment 2, you described skills, characteristics, and resources that you need for Work Future 3. What actions are you planning for the next two weeks to get closer to Work Future 3?
1. ……
……
2. ……
……

Note: The interventions tested in Chapter 5 were administered online via Qualtrics and subsequently the above assignments were optimized for that specific online environment. The interventions were administered in Dutch, and for the purpose of this dissertation translated to English by Google Translate (https://translate.google.com/).

Appendix 5C: Measurement Scales

Career Path Commitment

Reference: Carson, K. D., & Bedeian, A. G. (1994). Career commitment: Construction of a measure and examination of its psychometric properties. *Journal of Vocational Behavior, 44*(3), 237-262. https://doi.org/10.1006/jvbe.1994.1017

Items:

1. My line of work/career field an important part of who I am.
2. This line of work/career field has a great deal of personal meaning to me.
3. I do feel "emotionally attached" to this line of work/career field[11].
4. I strongly identify with my chosen line of work/career field.

Awareness of Career Goals

Reference: Gould, S. (1979). Characteristics of career planners in upwardly mobile occupations. *Academy of Management Journal, 22*(3), 539-550. https://doi.org/10.2307/255743

Items:

1. I have not really decided what my career objectives should be yet. (reverse-scored)
2. I have a plan for my career.
3. I have a strategy for achieving my career goals.
4. I know what I need to do to reach my career goals.
5. My career objectives are clear.[12]
6. I change my career objectives frequently. (reverse-scored)

Awareness of Career Options

Reference: Germeijs, V., & De Boeck, P. (2003). Career indecision: Three factors from decision theory. *Journal of Vocational Behavior, 62*(1), 11–25. https://doi.org/10.1016/S0001-8791(02)00055-6

Items:

1. I don't have an overview of the different alternatives *on the labor market* yet. (reverse-scored)
2. I can list the alternatives *for my career*.
3. I have an idea of the differences between the *career options*.
4. I know whether the characteristics of the alternatives correspond to the *things* I want to achieve.
5. I don't know if I am prepared for *all career options*. (reverse-scored)

Note. Italics denote edits made to constructs items that are more explicitly about career options.

[11] Originally, the scale includes "I do not feel "emotionally attached" to this line of work/career field". Adjustment was made to avoid reading errors among participants.

[12] Originally, the scale includes "My career objectives are not clear". Adjustment was made to avoid reading errors among participants.

Perceived Labor Market Demand

Reference: Wanberg, C. R., Hough, L. M., & Song, Z. (2002). Predictive validity of a multidisciplinary model of reemployment success. *Journal of Applied Psychology, 87*(6), 1100–1120. https://doi.org/10.1037/0021-9010.87.6.1100

Items:

1. There are plenty of jobs open in my field or type of work.
2. There is little demand for the type of skills I have. (reverse-scored)
3. There are many job openings in my area of work.
4. There are few jobs in my field. (reverse-scored)

Qualitative Job Insecurity

Reference: Langerak, J. B., Koen, J., & van Hooft, E. A. J. (2022). How to minimize job insecurity: The role of proactive and reactive coping over time. *Journal of Vocational Behavior, 136,* Article 103729. https://doi.org/10.1016/j.jvb.2022.103729

Items:

1. I worry about my career development.
2. I worry about my future pay development.
3. I worry about getting less stimulating work tasks in the future.
4. I feel insecure about what my work will look like in the future.

Note. All items were adapted so that they measure current job insecurity instead of job insecurity experienced during the past week. The original format started with: "Could you please indicate, how often you, in the last week…".

Chapter 6

General Discussion

Ongoing flexibilization of the labor market, technological advancements, and the enduring effects of the COVID-19 pandemic have led to an increasing prevalence of job insecurity among workers. This is a troubling development, because job insecurity is harmful to both individual well-being and organizational prosperity. Negative consequences include, inter alia, lower physical and psychological health, lower life satisfaction, and poorer organizational performance (Cheng & Chan, 2008; Jiang & Lavaysse, 2018; Sverke et al., 2002). To avert these negative outcomes, it is crucial to implement measures that reduce job insecurity. While ongoing initiatives at the policy and organizational levels (e.g., better employment protection) play a role in achieving this goal, it is equally important to acknowledge the agency of individual workers and explore how such workers can mitigate the experience of job insecurity by their own means. Therefore, throughout four empirical chapters (i.e., Chapters 2-5), this dissertation set out to uncover whether and how workers can minimize job insecurity through proactive coping. Specifically, I addressed three research questions aimed at uncovering how proactive coping manifests itself in the context of job insecurity (Research Question 1), whether such proactive coping can alleviate contemporary workers' experience of different types of job insecurity (Research Question 2a and 2b), and how resources play a role in this process (Research Question 3a, 3b, and 3c). Below, I shortly present the main findings of the four empirical chapters and then discuss these findings more elaborately in alignment with the research questions.

Main Findings

Chapter 2 described a 5-wave weekly survey study among 266 workers to assess whether proactive career behaviors (specifically: career planning, scenario thinking, career consultation, networking, and reflecting) could lower the experience of job insecurity (representing proactive coping, aimed at preventing or managing the stressor itself) and/or the psychological strain resulting from job insecurity (representing reactive coping, aimed at reducing the consequences of the stressor). The multilevel results showed that these behaviors were ineffective for both proactive and reactive coping purposes on a weekly basis. I concluded that the key difference between proactive and reactive coping may lie in the proposed function of coping efforts, rather than in the type of behavior or its effectiveness.

Chapter 3 described a meta-analytic review that synthesized data from 324 independent samples comprising over 300,000 workers to chart the relationships between various proactive coping efforts and job insecurity. The results showed that proactive coping of the engaged type

(e.g., voice behavior, positive reinterpretation) and of the adaptive disengaged type (e.g., recovery, mindfulness) related to lower levels of job insecurity, while proactive coping of the maladaptive disengaged type (e.g., avoidance, substance use) related to higher levels of job insecurity.

Chapter 4 described a 5-wave monthly survey study among 243 self-employed workers in which I developed and tested a cyclic model with proactive career behaviors, resources, and job insecurity. The within-level results indicated that monthly proactive coping minimized later job insecurity through the accumulation of career resources.

Chapter 5 described two online intervention studies among workers ($N_{S1} = 256$, $N_{S2} = 212$) with the aim to lower job insecurity through exploitation-based and exploration-based career planning. Although job insecurity was successfully decreased in Study 1, these intervention effects were not replicated in Study 2. I proposed that both career planning interventions may only be effective when workers feel a sense of necessity or "reason to" motivation to engage with their career future.

Discussion of Research Questions

How does Proactive Coping Manifest itself in the Context of Job Insecurity?

Proactive coping refers to the actions taken by individuals to avoid or confine potential stressful events or situations before they occur. The content of proactive coping is context-dependent, can consist of different kinds of behaviors, and the target stressor is not necessarily already identified (Aspinwall & Taylor, 1997). In Chapter 2 and Chapter 3, I applied two approaches to discern what proactive coping can entail among contemporary workers within the context of job insecurity.

First, in Chapter 2, I applied Aspinwall and Taylor's (1997) model of proactive coping to translate theoretical descriptions of proactive coping into specific behaviors and cognitions. Aspinwall and Taylor's (1997) model depicts five stages of proactive coping: resource accumulation, recognition, initial appraisal, preliminary coping, and the elicitation and use of feedback. Based on these stages I examined the proactive potential of career planning, scenario thinking, career consultation, networking, and reflecting. Following the finding that these behaviors did not lower later job insecurity in a matter of weeks, while not dismissing their proactive potential as illustrated by extant research (e.g., Koen & Parker, 2020; Koen & van Bezouw, 2021), I concluded that behavior can be considered proactive if the goal is to contain or

minimize potential stressors. However, behaviors do not need to be effective in containing or minimizing stressors in order to "count" as proactive coping: such effectiveness is an empirical matter. Therefore, Chapter 2 asserted that the distinction between proactive and reactive coping lies in the intended purpose rather than the nature of behaviors. This suggest that, theoretically, identical behaviors can serve both reactive and proactive purposes. In essence, if behaviors have the intention to impact job insecurity, they can be regarded proactive coping, regardless of their demonstrated (in)effectiveness or potential for a reactive purpose.

In Chapter 3, I further built on the above notion that any behavior with the goal to impact job insecurity can be considered proactive coping. Based on Aspinwall and Taylor's (1997) assertion that proactive coping functions through influencing situations or one's position within them, I expanded the concept of proactive coping to encompass not only efforts that target job insecurity directly but also indirectly. As such, I defined proactive coping in the context of job insecurity as 'any behavior or thought that may change (one's position in) the work situation and may consequently influence future job insecurity'. Using this definition as a foundation, I conducted a systematic review that yielded a proactive coping framework (see Table 6.1 for a summary). This framework categorizes both behavioral and cognitive efforts based on their level of engagement with the work situation (engaged or disengaged). Additionally, for cognitive efforts, it distinguishes between a generally adaptive and maladaptive form. According to this framework, proactive coping in the context of job insecurity manifests itself in various efforts, of which proactive career behaviors form only a part of all possible proactive coping efforts in the context of job insecurity. In addition, while proactivity has often been considered as exclusively engaged[13], the framework suggests that proactive coping – in the same way as reactive coping – can also be disengaged. For example, recovery and avoidance can function the goal of lowering job insecurity by not thinking about the potential future work situation. At the same time, while serving the same purpose, these proactive coping efforts likely influence (one's position in) the future work situation in different ways (i.e. adaptive and maladaptive correspondingly).

[13] The Oxford English Dictionary defines proactivity as: "creating or controlling a situation by taking the initiative and anticipating events or problems, rather than just reacting to them after they have occurred".

Table 6.1

Framework of Proactive Coping in the Context of Job Insecurity

Category	Examples
Behavioral engagement All behavioral efforts that may influence levels of job insecurity, that are aimed at changing the work situation or one's position in it.	Job performance, increased work efforts, organizational citizen behaviors, proactive career behaviors, innovative work behaviors, voice behaviors.
Mental engagement All cognitive efforts that may influence levels of job insecurity, that are aimed at changing the work situation or one's position in it.	Cognitive restructuring, e.g., positive reinterpretation, accommodation, self-enhancing humor. Adaptive thoughts that go with adaptive performance, compliance, cooperation, and championing.
Behavioral disengagement All behavioral efforts that may influence levels of job insecurity, that are not aimed at changing the potential work situation or one's position in it.	**Adaptive**: General recovery and self-care; all behaviors aimed at healthy recovery and relaxation, such as sleep and exercise.
	Maladaptive: Counterproductive work behaviors, giving up, being absent from work, substance use.
Mental disengagement All cognitive efforts that may influence levels of job insecurity, that are not aimed at changing the potential work situation or one's position in it.	**Adaptive**: Detachment from work after working hours, mindful behavior
	Maladaptive: Avoidance; trying not to think about the current or future situation. Rumination and self-blame.

So, to answer the first overall research question how proactive coping manifests itself in the context of job insecurity among contemporary workers, I conclude that proactive coping can involve any behavioral or cognitive effort that may change the future work situation or one's position in it. This effort does not have to specifically target job insecurity and can be part of a broader approach influencing a range of unknown or unfolding future stressors. By discerning what proactive coping entails in the context of job insecurity among contemporary workers, this dissertation expands the scientific narrative on proactive coping, by proposing that proactive coping is not necessarily engaged or effective, and can involve the same behaviors and cognitions as reactive coping. As such, I have created a starting point for future research to further investigate how workers can cope with job insecurity and other stressors in a proactive – rather than the traditional reactive – manner.

In addition, I have opened up the conversation about what types of proactive coping can be discerned and subsequently point towards potential disengaged forms of proactive coping that may be either adaptive and improve (one's position in) potential stressful situations, or maladaptive and deteriorate (one's position in) potential stressful situations.

Can Proactive Coping Alleviate Contemporary Workers' Experience of Job Insecurity?

The previous section explained that proactive coping with job insecurity can entail any behavioral or cognitive effort that may change the work situation or one's position in it and subsequently job insecurity – yet, these efforts do not need to be inherently effective. To advance our understanding about the effectiveness of proactive coping in relation to containing job insecurity, the current dissertation utilized a variety of research designs, methods, samples, and time horizons throughout the four empirical chapters. Below, I will first outline the findings regarding which forms of proactive coping may help to manage or mitigate job insecurity (Research Question 2a), after which I will address whether such proactive coping efforts should be aligned with the type of job insecurity one aims to manage (Research Question 2b).

Relationships Between Proactive Coping and Job Insecurity

The meta-analytic results from Chapter 3 indicated that, generally speaking, engaged proactive coping efforts, such as voice behavior ($\bar{r}$ = -0.26) and cognitive restructuring ($\bar{r}$ = -0.15), can help to contain job insecurity, as well as adaptive disengaged proactive coping efforts such as mindfulness ($\bar{r}$ = -0.31) and recovery ($\bar{r}$ = -0.21). Maladaptive disengaged proactive coping, such as counterproductive work behaviors ($\bar{r}$ = 0.26) and avoidance ($\bar{r}$ = 0.15), showed opposite relations. Such disengaged proactive coping is not only ineffective but even relates to aggravated feelings of job insecurity.

Somewhat unexpectedly in light of previous findings (e.g., Koen & Parker, 2020; Koen & Van Bezouw, 2021), proactive career behaviors seemed to form an exception to other engaged proactive coping efforts, as we found no significant relationship between these engaged coping behaviors and job insecurity ($\bar{r}$ = -0.03). Yet, moderation analyses revealed that proactive career behaviors can be effective depending on the circumstances: when there was no announced or ongoing reorganization proactive career behavior helped to minimize job insecurity ($\bar{r}$ = -0.07), but when there were announced or ongoing reorganizations, proactive career behavior was associated with higher levels of job insecurity ($\bar{r}$ = 0.19). This may imply that proactive coping

needs to be initiated timely – i.e., before (organizational) changes are announced rather than during or after. Proactive career behavior may then prevent the further deterioration of situations or help to better prepare for them. However, as the meta-analytic synthesis included mostly cross-sectional studies, this result on its own leaves room for a potential reversed causality: workers who face a reorganization and feel more insecure about retaining their jobs may be more likely to engage in proactive career behavior.

The findings from Chapter 2 and 4 offer more insight into the direction and potential boundary conditions of the relationship between proactive career behavior and job insecurity by using longitudinal designs. The results from Chapter 2 showed that workers who used more proactive career behavior throughout the 5-*week* research period, experienced more – rather than less – job insecurity than other workers. In contrast, the results from Chapter 4 show that the amount of proactive career behavior was related to lower levels of job insecurity in subsequent *months*, and that workers who used more proactive career behaviors throughout the 5-*month* research period experienced less job insecurity than other workers. Similar results were reported by El Khawli and colleagues (2022), who found that planning can mitigate later job insecurity over the course of a month.

Together, these three studies imply that the potential effects of proactive career behavior may not be immediate or visible in a matter of weeks. Instead, it may take months before proactive career behavior can initiate change in (one's position in) the work situation and consequently influence future job insecurity. However, it remains a possibility that proactive career behavior has more immediate effects when it is initiated more timely, before potential stressors are identified (cf. Aspinwall & Taylor, 1997). The research from El Khawli and colleagues (2022) and Chapters 2 and 4 from this dissertation all involved studies that were conducted during the COVID-19 pandemic, a period characterized by changes and reorganizations to adapt to a changed work environment. To address the question whether proactive career behavior has more immediate positive effects when initiated before stressors are identified, future research can further investigate proactive coping with job insecurity with repeated-measures designs applied among samples with and without already identified work stressors.

In addition to the longitudinal studies presented in Chapter 2 and 4, Chapter 5 presented two experimental studies that offer information regarding the potential direction and boundary conditions of the relationship between proactive career behaviors and job insecurity. While Study

1 supported the idea that proactive career behavior in the form of career planning lowers job insecurity, this finding was not replicated in Study 2. These inconsistent results indicate, again, that there may be boundary conditions for proactive coping that have yet to be identified. Considering that Study 1 was conducted during the COVID-19 pandemic and Study 2 was conducted during labor market shortages, proactive career behavior may only be effective when workers feel a sense of necessity or "reason to" motivation to engage with their career future (Parker at al., 2010). That is, if workers perceive they may find or sustain a job with desirable job features regardless of their efforts, proactive career behavior may be less or ineffective. As of yet, this remains speculation and further research addressing the influence of contextual factors on the effectiveness of proactive career behavior and other forms of proactive coping is required.

Proactive Coping with Different Types of Job Insecurity

While the joint results of this dissertation show that proactive coping may alleviate workers' experience of job insecurity in the long run (i.e., in a matter of months) and when certain boundary conditions are met, the question remains which type of job insecurity can (best) be targeted with proactive coping. The findings from Chapter 2 and 3 help to answer this question. Chapter 2 showed similar between- and within-level results for all four types of job insecurity, with one exception: at the between-level, proactive coping did not relate to cognitive qualitative job insecurity. This may imply that proactive coping is less effective in managing cognitive qualitative job insecurity than other forms of job insecurity. Yet, in line with the within-level results from Chapter 2, the meta-analytic results from Chapter 3 showed no meaningful differences in the relationship between proactive coping and different types of job insecurity. Despite these findings, we cannot yet conclude that proactive coping minimizes all types of job insecurity to an equal extent, because the included primary studies mostly concerned quantitative (rather than qualitative) and cognitive (rather than affective) job insecurity. Such a conclusion would require meta-analytic moderator analyses with more statistical power. To achieve this, more primary studies that include measures of qualitative and affective job insecurity are required.

In conclusion, can proactive coping alleviate workers' experience of job insecurity? The findings from this dissertation suggest it can. In general, proactive coping in the form of engagement and adaptive disengagement (e.g., voice behavior, job performance, mindfulness) relate to less job insecurity. Specifically, engaged proactive coping in the form of proactive career behavior (e.g., career planning, skill development, career consultation) relate to less job insecurity

over the course of (at least) one month. Yet, the effectiveness of proactive coping may also depend on boundary conditions such as a sense of necessity to engage with one's future career. The findings further suggest that proactive coping relates similarly to different job insecurity types, although the available research on qualitative and affective job insecurity is still relatively scarce.

As such, this dissertation extends prior research by indicating which proactive coping efforts may help workers to manage and minimize their experience of job insecurity by their own means. In addition, it open ups our thinking of Aspinwall and Taylor's (1997) concept of proactive coping by unpacking which forms of proactive coping may negatively affect the future. For example, maladaptive disengaged coping such as counterproductive work behaviors and avoidance go together with increased job insecurity, perhaps because these proactive behaviors inadvertently influence one's position in the work situation in a negative way. Altogether, the findings of this dissertation illustrate what behaviors and cognitions workers should use and avoid in order to manage and minimize their experience of job insecurity.

What is the Role of Resources in the Relation Between Proactive Coping and Job Insecurity?

In the general introduction I proposed three ways in which resources may play a role in the relationship between proactive coping and job insecurity: as a mediator between proactive coping and job insecurity (Research Question 3a), as a moderator between proactive coping and job insecurity (Research Question 3b), or as a antecedent of proactive coping (Research Question 3c). Below I will first address our findings with regard to each question separately, after which I integrate these findings to formulate a comprehensive answer.

The Mediating Role of Resources

In Chapter 2, the expectation was that (engaged) proactive coping such as career planning or career consultation would directly affect workers' level of job insecurity within a matter of days or weeks. Because we found no empirical support for this hypothesis, we surmised that proactive coping may need more time to establish effects. That is, it may take a while before proactive coping results in the resources necessary to manage feelings of job insecurity. This aligned with suggestions from previous research that proactive coping may only be beneficial in the long term, because new resources have to be gained first (Bolino et al., 2010; Cangiano et al., 2021; Giunchi et al., 2019). For example, networking may cost time and resources, but days or weeks of networking may not immediately result in a large and reliable network. Chapter 4 tested this

expected mediation of resources. The findings indicated that monthly proactive coping efforts related to higher career resources in subsequent months, and that these career resources were, in turn, related to decreased feelings of job insecurity. Chapter 5 also provided some support for the idea that resources (this time in the form of goal awareness and option awareness) can minimize feelings of job insecurity, as a negative relation was found between goal/option awareness and later qualitative job insecurity.

The Moderating Role of Resources

This dissertation also investigated whether the availability of resources can act as a moderator in the relationship between proactive coping and job insecurity. This was based on Aspinwall and Taylor's (1997) proposition that the more resources one has, the more likely it is that one's proactive coping efforts will be effective in containing or minimizing potential stressors. For example, it may be easier to recognize a situation that may develop into a future stressor for those who can draw upon an extensive social network to receive information from. The results from Chapter 2 somewhat support this premise. That is, the between-level findings showed that the positive (rather than negative) relationship between proactive coping and job insecurity was weaker for workers high in career and financial resources. As such, I concluded that proactive coping is more harmful in the short term for workers with relatively few resources.

Resources as Antecedent of Proactive Coping

Lastly, this dissertation investigated whether the availability of resources could function as an antecedent of proactive coping. Specifically, Chapter 4 investigated whether resource loss would impede proactive coping in the same manner that reactive coping is impeded by resource loss, as both types of coping require an investment of resources (Aspinwall & Taylor, 1997; Hobfoll, 1989). Contrary to the expectations, the findings showed no support for a paralyzing effect of resource loss, although the overall findings did point towards the benefit of resource gain: recovery experiences were found to be a significant antecedent of more proactive coping.

All in all, regarding the role of resources in the relation between proactive coping and job insecurity, this dissertation shows that resources can have multiple roles. First, the findings from Chapter 4 show that the accumulation of resources can function as a mediating mechanism in the relationship between proactive coping and job insecurity. This is in line with the theory that proactive coping creates positive outcomes only in the (relatively) long term, because

accumulating the resources that foster effective proactive coping takes time. Second, the findings from Chapter 2 show that the availability of resources may change the relationship between proactive coping and job insecurity: workers with fewer resources, experience more initial job insecurity from proactive coping than workers with larger amounts of resources. Lastly, the findings of Chapter 4 suggest that the availability of resources (in the form of recovery experiences) can foster the use of proactive coping.

Practical Recommendations

The joint findings of this dissertation have at least three implications for practice. First, proactive coping is more difficult for workers who need the beneficial outcomes of proactive coping the most (i.e., workers with relatively little resources). It is therefore of utmost importance that employers protect workers from potential loss spirals, and that (semi-)public organizations support workers who are already experiencing such a downward spiral. Second, effective proactive coping is not a one-time effort; both employers and workers themselves should keep in mind that the needed accumulation of resources requires prolonged use of proactive coping efforts. Third, because proactive coping requires the investment of resources, individuals are advised to counteract the short-term resource loss by creating new resources, for example through recovery and mindfulness activities. Below, I discuss each implication in further detail.

Protect Vulnerable Workers from Loss Spirals

The findings from this dissertation show that, in the short term, proactive coping can disproportionately burden workers with fewer career resources with additional job insecurity and psychological strain. At the same time, the findings indicate that the positive effects of proactive coping may only become visible after several months of proactive coping efforts, because accumulating new (career) resources takes time. As such, we must be vigilant that workers low in resources, who subsequently need the benefits of proactive coping the most, are not hindered in their continued proactive coping efforts due to the initial increase in job insecurity they may experience. Otherwise, they may be at risk of a so-called Matthew effect, in which individuals who lack resources are less able to acquire new resources, eventually leading to loss spirals in which individuals who lack resources are more at risk for additional resource loss (Hobfoll, 1989). We are not the first to uncover potential loss spirals among workers who experience job insecurity: Vander Elst and colleagues (2018) showed that job insecurity is not only related to later depressive

symptoms, but that such depressive symptoms aggravate later job insecurity as well. In addition, De Cuyper and colleagues (2012) showed that job insecurity is not only related to lower employability, but that lower employability created more job insecurity as well. These findings are reflected in Hirschi and Koen's (2021) review, where the authors urge future research to further examine loss spirals associated with the role of resources in career self-regulation.

The potential risk of loss spirals for workers low in career resources may impair them to such an extent that proactive coping becomes impossible due to an unavailability of resources. On a larger scale, these processes may exacerbate existing inequality in our society. It is therefore important that workers in such positions of resource scarcity are supported to find their way back up. For example, organizations can take measures to contain the negative impact of job insecurity among workers by good communication and participation strategies (Jiang & Probst, 2014; Vander Elst et al., 2010). Public and semi-public organizations can take measures to provide workers with relatively few resources with some sort of "start-up resources", from which they can further grow their resources independently. For example, these individuals may benefit from financial support, education (e.g., education sponsored by the government; STAP budget, 2023), career guidance (e.g., professional career guidance sponsored by the government; Rijksoverheid, 2020), or a combination of such measures. This way, workers are enabled to manage their job insecurity through proactive coping despite their scarcity of resources.

Prolonged Proactive Coping: Apply Routinization and Modest Effort

The finding that proactive coping may only help to minimize job insecurity after several months, after a successful accumulation of resources has taken place, points towards the importance of helping workers to sustain their proactive coping efforts over time. One possible way to ease proactive coping lies in routinization: developing habits which make corresponding behaviors less resource consuming (Ohly et al., 2006). Proactive coping requires the investment of personal resources (e.g., energy, mental capacity). Routinizing proactive coping (e.g., asking one's supervisor about organizational developments out of habit) may make it less resource consuming, and hence, easier to sustain. Organizations or career counselors can help such routinization processes by making opportunities for proactive coping reoccurring. For example, through reserving biweekly or monthly moments to reflect on one's goals and progress towards them. Stimulating proactive coping only when there is an imminent threat of job loss is strongly

discouraged, as workers may then lack both the mental capacity and time to be able to benefit from this proactive coping (Shin et al., 2019).

A related, but somewhat different means to make proactive coping less resource consuming lies in spreading proactive coping efforts out over time, rather than using a lot of proactive coping at once (e.g., in a sudden rush). Sudden increases in proactive coping are shown to relate to increased burnout symptoms in the form of exhaustion (Zacher et al., 2019). Using a moderate amount of proactive coping for prolonged periods of time will render information and may help manage stressors, without it being overly resource depleting. Additionally, it may prevent the potential downside of using too much proactive coping: proactive career behavior such as scenario-thinking, reflecting, and career planning may result in rumination, absorption in the past, or anxieties about the future when applied too extensively (Cangiano et al., 2019; Pingel et al., 2019; Richter et al., 2020).

Prolonged Proactive Coping: Counteract Short-term Resource Loss

While making proactive coping less resource consuming is one way to help sustain proactive coping for prolonged periods of time, another promising strategy lies in pursuing activities that are aimed at replacing lost resources. The findings of this dissertation indicate that recovery experiences, such as detachment, relaxation, mastery, and control (Sonnentag & Fritz, 2007), foster workers' ability to engage proactive coping. This may imply that such recovery experiences can replenish or compensate lost personal resources (Hobfoll et al., 2018). Recovery can be fostered through training (cf. Hahn et al., 2011), but the organizational context also plays a role: time pressure and role ambiguity prohibit employee recovery (Chawla et al., 2020). In addition, based on the proactive coping framework I have proposed (see Table 6.1), any adaptive form of disengaged proactive coping (e.g., mindfulness) may help compensate for resource loss as they are – in theory – expected to improve worker's position in the work situation (which generally implies a larger availability of resources). This underlines the importance of incorporating a certain amount of non-work activities in worker's lives to enable the accumulation of resources that help offset setbacks and contribute to building a sustainable career. This can be outside of working hours, but organizations are also increasingly creating room for mindfulness training inside the workplace considering its positive effects on employee health and productivity (cf. Johnson et al., 2020).

Future Research Directions

In investigating whether and how workers can manage or minimize job insecurity through their own proactive coping efforts, this dissertation also brought forward important questions that still need to be answered. More specifically, how can we know if behaviors included in research are truly proactive when individuals are not asked about their underlying intentions? How does proactive coping relate to other forms of career proactivity concepts such as job crafting and employability? And lastly, while we recommend individual workers to use proactive coping, to what extent can and should organizations and institutions cope more proactively with potential setbacks? I have outlined my thoughts on these questions below.

A Measure for Proactive Coping

In the discussion of this dissertation's research questions, I concluded that proactive coping among contemporary workers may involve any behavioral or cognitive effort that may change the future work situation or one's position in it. While such efforts should have the goal to contain or minimize potential stressors, this goal does not have to involve one particular stressor and pursuing this goal may not always be a rational decision. The latter may particularly apply to maladaptive disengaged proactive coping: avoiding thoughts about the future development of the situation may be more an automatic "pre-sponse" to circumvent thoughts that would induce negative feelings such as job insecurity, rather than a conscious decision aimed at minimizing job insecurity. While it may appear difficult to measure the underlying goal of behaviors when these are not always consciously decided upon, a similar challenge has been brought forward decades ago when formulating the traditional theory of coping with stress and designing corresponding measures (e.g., Carver et al., 1989; Folkman et al., 1986; Lazarus, 1966). These scales include items to assess both conscious and unconscious responses to existing stressors. As such, I recommend future research to construct and investigate the potential of similar scales pertaining to potential future stressors.

A proactive coping scale that includes the future focus inherent to proactive coping, would help advance our understanding of proactive coping. While I investigated behavioral and cognitive efforts that can theoretically function as proactive coping, a proactive coping scale can more objectively assess whether individuals' efforts have proactive purposes. Based on this dissertation, I suggest that such a scale consists of sub-scales depicting the categories of the proposed proactive coping framework (see Table 6.1), so that not only adaptive but also maladaptive proactive coping

strategies and their impact can be further investigated. Ideally, this proactive coping scale would be focused on undefined future stressors (e.g., "a potential setback" or "future threats") and can be adjusted to target specific (career) threats. As such, the concept of proactive coping may not only be a valuable contribution within the context of careers, but also in other contexts in which individuals' are subjected to potential future threats such as climate change and its consequences.

Proactive Coping and Other Forms of Career Proactivity

Not too long ago, Jiang and colleagues (2023) published a literature review on career proactivity. In their review they presented an overview of key concepts pertaining to career proactivity (e.g., proactive career behavior, career self-management, career adaptivity), which they define as "an individual's self-initiated and future-oriented actions aiming to influence, change, and improve career circumstances including the situation and the self". In response to their review, Akkermans and Hirschi (2023) note that – while endorsing their proposed definition – several of the presented key concepts in the review are not behavioral, but instead represent individual characteristics, attitudes, competencies, and resources (e.g., employability, career optimism, protean career orientation). This discrepancy may coincide with Jiang and colleagues' (2023) notion that the careers literature does not offer one overall theory that can guide proactivity research in all career-related contexts. Their review contains research stemming from multiple theoretical subdomains and synthesizing all these concepts into one definition would be very difficult, if not impossible.

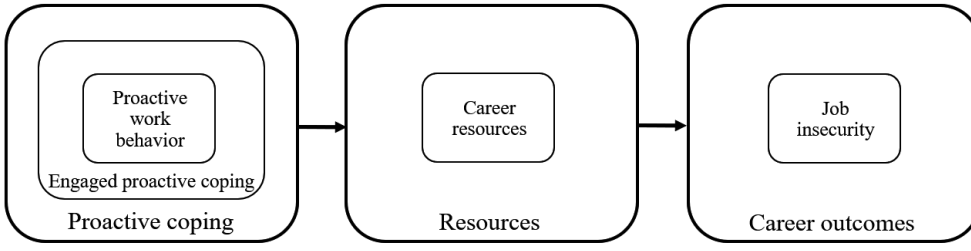
In this dissertation, however, I have focused specifically on proactive coping within careers, which I defined and investigated as cognitive and behavioral efforts that may change the work situation or one's position in it. More importantly, this specific form of proactivity does have its foundation in one overall theory that can guide research within, and even beyond, career-related contexts: proactive coping theory (Aspinwall & Taylor, 1997). In addition, throughout this dissertation, I have revealed how proactive coping may relate to resources and outcome variables. This provides preliminary answers regarding the questions posed by Akkermans and Hirschi (2023), pertaining to whether proactivity enhances career outcomes directly or indirectly (indirectly, via the accumulation of career resources, cf. Chapter 4), potential downsides of proactivity due to resource loss (proactive coping results in increased job insecurity and strain in the short term, cf. Chapter 2), and whether other life domains such as leisure influence proactive coping (they do, recovery experiences stimulate proactive coping, cf. Chapter 4). However, the

findings of this dissertation are limited to proactive coping, and additional research is required to assess to what forms of proactivity these findings can and cannot be generalized.

While Jiang and colleagues (2023) mention in their review that overlapping proactivity concepts may reflect a jangle fallacy, an unjustified belief that things are different from each other because they are called by different names, I suspect that the overlap in concepts may be a correct representation of reality in which certain phenomena do, in fact, overlap. For example, in the current dissertation I established that proactive career behavior is a form of engaged proactive coping, which in turn is a subtype of proactive coping (see Figure 6.1). I concur with Jiang and colleagues' (2023) suggestion that a comprehensive meso-level theory of career proactivity, in which individual and contextual influences and characteristics are integrated, may bring clarity that can help the field forward. However, I advise, firstly, that such future research efforts aimed at integrating and "cleaning up" the career proactivity literature make sure that they do not overlook the existence and potential value of overlapping concepts. Secondly, I ask future researchers not to neglect cognitive efforts, as proactivity may not be solely behavioral.

Figure 6.1

Overlapping Concepts Regarding Proactive Coping in the Careers Context



Proactive Coping at Organizational Levels

Throughout this dissertation I have positioned proactive coping as efforts initiated by individuals. However, both the original definition of proactive coping ("efforts undertaken in advance of a potentially stressful event to prevent it or to modify its form before it occurs", Aspinwall & Taylor, 1997) and the definition I proposed for the career context ("efforts that may change the future work situation or one's position in it") do not exclude the possibility that proactive coping can be initiated by higher-level agents such as organizations and institutions.

Proactive coping at the organizational level can be found in literature on crisis management, but our understanding and application of organizational-level proactive coping remains scarce. While Pearson and Mitroff (1993) put forward the question "Is it enough to be reactive or does one need to be proactive?" as a major issue to consider for crisis management, later literature on crisis management seems to attach less importance to proactivity (Wu et al., 2021).

Rightfully, Bundy and colleagues (2017) note the opportunity for future research to recognize that crisis management "best practices" may go unnoticed when scholars only focus on examining crises that have occurred, as organizations who have proactively averted crises may subsequently fall out of the picture. Notably, this is exactly what Aspinwall and Taylor (1997) warned for in their seminal article, applied to the organizational level: proactive coping may often go unstudied because stressors are generally the starting point of coping research. I suspect that a better understanding of organizational proactive coping, both in engaged and disengaged forms, can help prevent crises and other negative (organizational) events. Organizational proactive coping, such as scenario planning (Hillman et al., 2018), is likely to have a much larger impact than individual proactive coping can realize. Pearson and Mitroff (1993) wrote that "With very few exceptions, crises leave a trail of early warning signals. Unfortunately, we have found that in many cases, organizations not only ignore such signals, but may actually exert considerable efforts to block them" (p. 52). If we can uncover how organizations can act more proactively, many stressors can be averted which are beyond the grasp of individuals. However, as it is impossible to prevent all stressors, workers' proactive coping efforts remain a valuable means to manage or contain potential stressors and their corresponding negative consequences.

Conclusion

Job insecurity is on the rise among contemporary workers. While policy and organizational initiatives play a role, this dissertations shows that individual workers, can mitigate job insecurity through proactive coping. I argued that proactive coping is not inherently effective, but is more likely to be effective when manifested as engagement and adaptive disengagement – a proposition supported by the meta-analytic results in Chapter 3. Longitudinal findings from Chapters 2 and 4 illustrate the efficacy of engagement in the form of proactive career behaviors. Although these behaviors may not immediately alleviate job insecurity, over a period of months they can accumulate the resources that help contain or minimize later job insecurity. However, the findings also suggest the need for further exploration of the conditions that foster the effectiveness of

proactive coping in the context of job insecurity. Simply instructing workers to engage in proactive coping, as demonstrated in Chapter 5 with different career planning interventions, appears insufficient to prompt a change in their experience of job insecurity.

In summary, this dissertation underlines that, even amid significant external factors like ongoing flexibilization processes and COVID-19-related restrictions, individual workers can assert influence on their future experience of job insecurity through their own proactive measures. Although proactive coping may initially result in a stronger experience of job insecurity, months of continued proactive coping can provide the resources that help contain or minimize the experience of job insecurity in the long term. As such, I conclude with the opening quote of my dissertation:

"It may seem difficult at first, but all things are difficult at first"

– Miyamoto Musashi[14]

[14] Japanese master swordsman (1584 – 1645), who believed that the True Warrior masters many art forms away from that of the sword, such as drinking tea, philosophizing, writing, and painting.

References

Alisic, A., & Wiese, B. S. (2020). Keeping an insecure career under control: The longitudinal interplay of career insecurity, self-management, and self-efficacy. *Journal of Vocational Behavior, 120*, Article 103431. https://doi.org/10.1016/j.jvb.2020.103431

Almahendra, R., & Ambos, B. (2015). Exploration and exploitation: a 20-year review of evolution and reconceptualization. *International Journal of Innovation Management, 19*(1), https://doi.org/10.1142/S1363919615500085

Akkermans, J., & Hirschi, A. (2023). Career proactivity: Conceptual and theoretical reflections. *Applied psychology*, *72*(1), 199-204. https://doi.org/10.1111/apps.12444

Akkermans, J., Seibert, S. E., & Mol, S. T. (2018). Tales of the unexpected: Integrating career shocks in the contemporary careers literature. *SA Journal of Industrial Psychology, 44*(1), 1-10. https://doi.org/10.4102/sajip.v44i0.1503

Aspinwall, L. G., & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin, 121*(3), 417–436. https://doi.org/10.1037/0033-2909.121.3.417

Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology, 22*(3), 273–285. https://doi.org/10.1037/ocp0000056

Bakker, A. B., & Wang, Y. (2020). Self-undermining behavior at work: Evidence of construct and predictive validity. *International Journal of Stress Management, 27*(3), 241–251. https://doi.org/10.1037/str0000150

Bandler, R., Keay, K. A., Floyd, N., & Price, J. (2000). Central circuits mediating patterned autonomic activity during acttive vs. passive emotional coping. *Brain Research Bulletin, 53*(1), 95–104. https://doi.org/10.1016/S0361-9230(00)00313-0

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes, 50*(2), 248–287. https://doi.org/10.1016/0749-5978(91)90022-L

Bazzoli, A., & Probst, T. M. (2022a). Taking stock and moving forward: A textual statistics approach to synthesizing four decades of job insecurity research. *Organizational Psychology Review, 12*(4), 507-544. https://doi.org/10.1177/20413866221112386

Bazzoli, A., & Probst, T. M. (2022b). Vulnerable workers in insecure jobs: A critical meta-synthesis of qualitative findings. *Applied Psychology, 72*(1), 85-105. https://doi.org/10.1111/apps.12415

Benz, M., & Frey, B. S. (2008). The value of doing what you like: Evidence from the self-employed in 23 countries. *Journal of Economic Behavior & Organization, 68*(3), 445-455. https://doi.org/10.1016/j.jebo.2006.10.014

Bindl, U. K., Parker, S. K., Totterdell, P., & Hagger-Johnson, G. (2012). Fuel of the self-starter: How mood relates to proactive goal regulation. *Journal of Applied Psychology, 97*(1), 134–150. https://psycnet.apa.org/doi/10.1037/a0024368

Binnewies, C., Sonnentag, S., & Mojza, E. J. (2010). Recovery during the weekend and fluctuations in weekly job performance: A week-level study examining intra-individual relationships. *Journal of Occupational and Organizational Psychology, 83*(2), 419–441. https://doi.org/10.1348/096317909X418049

Bolino, M., Valcea, S., & Harvey, J. (2010). Employee, manage thyself: The potentially negative implications of expecting employees to behave proactively. *Journal of Occupational and Organizational Psychology, 83*(2), 325–345. https://doi.org/10.1348/096317910X493134

Borenstein, M., Hedges, L., Higgins, J., & Rothstein, H. (2013). *Comprehensive Meta-Analysis Version 3 (CMA).* SAS Institute Inc.

Brannick, M. T., Potter, S. M., Benitez, B., & Morris, S. B. (2019). Bias and precision of alternate estimators in meta-analysis: Benefits of blending Schmidt-Hunter and Hedges approaches. *Organizational Research Methods, 22*(2), 490-514. https://doi.org/10.1177/1094428117741966

Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017). Crises and crisis management: Integration, interpretation, and research development. *Journal of management*, *43*(6), 1661-1692. https://doi.org/10.1177/0149206316680030

Cafri, G., Kromrey, J. D., & Brannick, M. T. (2010). A meta-meta-analysis: Empirical review of statistical power, type I error rates, effect sizes, and model selection of meta-analyses published in psychology. *Multivariate Behavioral Research, 45*(2), 239–270. https://doi.org/10.1080/00273171003680187

Cangiano, F., Parker, S. K., & Ouyang, K. (2021). Too proactive to switch off: When taking charge drains resources and impairs detachment. *Journal of Occupational Health Psychology, 26*(2), 142–154. https://psycnet.apa.org/doi/10.1037/ocp0000265

Cangiano, F., Parker, S. K., & Yeo, G. B. (2019). Does daily proactivity affect well-being? The moderating role of punitive supervision. *Journal of Organizational Behavior, 40*(1), 59-72. https://psycnet.apa.org/doi/10.1037/ocp0000265

Carson, K. D., & Bedeian, A. G. (1994). Career commitment: Construction of a measure and examination of its psychometric properties. *Journal of Vocational Behavior, 44*(3), 237–262. https://doi.org/10.1006/jvbe.1994.1017

Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology, 61*, 679–704. https://doi.org/10.1146/annurev.psych.093008.100352

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267-283. https://doi.org/10.1037//0022-3514.56.2.267

Centraal Bureau van de Statistiek (CBS) (2020). *Flexwerk in Nederland en de EU.* https://www.cbs.nl/nl-nl/dossier/dossier-flexwerk/flexwerk-in-nederland-en-de-eu

Chawla, N., MacGowan, R. L., Gabriel, A. S., & Podsakoff, N. P. (2020). Unplugging or staying connected? Examining the nature, antecedents, and consequences of profiles of daily recovery experiences. *Journal of Applied Psychology, 105*(1), 19–39. http://dx.doi.org/10.1037/apl0000423

Cheng, G. -H. L., & Chan, D. K. S. (2008). Who suffers more from job insecurity? A meta-analytic review. *Applied Psychology: An International Review*, *57*(2), 272–303. https://doi.org/10.1111/j.1464-0597.2007.00312.x

Cheng, T., Mauno, S., & Lee, C. (2014). The buffering effect of coping strategies in the relationship between job insecurity and employee well-being. *Economic and Industrial Democracy, 35*(1), 71–94. https://doi.org/10.1177/0143831X12463170

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management, 31*(6), 874–900. https://doi.org/10.1177/0149206305279602

Darvishmotevali, M., & Ali, F. (2020). Job insecurity, subjective well-being and job performance: The moderating role of psychological capital. *International Journal of Hospitality Management, 87*, https://doi.org/10.1016/j.ijhm.2020.102462

De Cuyper, N., & De Witte, H. (2006). The impact of job insecurity and contract type on attitudes, well-being and behavioural reports: A psychological contract perspective. *Journal of Occupational and Organizational Psychology, 79*(3), 395–409. https://doi.org/10.1348/096317905X53660

De Cuyper, N., Mäkikangas, A., Kinnunen, U., Mauno, S., and Witte, H. (2012). Cross-lagged associations between perceived external employability, job insecurity, and exhaustion: testing gain and loss spirals according to the Conservation of Resources Theory. *Journal of Organizational Behavior, 33*(6), 770-788. https://doi.org/10.1002/job.1800

De Witte, H. (1999). Job insecurity and psychological well-being: Review of the literature and exploration of some unresolved issues. *European Journal of Work and Organizational Psychology*, *8*(2), 155–177. https://doi.org/10.1080/135943299398302

De Witte, H. (2005). Job insecurity: Review of the international literature on definitions, prevalence, antecedents and consequences. *SA Journal of Industrial Psychology, 31*(4), 1-6. http://dx.doi.org/10.4102/sajip.v31i4.200

De Witte, H., De Cuyper, N., Handaja, Y., Sverke, M., Näswall, K., & Hellgren, J. (2010). Associations between quantitative and qualitative job insecurity and well-being: A test in Belgian banks. *International Studies of Management and Organization, 40*(1), 40–56. https://doi.org/10.2753/IMO0020-8825400103

De Witte, H., Pienaar, J., & De Cuyper, N. (2016). Review of 30 years of longitudinal studies on the association between job insecurity and health and well-being: Is there causal evidence? *Australian Psychologist, 51*, 18–31. https://doi.org/10.1111/ap.12176

Dodson, S. J., & Heng, Y. T. (2022). Self-compassion in organizations: A review and future research agenda. *Journal of Organizational Behavior, 43*(2), 168-196. https://doi.org/10.1002/job.2556

Duval, S., & Tweedie, R. (2000). Trim and fill: a simple funnel-plot–based method of testing and adjusting for publication bias in meta-analysis. *Biometrics, 56*(2), 455-463. https://doi.org/cz42tj

Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *British Medical Journal, 315*, 629-634. https://doi.org/10.1136/bmj.315.7109.629

El Khawli, E., Keller, A. C., Agostini, M., Gützkow, B., Kreienkamp, J., Leander, N. P., & Scheibe, S. (2022). The rise and fall of job insecurity during a pandemic: The role of habitual coping. *Journal of Vocational Behavior, 139,* Article 103792. https://doi.org/10.1016/j.jvb.2022.103792

Eva, N., Newman, A., Jiang, Z., & Brouwer, M. (2020). Career optimism: A systematic review and agenda for future research. *Journal of Vocational Behavior, 116,* Article 103287. https://doi.org/10.1016/j.jvb.2019.02.011

Fabrin-Petersen, R. (2022). The effects of non-standard employment on subjective well-being: A meta-analytic review. *Advances in Methodology and Statistics, 19*(1), 1-39. https://doi.org/10.51936/uspx6788

Field, A. P. (2001). Meta-analysis of correlation coefficients: A Monte Carlo comparison of fixed- and random-effects methods. *Psychological Methods, 6*(2), 161–180. https://doi.org/10.1037/1082-989X.6.2.161

Field, A. P. (2005). Is the meta-analysis of correlation coefficients accurate when population correlations vary? *Psychological Methods, 10*(4), 444–467. https://doi.org/d66sb3

Flexbarometer (2023). *Trend in het aantal vaste, flexcontracten en zelfstandigen*. CBS Statline.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50*(5), 992–1003. https://doi.org/dzx77v

Forrier, A., De Cuyper, N., & Akkermans, J. (2018). The winner takes it all, the loser has to fall: Provoking the agency perspective in employability research. *Human Resource Management Journal, 28*(4), 511-523. https://doi.org/10.1111/1748-8583.12206

Fuller, B., & Marler, L. E. (2009). Change driven by nature: A meta-analytic review of the proactive personality literature. *Journal of Vocational Behavior, 75*(3), 329–345. https://doi.org/10.1016/j.jvb.2009.05.008

Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences, 30*(8), 1311–1327. https://doi.org/10.1016/S0191-8869(00)00113-6

Germeijs, V., & De Boeck, P. (2003). Career indecision: Three factors from decision theory. *Journal of Vocational Behavior, 62*(1), 11–25. https://doi.org/10.1016/S0001-8791(02)00055-6

Giunchi, M., Vonthron, A. M., & Ghislieri, C. (2019). Perceived job insecurity and sustainable wellbeing: do coping strategies help? *Sustainability, 11*(3), 784-801. https://doi.org/10.3390/su11030784

Gould, S. (1979). Characteristics of career planners in upwardly mobile occupations. *Academy of Management Journal, 22*(3), 539-550. https://doi.org/10.2307/255743

Greenglass, E., Schwarzer, R., Jakubiec, D., Fiksenbaum, L., & Taubert, S. (1999, July 12-14). The Proactive Coping Inventory (PCI): A Multidimensional Research Instrument [*Paper presentation]*. 20th International Conference of the Stress and Anxiety Research Society (STAR), Cracow, Poland.

Hahn, V. C., Binnewies, C., Sonnentag, S., & Mojza, E. J. (2011). Learning how to recover from job stress: Effects of a recovery training program on recovery, recovery-related self-efficacy, and well-being. *Journal of Occupational Health Psychology, 16*(2), 202–216. https://doi.org/10.1037/a0022169

Hall, D. T. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior, 65*(1), 1–13. https://doi.org/10.1016/j.jvb.2003.10.006

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis*. Guilford Press.

Hedges, L. V., & Olkin, I. (1985). *Statistical methods for meta-analysis.* Orlando, FL: Academic Press.

Hedges, L. V., & Vevea, J. L. (1998). Fixed- and random-effects models in meta-analysis. *Psychological Methods, 3*(4), 486–504. https://doi.org/10.1037/1082-989X.3.4.486

Hellgren, J., & Sverke, M. (2003). Does job insecurity lead to impaired well-being or vice versa? Estimation of cross-lagged effects using latent variable modelling. *Journal of Organizational Behavior*, *24*(2), 215–236. https://doi.org/10.1002/job.184

Hellgren, J., Sverke, M., & Isaksson, K. (1999). A Two-dimensional Approach to Job Insecurity: Consequences for Employee Attitudes and Well-being. *European Journal of Work and Organizational Psychology, 8*(2), 179–195. https://doi.org/10.1080/135943299398311

Hillmann, J., Duchek, S., Meyr, J., & Guenther, E. (2018). Educating future managers for developing resilient organizations: The role of scenario planning. *Journal of Management Education, 42*(4), 461-495. https://doi.org/10.1177/1052562918766350

Hirschi, A., & Koen, J. (2021). Contemporary career orientations and career self-management: A review and integration. *Journal of Vocational Behavior, 126*, Article 103505. https://doi.org/10.1016/j.jvb.2020.103505

Hobfoll, S. E. (1989). Conservation of Resources: A New Attempt at Conceptualizing Stress. *American Psychologist, 44*(3), 513-524. https://doi.org/10.1037/0003-066X.44.3.513

Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of*

Organizational Psychology and Organizational Behavior, 5, 103-128. https://doi.org/10.1146/annurev-orgpsych- 032117-104640

Howard, M. C., Cogswell, J. E., & Smith, M. B. (2020). The antecedents and outcomes of workplace ostracism: A meta-analysis. *Journal of Applied Psychology, 105*(6), 577–596. https://doi.org/10.1037/apl0000453

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Huang, G., Lee, C., Ashford, S., Chen, Z., & Ren, X. (2010). Affective job insecurity: A mediator of cognitive job insecurity and employee outcomes relationships. *International Studies of Management and Organization, 40*(1), 20–39. https://doi.org/10.2753/IMO0020-8825400102

Huang, G. H., Zhang, Y., Zhang, X., & Long, L. (2021). Job insecurity, commitment and proactivity towards the organization and one's career: Age as a condition. *Human Resource Management Journal, 31*(2), 532-552. https://doi.org/10.1111/1748-8583.12322

Huang, G. H., Zhao, H. H., Niu, X. Y., Ashford, S. J., & Lee, C. (2013). Reducing job insecurity and increasing performance ratings: Does impression management matter? *Journal of Applied Psychology, 98*(5), 852–862. https://doi.org/10.1037/a0033151

Hunter, J. E., & Schmidt, F. L. (2000). Fixed effects vs. random effects meta-analysis models: implications for cumulative knowledge. *International Journal of Selection and Assessment, 8*(4), 275–292. https://doi.org/10.1111/1468-2389.00156

Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings* (2nd ed.). SAGE Publishing.

Hur, H. (2022). Job security matters: A systematic review and meta-analysis of the relationship between job security and work attitudes. *Journal of Management & Organization, 28*(5), 925-955. http://doi.org/10.1017/jmo.2019.3

Ibarra, H. (2004). *Working identity: Unconventional strategies for reinventing your career.* Harvard Business Press.

Jennings, R. E., Lanaj, K., & Kim, Y. J. (2023). Self-compassion at work: A self-regulation perspective on its beneficial effects for work performance and wellbeing. *Personnel Psychology, 76*(1), 279-309. https://doi.org/10.1111/peps.12504

Jiang, L., & Lavaysse, L. M. (2018). Cognitive and affective job insecurity: A meta-analysis and a primary study. *Journal of Management, 44*(6), 2307–2342. https://doi.org/gf2zpp

Jiang, L., Lawrence, A., & Xu, X. (2022). Does a stick work? A meta-analytic examination of curvilinear relationships between job insecurity and employee workplace behaviors. *Journal of Organizational Behavior,* 1-36. https://doi.org/10.1002/job.2652

Jiang, L., & Probst, T. M. (2014). Organizational communication: A buffer in times of job insecurity?. *Economic and Industrial Democracy,35*(3), 557-579. https://doi.org/10.1177/0143831X13489356

Jiang, L., Xu, X., & Wang, H.-J. (2021). A resources–demands approach to sources of job insecurity: A multilevel meta-analytic investigation. *Journal of Occupational Health Psychology, 26*(2), 108–126. https://doi.org/10.1037/ocp0000267

Jiang, Z., Newman, A., Le, H., Presbitero, A., & Zheng, C. (2019). Career exploration: A review and future research agenda. *Journal of Vocational Behavior, 110*(Part B), 338–356. https://doi.org/10.1016/j.jvb.2018.08.008

Jiang, Z., Wang, Y., Li, W., Peng, K. Z., & Wu, C. H. (2023). Career proactivity: A bibliometric literature review and a future research agenda. *Applied Psychology*, *72*(1), 144-184. https://doi.org/10.1111/apps.12442

Johnson, K. R., Park, S., & Chaudhuri, S. (2020). Mindfulness training in the workplace: Exploring its scope and outcomes. *European Journal of Training and Development, 44*(4), 341-354. https://doi.org/10.1108/EJTD-09-2019-0156

Kalleberg, A. L. (2011). *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s–2000s*. New York, NY: Russell Sage Foundation.

Kalliath, T. J., O'Driscoll, M. P., & Brough, P. (2004). A confirmatory factor analysis of the General Health Questionnaire - 12. *Stress & Health, 20*(1), 11–20.

Karpman, M.; Loprest, P.; Hahn, H. (2022). *Characteristics and Well-Being of Adults with Nonstandard Work Arrangements*. WorkforceGPS. https://strategies.workforcegps.org /resources/2023/07/24/13/59/Characteristics-and-Well-Being-of-Adults-with-Nonstandard-Work-Arrangements

Kato, T. (2015). Frequently used coping scales: A meta-analysis. *Stress & Health, 31*(4), 315–323. https://doi.org/10.1002/smi.2557

Keim, A. C., Landis, R. S., Pierce, C. A., & Earnest, D. R. (2014). Why do employees worry about their jobs? A meta-analytic review of predictors of job insecurity. *Journal of Occupational Health Psychology, 19*(3), 269–290. https://doi.org/10.1037/a0036743

Kim, T. J., & von Dem Knesebeck, O. (2015). Is an insecure job better for health than having no job at all? A systematic review of studies investigating the health-related risks of both job insecurity and unemployment. *BMC Public Health, 15*(985), 1-9. https://doi.org/f7ssf6

Klug, K., Bernhard-Oettel, C., Mäkikangas, A., Kinnunen, U., & Sverke, M. (2019). Development of perceived job insecurity among young workers: A latent class growth analysis. *International Archives of Occupational and Environmental Health, 92,* 901-918. https://doi.org/10.1007/s00420-019-01429-0

Koen, J., Klehe, U.-C., & Van Vianen, A. E.M. (2012). Training career adaptability to facilitate a successful school-to-work transition. *Journal of Vocational Behavior, 81*(3), 395–408. https://doi.org/10.1016/j.jvb.2012.10.003

Koen, J., Klehe, U. C., Van Vianen, A. E., Zikic, J., & Nauta, A. (2010). Job-search strategies and reemployment quality: The impact of career adaptability. *Journal of Vocational Behavior, 77*(1), 126-139. https://doi.org/10.1016/j.jvb.2010.02.004

Koen, J., & Parker, S. K. (2020). In the eye of the beholder: How proactive coping alters perceptions of insecurity. *Journal of Occupational Health Psychology, 25*(6), 385–400. https://doi.org/10.1037/ocp0000198

Koen, J., & Sijbom, R. B. (2019). *How to Steer Your Career?* In J.W. Hedge, G.W. Carter (Eds.), Career pathways: From school to retirement, Oxford University Press.

Koen, J. & Van Bezouw, M.J. (2021). Acting proactively to manage job insecurity: how worrying about the future of one's job may obstruct future-focused thinking and behavior. *Frontiers in Psychology, 12.* https://doi.org/gnbmvg

Koen, J., Van Vianen, A., Klehe, U. C., & Zikic, J. (2016). "A whole new future"–identity construction among disadvantaged young adults. *Career Development International, 21*(7), 658-681. https://doi.org/10.1108/CDI-02-2016-0019

Kraaij, V., & Garnefski, N. (2019). The Behavioral Emotion Regulation Questionnaire: Development,

psychometric properties and relationships with emotional problems and the Cognitive Emotion Regulation Questionnaire. *Personality and Individual Differences, 137*, 56–61. https://doi.org/10.1016/j.paid.2018.07.036

Kreemers, L. M., van Hooft, E. A., & van Vianen, A. E. (2018). Dealing with negative job search experiences: The beneficial role of self-compassion for job seekers' affective responses. *Journal of Vocational Behavior, 106*, 165-179. https://doi.org/10.1016/j.jvb.2018.02.001

Kreemers, L. M., van Hooft, E. A., van Vianen, A. E., & Sisouw de Zilwa, S. (2020). Testing a self-compassion intervention among job seekers: Self-compassion beneficially impacts affect through reduced self-criticism. *Frontiers in Psychology, 11*, Article 1371. https://doi.org/10.3389/fpsyg.2020.01371

Kriz, T. D., Jolly, P. M., & Shoss, M. K. (2021). Coping with organizational layoffs: Managers' increased active listening reduces job insecurity via perceived situational control. *Journal of Occupational Health Psychology, 26*(5), 448–458. https://doi.org/10.1037/ocp0000295

Kraimer, M. L., Wayne, S. J., Liden, R. C., & Sparrowe, R. T. (2005). The role of job security in understanding the relationship between employees' perceptions of temporary workers and employees' performance. *Journal of Applied Psychology, 90*(2), 389–398. https://doi.org/10.1037/0021-9010.90.2.389

Langerak, J. B., Koen, J., & van Hooft, E. A. (2022a). Hoe (niet) om te gaan met baanonzekerheid bij een tijdelijk contract: De rol van actief en passief copinggedrag. *Gedrag & Organisatie, 35*(4), 484-512. https://doi.org/10.5117/GO2022.4.005.LANG

Langerak, J. B., Koen, J., & van Hooft, E. A. J. (2022b). How to minimize job insecurity: The role of proactive and reactive coping over time. *Journal of Vocational Behavior, 136*, Article 103729. https://doi.org/10.1016/j.jvb.2022.103729

Låstad, L., Berntson, E., Näswall, K., Lindfors, P., & Sverke, M. (2015). Measuring quantitative and qualitative aspects of the job insecurity climate: Scale validation. *Career Development International, 20*(3), 202–217. https://doi.org/10.1108/CDI-03-2014-0047

Lazarus, R. S. (1966). *Psychological stress and the coping process.* McGraw-Hill.

Lazarus, R. S., & Folkman, S. K. (1984). *Stress, appraisal, and coping.* Springer.

Lee, C., Huang, G.-H., & Ashford, S. J. (2018). Job insecurity and the changing workplace: Recent developments and the future trends in job insecurity research. *Annual Review of Organizational Psychology and Organizational Behavior, 5*, 335–359. https://doi.org/10.1146/annurev-orgpsych-032117-104651

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting & task performance.* Prentice-Hall, Inc.

Lord, R. G., Diefendorff, J. M., Schmidt, A. M., & Hall, R. J. (2010). Self-regulation at work. *Annual Review of Psychology, 61*, 543-568. https://doi.org/d54w7f

Lyne, K., & Roger, D. (2000). A psychometric re-assessment of the COPE questionnaire. *Personality and Individual Differences, 29*(2), 321–335.

Lyu, Y., Wu, C. H., Kwan, H. K., Lee, C., & Deng, H. (2022). Why and when job insecurity hinders employees' taking charge behavior: The role of flexibility and work-based self-esteem. *Economic and Industrial Democracy, OnlineFirst,* 1-22. https://doi.org/10.1177/0143831X221100852

Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist, 41*(9), 954–969. https://doi.org/10.1037/0003-066X.41.9.954

Mauno, S., Cheng, T., & Lim, V. (2017). The far-reaching consequences of job insecurity: A review on family-related outcomes. *Marriage and Family Review*, *53*(8), 717–743.

Menéndez-Espina, S., Llosa, J. A., Agulló-Tomás, E., Rodríguez-Suárez, J., Sáiz-Villar, R., & Lahseras-Díez, H. F. (2019). Job insecurity and mental health: The moderating role of coping strategies from a gender perspective. *Frontiers in Psychology, 10*, 286-296. https://doi.org/10.3389/fpsyg.2019.00286

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality, 77*(1), 23-50. https://doi.org/10.1111/j.1467-6494.2008.00537.x

Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success. A meta-analysis. *Personnel Psychology, 58*(2), 367–408. https://doi.org/10.1111/j.1744-6570.2005.00515.x

Ng, T. W., & Feldman, D. C. (2014). Subjective career success: A meta-analytic review. *Journal of Vocational Behavior, 85*(2), 169-179. https://doi.org/10.1016/j.jvb.2014.06.001

Niesen, W., et al. (2018). Quantitative and Qualitative Job Insecurity and Idea Generation: The Mediating Role of Psychological Contract Breach. *Scandinavian Journal of Work and Organizational Psychology, 3*(1), 1–14. https://doi.org/10.16993/sjwop.36

Nye, C. D., Su, R., Rounds, J., & Drasgow, F. (2012). Vocational interests and performance: A quantitative summary of over 60 years research. *Perspectives on Psychological Science, 7*(4), 384–403. https://doi.org/10.1177/1745691612449021

Ohly, S., Sonnentag, S., & Pluntke, F. (2006). Routinization, work characteristics and their relationships with creative and proactive behaviors. *Journal of Organizational Behavior, 27*(3), 257-279. https://doi.org/10.1002/job.376

Ouyang, K., Cheng, B. H., Lam, W., & Parker, S. K. (2019). Enjoy your evening, be proactive tomorrow: How off-job experiences shape daily proactivity. *Journal of Applied Psychology, 104*(8), 1003–1019. https://doi.org/10.1037/apl0000391

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ... & Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Systematic Reviews, 10*(89), 1-11. https://doi.org/gjm5rn

Papachroni, A., & Heracleous, L. (2020). Ambidexterity as practice: Individual ambidexterity through paradoxical practices. *The Journal of Applied Behavioral Science, 56*(2), 143-165. https://doi.org/10.1177/0021886320913048

Parker, S. K., Bindl, U. K., & Strauss, K. (2010). Making things happen: A model of proactive motivation. *Journal of Management, 36*(4), 827–856. https://doi.org/10.1177/0149206310363732

Parker, S. K., Wang, Y., & Liao, J. (2019). When is proactivity wise? A review of factors that influence the individual outcomes of proactive behavior. *Annual Review of Organizational Psychology and Organizational Behavior, 6,* 221–248. https://doi.org/10.1146/annurev-orgpsych-012218-015302

Pearson, C. M., & Mitroff, I. I. (1993). From crisis prone to crisis prepared: A framework for crisis management. Academy of Management Executive, 7 (1), 185-196. https://doi.org/10.5465/ame.1993.9409142058

Pindek, S., Arvan, M. L., & Spector, P. E. (2019). The stressor–strain relationship in diary studies: A meta-analysis of the within and between levels. *Work and Stress, 33*(1), 1-21. https://doi.org/10.1080/02678373.2018.1445672

Pingel, R., Fay, D., & Urbach, T. (2019). A resources perspective on when and how proactive work behaviour leads to employee withdrawal. *Journal of Occupational and Organizational Psychology*, *92*(2), 410–435. https://doi.org/10.1111/joop.12254

Probst, T. M., & Jiang, L. (2016). Mitigating physiological responses to layoff threat: An experimental test of the efficacy of two coping interventions. *International Journal of Environmental Research and Public Health, 13*(3), 338-352. https://doi.org/10.3390/ijerph13030338

Probst, T. M., Bazzoli, A., Jenkins, M. R., Jiang, L., & Bohle, S. L. (2021). Coping with job insecurity: Employees with grit create I-deals. *Journal of Occupational Health Psychology*, *26*(5), 437-447. https://doi.org/10.1037/ocp0000220

Probst, T. M., Jiang, L., & Bohle, S. A. L. (2019). Job insecurity and impression management: Which is the horse and which is the cart when it comes to job performance? *Career Development International, 25*(3), 306-324. http://dx.doi.org/10.1108/CDI-04-2018-0119

Reisel, W. D., Chia, S. L., Maloles, C. M., & Slocum, J. W. (2007). The Effects of Job Insecurity on Satisfaction and Perceived Organizational Performance. *Journal of Leadership & Organizational Studies, 14*(2), 106–116. https://doi.org/10.1177/1071791907308055

Retkowsky, J., Nijs, S., Akkermans, J., Khapova, S., & Jansen, P. (2023). Seeking stability in unstable employment: An exploratory study of temporary agency workers' career self-management. *Journal of Vocational Behavior, 143,* Article 103877. https://doi.org/10.1016/j.jvb.2023.103877

Reuter, T., & Schwarzer, R. (2009). Manage Stress at Work through Preventive and Proactive Coping. In E. A. Locke (Ed.), *Handbook of Principles of Organizational Behavior: Indispensable Knowledge for Evidence-Based Management* (pp. 499-515). John Wiley & Sons.

Richter, A., Näswall, K., De Cuyper, N., Sverke, M., De Witte, H., & Hellgren, J. (2013). Coping with job insecurity: Exploring effects on perceived health and organizational attitudes. *Career Development International, 18*(5), 484–502. https://doi.org/10.1108/CDI-06-2013-0081

Richter, A., Vander Elst, T., & De Witte, H. (2020). Job Insecurity and Subsequent Actual Turnover: Rumination as a Valid Explanation? *Frontiers in Psychology, 11*, 712-723.

Rijksoverheid (2020, July). *Kosteloos een ontwikkeladvies volgen vanaf morgen mogelijk.* Rijksoverheid. https://www.rijksoverheid.nl/actueel/nieuws/2020/07/31/kosteloos-een-ontwikkeladvies-volgen-%09vanaf-morgen-mogelijk

Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin, 86*(3), 638–641. https://doi.org/10.1037/0033-2909.86.3.638

Sawhney, G., Klinefelter, Z., & Britt, T. W. (2018). Integrating coping and recovery: Review and recommendations for future research. *Journal of Applied Biobehavioral Research, 23*(4), https://doi.org/10.1111/jabr.12156

Schabram, K., & Heng, Y. T. (2022). How other-and self-compassion reduce burnout through resource replenishment. *Academy of Management Journal, 65*(2), 453-478. https://doi.org/10.5465/amj.2019.0493

Schmidt, F. L., & Hunter, J. E. (2014). *Methods of meta-analysis: correcting error and bias in research findings*. SAGE Publishing.

Schreurs, B. H., Hetty van Emmerik, I. J., Guenter, H., & Germeys, F. (2012). A weekly diary study on the buffering role of social support in the relationship between job insecurity and employee performance. *Human Resource Management, 51*(2), 259-279. https://doi.org/10.1002/hrm.21465

Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *Journal of Applied Psychology, 84*(3), 416–427. https://psycnet.apa.org/doi/10.1037/0021-9010.84.3.416

Shin, Y., Hur, W. M., Moon, T. W., & Lee, S. (2019). A motivational perspective on job insecurity: Relationships between job insecurity, intrinsic motivation, and performance and behavioral

outcomes. *International Journal of Environmental Research and Public Health, 16*(10), Article 1812. https://doi.org/10.3390/ijerph16101812

Shoss, M. K. (2017). Job insecurity: An integrative review and agenda for future research. *Journal of Management, 43*(6), 1911-1939. https://doi.org/10.1177/0149206317691574

Shoss, M. K. (2018). Addressing job insecurity in the 21st century. *Work Science Center Thinking Forward Report Series*. http://hdl.handle.net/1853/59484

Shoss, M. K., Su, S., Schlotzhauer, A. E., & Carusone, N. (2022). Working Hard or Hardly Working? An Examination of Job Preservation Responses to Job Insecurity. *Journal of Management.* OnlineFirst. https://doi.org/10.1177/01492063221107877

Sianoja, M., Syrek, C. J., de Bloom, J., Korpela, K., & Kinnunen, U. (2018). Enhancing daily well-being at work through lunchtime park walks and relaxation exercises: Recovery experiences as mediators. *Journal of Occupational Health Psychology, 23*(3), 428-442. https://doi.org/10.1037/ocp0000083

Siegel, M., Eder, J. S. N., Wicherts, J. M., & Pietschnig, J. (2022). Times are changing, bias isn't: A meta-meta-analysis on publication bias detection practices, prevalence rates, and predictors in industrial/organizational psychology. *Journal of Applied Psychology, 107*(11), 2013-2039. https://doi.org/10.1037/apl0000991

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: a review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129*(2), 216-269. https://doi.org/10.1037/0033-2909.129.2.216

Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: a new look at the interface between nonwork and work. *Journal of Applied Psychology, 88*(3), 518-528. https://psycnet.apa.org/doi/10.1037/0021-9010.88.3.518

Sonnentag, S., Cheng, B. H., & Parker, S. L. (2022). Recovery from work: Advancing the field toward the future. *Annual Review of Organizational Psychology and Organizational Behavior, 9*, 33-60. https://doi.org/10.1146/annurev-orgpsych-012420- 091355

Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology, 12*(3), 204–221. https://doi.org/dxsctz

Spurk, D., Hofer, A., Hirschi, A., De Cuyper, N., & De Witte, H. (2022). Conceptualizing career insecurity: Toward a better understanding and measurement of a multidimensional construct. *Personnel Psychology, 75*(2), 253-294. https://doi.org/10.1111/peps.12493

Spurk, D., Kauffeld, S., Barthauer, L., & Heinemann, N. S. (2015). Fostering networking behavior, career planning and optimism, and subjective career success: An intervention study. *Journal of Vocational Behavior, 87*, 134-144. https://doi.org/10.1016/j.jvb.2014.12.007

Stiglbauer, B., & Batinic, B. (2015). Proactive coping with job insecurity: Is it always beneficial to well-being? *Work and Stress, 29*(3), 264–285. https://doi.org/10.1080/02678373.2015.1074956

Strauss, K., Griffin, M. A., & Parker, S. K. (2012). Future work selves: How salient hoped-for identities motivate proactive career behaviors. *Journal of Applied Psychology, 97*(3), 580–598. https://psycnet.apa.org/doi/10.1037/a0026423

Sverke, M., Hellgren, J., & Näswall, K. (2002). No security: A meta-analysis and review of job insecurity and its consequences. *Journal of Occupational Health Psychology*, *7*(3), 242–264. https://doi.org/10.1037/1076-8998.7.3.242

Sverke, M., Låstad, L., Hellgren, J., Richter, A., & Näswall, K. (2019). A meta-analysis of job insecurity and employee performance: Testing temporal aspects, rating source, welfare regime, and union density as moderators. *International Journal of Environmental Research and Public Health, 16*(14), 2536-2564. https://doi.org/gh8994

Tims, M., Bakker, A. B., & Derks, D. (2012). Development and validation of the job crafting scale. *Journal of Vocational Behavior, 80*(1), 173–186. https://doi.org/10.1016/j.jvb.2011.05.009

Tobin, D. L., Holroyd, K. A., Reynolds, R. V., & Wigal, J. K. (1989). The hierarchical factor structure of the Coping Strategies Inventory. *Cognitive Therapy and Research, 13*(4), 343–361. https://doi.org/10.1007/BF01173478

Tuan, L. T. (2021). Employee mindfulness and proactive coping for technostress in the COVID-19 outbreak: The roles of regulatory foci, technostress, and job insecurity. *Computers in Human Behavior, 129,* 1-9.

Uitvoeringsinstituut Werknemersverzekeringen (2023, October). *Introductie tot STAP*. Uitvoeringsinstituut Werknemersverzekeringen. https://www.stapuwv.nl/p/STAP-informatie

Urbanavičiūtė, I., Bagdžiūnienė, D., Lazauskaitė-Zabielskė, J., Elst, T. V., & De Witte, H. (2015). The role of career factors in qualitative and quantitative job insecurity: A study in different organizational contexts. *International Journal of Psychology: A Biopsychosocial Approach, 16,* 23–45. https://doi.org/10.7220/2345-024X.16.2

Urbanavičiūtė, I., Lazauskaitė-Zabielskė, J., & De Witte, H. (2021). Deconstructing Job Insecurity: Do its Qualitative and Quantitative Dimensions Add Up? *Occupational Health Science, 5*(3), 415-435. https://doi.org/10.1007/s41542-021-00096-3

Urbanavičiūtė, I., Udayar, S., Maggiori, C., & Rossier, J. (2020). Precariousness profile and career adaptability as determinants of job insecurity: A three-wave study. *Journal of Career Development, 47*(2), 146-161. https://doi.org/10.1177/0894845318791777

Vander Elst, T., Baillien, E., De Cuyper, N., & De Witte, H. (2010). The role of organizational communication and participation in reducing job insecurity and its negative association with work-related well-being. *Economic and Industrial Democracy, 31*(2), 249-264. https://doi.org/10.1177/0143831X09358372

Vander Elst, T., De Witte, H., & De Cuyper, N. (2014). The job insecurity scale: A psychometric evaluation across five European countries. *European Journal of Work and Organizational Psychology, 23*(3), 364–380.

Vander Elst, T., Richter, A., Sverke, M., Näswall, K., De Cuyper, N., & De Witte, H. (2014). Threat of losing valued job features: The role of perceived control in mediating the effect of qualitative job insecurity on job strain and psychological withdrawal. *Work & Stress, 28*(2), 143–164. https://doi.org/10.1080/02678373.2014.899651

Vander Elst, T., Notelaers, G., & Skogstad, A. (2018). The reciprocal relationship between job insecurity and depressive symptoms: A latent transition analysis. *Journal of Organizational Behavior*, *39*(9), 1197-1218. https://doi.org/10.1002/job.2250

Van der Horst, A. C., Klehe, U. C., & Van der Heijden, B. I. (2017). Adapting to a looming career transition: How age and core individual differences interact. *Journal of Vocational Behavior, 99,* 132-145. https://doi.org/10.1016/j.jvb.2016.12.006

Van de Ven, H., Gielen, W., & Van Dam, L. (2023). *Zelfstandigen Enquête Arbeid 2023.* TNO. https://www.monitorarbeid.tno.nl/nl-nl/publicaties/zea-2023-resultaten-in-vogelvlucht/

Vo, T. T., & Vansteelandt, S. (2022). Challenges in systematic reviews and meta-analyses of mediation analyses. *American Journal of Epidemiology, 191*(6), 1098-1106. https://doi.org/10.1093/aje/kwac028

Vroom, V. H. (1964). *Work and motivation.* John Wiley.

Wanberg, C. R., Hough, L. M., & Song, Z. (2002). Predictive validity of a multidisciplinary model of reemployment success. *Journal of Applied Psychology, 87*(6), 1100 –1120. https://psycnet.apa.org/doi/10.1037/0021-9010.87.6.1100

Wanberg, C. R., Zhu, J., & Van Hooft, E. A. (2010). The job search grind: Perceived progress, self-reactions, and self-regulation of search effort. *Academy of Management Journal, 53*(4), 788-807. https://doi.org/10.5465/amj.2010.52814599

Waugh, C. E., Shing, E. Z., & Furr, R. M. (2020). Not all disengagement coping strategies are created equal: positive distraction, but not avoidance, can be an adaptive coping strategy for chronic life stressors. *Anxiety, Stress, & Coping, 33*(5), 511-529. https://doi.org/10.1080/10615806.2020.1755820

Wiernik, B. M., & Dahlke, J. A. (2020). Obtaining unbiased results in meta-analysis: The importance of correcting for statistical artifacts. *Advances in Methods and Practices in Psychological Science, 3*(1), 94-123. https://doi.org/10.1177/2515245919885611

Wu, C.-H., Wang, Y., Parker, S. K., & Griffin, M. A. (2020). Effects of chronic job insecurity on Big Five personality change. *Journal of Applied Psychology, 105*(11), 1308–1326. https://doi.org/10.1037/apl0000488

Wu, Y. L., Shao, B., Newman, A., & Schwarz, G. (2021). Crisis leadership: A review and future research agenda. *The Leadership Quarterly*, *32*(6). Article 101518. https://doi.org/10.1016/j.leaqua.2021.101518

Zacher, H., Schmitt, A., Jimmieson, N., Rudolph, C. (2019). Dynamic effects of personal initiative on emotional engagement and exhaustion: The role of positive and negative mood, job autonomy, and perceived organizational support. *Journal of Organizational Behavior, 40*, 38–58. https://doi.org/10.1002/job.2277

Zammitti, A., Russo, A., Ginevra, M. C., & Magnano, P. (2023). "Imagine Your Career after the COVID-19 Pandemic": An Online Group Career Counseling Training for University Students. *Behavioral Sciences, 13*(1), 48-61. https://doi.org/10.3390/bs13010048

Zhang, J., Zhang, Y., Lu, L., & Zhang, L. (2022). Proactive responses to job insecurity: why and when job-insecure employees engage in political behaviors. Management Decision, 60(12), 3188-3208. https://doi.org/10.1108/MD-06-2021-0766

Supplemental materials

Supplemental Material A: Search queries

Business Source Premier *EBSCO*

#1 Job insecurity
SU "JOB security" OR

TI(("job" N2 "security") OR (("job" OR "employment" OR "career") N1 ("insecurity" OR "certainty" OR "uncertainty" OR "secure" OR "insecure" OR "instability")) OR (("fear*" OR "anticip*" OR "threat*") N2 ("job loss" OR "unemployment" OR "losing a job")) OR "job future ambiguity" OR "work insecurity" OR "work uncertainty" OR "employment security" OR "job stability" OR "employment stability" OR "career stability") OR

AB(("job" N2 "security") OR (("job" OR "employment" OR "career") N1 ("insecurity" OR "certainty" OR "uncertainty" OR "secure" OR "insecure" OR "instability")) OR (("fear*" OR "anticip*" OR "threat*") N2 ("job loss" OR "unemployment" OR "losing a job")) OR "job future ambiguity" OR "work insecurity" OR "work uncertainty" OR "employment security" OR "job stability" OR "employment stability" OR "career stability") OR

KW(("job" N2 "security") OR (("job" OR "employment" OR "career") N1 ("insecurity" OR "certainty" OR "uncertainty" OR "secure" OR "insecure" OR "instability")) OR (("fear*" OR "anticip*" OR "threat*") N2 ("job loss" OR "unemployment" OR "losing a job")) OR "job future ambiguity" OR "work insecurity" OR "work uncertainty" OR "employment security" OR "job stability" OR "employment stability" OR "career stability")

#2 Study type
TI("cohen*s d" OR "control group*" OR "control condition*" OR "effect size*" OR "random*" OR "cross-sectional*" OR "demograph*" OR "moderat*" OR "mediator*" OR "mediating effect*" OR "interaction effect*" OR "antecedent*" OR "correlat*" OR "longitudinal*" OR "follow-up" OR "followup" OR "cohort" OR "baseline" OR "sample" OR "survey" OR "questionnair*") OR

AB("cohen*s d" OR "control group*" OR "control condition*" OR "effect size*" OR "random*" OR "cross-sectional*" OR "demograph*" OR "moderat*" OR "mediator*" OR "mediating effect*" OR "interaction effect*" OR "antecedent*" OR "correlat*" OR "longitudinal*" OR "follow-up" OR "followup" OR "cohort" OR "baseline" OR "sample" OR "survey" OR "questionnair*") OR

KW("cohen*s d" OR "control group*" OR "control condition*" OR "effect size*" OR "random*" OR "cross-sectional*" OR "demograph*" OR "moderat*" OR "mediator*" OR "mediating effect*" OR "interaction effect*" OR "antecedent*" OR "correlat*" OR "longitudinal*" OR "follow-up" OR "followup" OR "cohort" OR "baseline" OR "sample" OR "survey" OR "questionnair*")

1 AND 2
Uncheck ‘apply related words’ and ‘search in full text’ + Limit to academic journals

PsycINFO *Ovid*

#1 Job insecurity
job security/ OR ((job ADJ3 security) OR ((job OR employment OR career) ADJ2 (insecurity OR certainty OR uncertainty OR secure OR insecure OR instability)) OR ((fear* OR anticip* OR threat*) ADJ3 (job loss OR unemployment OR losing a job)) OR job future ambiguity OR work insecurity OR work uncertainty OR employment security OR job stability OR employment stability OR career stability).ti,ab,id.

#2 Study type
(cohen*s d OR control group* OR control condition* OR effect size* OR random* OR cross-sectional* OR demograph* OR moderat* OR mediator* OR mediating effect* OR interaction effect* OR correlat* OR longitudinal* OR follow-up OR followup OR cohort OR baseline OR sample OR survey OR questionnair*).ti,ab,id.

1 AND 2

Web of Science *Thomson Reuters, Web of Science Core Collection*

#1 Job insecurity
TS=(("job" NEAR/2 "security") OR (("job" OR "employment" OR "career") NEAR/1 ("insecurity" OR "certainty" OR "uncertainty" OR "secure" OR "insecure" OR "instability")) OR (("fear*" OR "anticip*" OR "threat*") NEAR/2 ("job loss" OR "unemployment" OR "losing a job")) OR "job future ambiguity" OR "work insecurity" OR "work uncertainty" OR "employment security" OR "job stability" OR "employment stability" OR "career stability")

#2 Study type
TS=("cohen*s d" OR "control group*" OR "control condition*" OR "effect size*" OR "random*" OR "cross-sectional*" OR "demograph*" OR "moderat*" OR "mediator*" OR "mediating effect*" OR "interaction effect*" OR "antecedent*" OR "correlat*" OR "longitudinal*" OR "follow-up" OR "followup" OR "cohort" OR "baseline" OR "sample" OR "survey" OR "questionnair*")

1 AND 2

Supplemental Material B: Reference list of all included records

Abramis, D. J. (1994). Relationship of job stressors to job performance: Linear or an inverted-U? *Psychological reports, 75*(1), 547-558.

Akgunduz, Y., & Eryilmaz, G. (2018). Does turnover intention mediate the effects of job insecurity and co-worker support on social loafing? *International Journal of Hospitality Management, 68*, 41-49.

Ali, M., Ali, I., Albort-Morant, G., & Leal-Rodríguez, A. L. (2021). How do job insecurity and perceived well-being affect expatriate employees' willingness to share or hide knowledge? *International Entrepreneurship and Management Journal, 17*(1), 185-210.

Aliedan, M. M., Sobaih, A. E. E., Alyahya, M. A., & Elshaer, I. A. (2022). Influences of distributive injustice and job insecurity amid COVID-19 on unethical pro-organisational behaviour: Mediating role of employee turnover intention. International Journal of Environmental Research and Public Health, 19(12), 7040, 1-16.

Alisic, A., & Wiese, B. S. (2020). Keeping an insecure career under control: The longitudinal interplay of career insecurity, self-management, and self-efficacy. *Journal of Vocational Behavior, 120*.

Allemann, A., Siebenhüner, K., & Hämmig, O. (2019). Predictors of presenteeism among hospital employees—A cross-sectional questionnaire-based study in Switzerland. *Journal of Occupational and Environmental Medicine, 61*(12), 1004-1010.

Al-Shuaibi, I., Sai'd, A., & Subramaniam, C. (2014). The mediating influence of job satisfaction on the relationship between HR Practices and cyberdeviance. *Journal of Marketing & Management, 5*(1), 105-119.

Ametepe, P. K., Banwo, A. O., & Arilesere, M. S. (2022). Amoral behavior, control climate, job insecurity and fraudulent intentions among bank employees. International Journal of Ethics and Systems, (ahead-of-print).

An, Y., Sun, X., Wang, K., Shi, H., Liu, Z., Zhu, Y., & Luo, F. (2020). Core self-evaluations associated with workaholism: The mediating role of perceived job demands. *Personnel Review, 50*(1), 303-318.

Andel, S. A., Shen, W., & Arvan, M. L. (2021). Depending on your own kindness: The moderating role of self-compassion on the within-person consequences of work loneliness during the COVID-19 pandemic. *Journal of Occupational Health Psychology, 26*(4), 276-290.

Antino, M., Ruiz-Zorrilla, P., Sanz-Vergel, A. I., Leon-Perez, J. M., & Rodriguez-Muñoz, A. (2022). The role of job insecurity and work-family conflict on mental health evolution during COVID-19 lockdown. *European Journal of Work and Organizational Psychology, 31*(5), 667-684.

Armstrong-Stassen, M. (1993). Production workers' reactions to a plant closing: The role of transfer, stress, and support. *Anxiety, Stress and Coping, 6*(3), 201-214.

Armstrong-Stassen, M. (2002). Designated redundant but escaping lay-off: A special group of lay-off survivors. *Journal of Occupational and Organizational Psychology, 75*(1), 1-13.

Armstrong-Stassen, M. (2003). Job transfer during organizational downsizing: A comparison of promotion and lateral transfers. *Group & Organization Management, 28*(3), 392-415.

Armstrong-Stassen, M. (2004). The influence of prior commitment on the reactions of layoff survivors to organizational downsizing. *Journal of Occupational Health Psychology, 9*(1), 46.

Armstrong-Stassen, M., Cameron, S. J., Mantler, J., & Horsburgh, M. E. (2001). The impact of hospital amalgamation on the job attitudes of nurses. *Canadian Journal of Administrative Sciences, 18*(3), 149-162.

Armstrong-Stassen, M., Wagar, T. H., & Cattaneo, R. J. (2004). Work-group membership (in)stability and survivors' reactions to organizational downsizing. *Journal of Applied Social Psychology, 34*(10), 2023-2044.

Asif, R., Fiaz, M., Khaliq, Z., & Nisar, S. (2019). Estimating the mediating role of organizational identification in determining the relationship between qualitative job insecurity and job performance. *Journal of Managerial Sciences, 13*(3). 175-187.

Bala, H. (2013). The effects of IT-enabled supply chain process change on job and process outcomes: A longitudinal investigation. *Journal of Operations Management, 31*(6), 450-473.

Banerjee, M., Tolbert, P. S., & DiCiccio, T. (2012). Friend or foe? The effects of contingent employees on standard employees' work attitudes. *The International Journal of Human Resource Management, 23*(11), 2180-2204.

Baraldi, S., Kalyal, H. J., Berntson, E., Näswall, K., & Sverke, M. (2010). The importance of commitment to change in public reform: an example from Pakistan. *Journal of Change Management, 10*(4), 347-368.

Barney, C. E. (2013). *Job insecurity and deviant workplace behavior: The moderating effect of core self-evaluation* (Publication No. 3574489) [Doctoral dissertation, New Mexico State University]. ProQuest Dissertations & Theses Global.

Bartol, K. M., Liu, W., Zeng, X., & Wu, K. (2009). Social exchange and knowledge sharing among knowledge workers: The moderating role of perceived job security. *Management and Organization Review, 5*(2), 223-240.

Bayraktar, S. (2019). How leaders cultivate support for change: Resource creation through justice and job security. *The Journal of Applied Behavioral Science, 55*(2), 213-234.

Bazzoli, A., & Probst, T. M. (2022, April). *Are our best days still ahead of us? Job insecurity and work selves during the pandemic.* In L. Jiang & T. M. Probst, (Chairs), Job insecurity research in the context of the COVID-19 pandemic and automation [Symposium]. SIOP Annual Conference, Seattle, WA, United States.

Bedemariam, R., & Ramos, J. (2021). Over-education and job satisfaction: The role of job insecurity and career enhancing strategies. *European Review of Applied Psychology, 71*(3), 1-9.

Begum, A., Shafaghi, M., & Adeel, A. (2022). Impact of job insecurity on work–life balance during COVID-19 in India. *Vision*, 1-22.

Bellman, S., Forster, N., Still, L., & Cooper, C. L. (2003). Gender differences in the use of social support as a moderator of occupational stress. *Stress and Health, 19*(1), 45-58.

Benson, W. L., Probst, T. M., Jiang, L., Olson, K. J., & Graso, M. (2020). Insecurity in the ivory tower: direct and indirect effects of pay stagnation and job insecurity on faculty performance. *Economic and Industrial Democracy, 41*(3), 693-708.

Bilal, M., Chaudhry, S. A., Sharif, I., Shafique, O., & Shahzad, K. (2022). Entrepreneurial Leadership and Employee Wellbeing During COVID-19 Crisis: A Dual Mechanism Perspective. *Frontiers in psychology, 13,* 1-13.

Boatemaa, M. A., Oppong Asante, K., & Agyemang, C. B. (2019). The moderating role of psychological flexibility in the relationship between organizational commitment, workaholism, job security, and

corporate entrepreneurship among information technology workers in Accra, Ghana. *SAGE Open, 9*(3), 1-8.

Bohle, S. A. L., & Alonso, A. R. M. (2017). The effect of procedural fairness and supervisor support in the relationship between job insecurity and organizational citizenship behaviour. *Revista brasileira de gestão de negócios, 19*(65), 337-357.

Bohle, S. A. L., Bal, P. M., Jansen, P. G., Leiva, P. I., & Alonso, A. M. (2017). How mass layoffs are related to lower job performance and OCB among surviving employees in Chile: An investigation of the essential role of psychological contract. *The International Journal of Human Resource Management, 28(20)*, 2837-2860.

Bohle, S. L., Bal, P. M., Probst, T. M., Rofcanin, Y., & Medina, F. M. (2022). What do job insecure people do? Examining employee behaviors and their implications for well-being at a weekly basis. *Journal of Management & Organization*, 1-20.

Bohle, S. A. L., Chambel, M. J., Medina, F. M., & Cunha, B. S. D. (2018). The role of perceived organizational support in job insecurity and performance. *Revista de Administração de Empresas, 58*(4), 393-404.

Breevaart, K., & Tims, M. (2019). Crafting social resources on days when you are emotionally exhausted: The role of job insecurity. *Journal of Occupational and Organizational Psychology, 92*(4), 806-824.

Breevaart, K., Bohle, S. L., Pletzer, J. L., & Medina, F. M. (2020). Voice and silence as immediate consequences of job insecurity. *Career Development International, 25*(2), 204-220.

Bultena, C.D. (1998). *Social exchange under fire: Direct and moderated effects of job insecurity on social exchange.* (Publication No. 9830822) [Doctoral dissertation, University of North Texas]. ProQuest Dissertations & Theses Global.

Callea, A., Urbini, F., & Chirumbolo, A. (2016). The mediating role of organizational identification in the relationship between qualitative job insecurity, OCB and job performance. *Journal of Management Development, 35*(6), 735-746.

Cao, C., Shang, L., & Meng, Q. (2020). Applying the job demands-resources model to exploring predictors of innovative teaching among university teachers. *Teaching and Teacher Education, 89,* 1-10.

Ceschi, A., Costantini, A., Dickert, S., & Sartori, R. (2017). The impact of occupational rewards on risk taking among managers. *Journal of Personnel Psychology, 16*(2), 104-111.

Chhabra, B. (2022). Desperate Times, Desperate Measures: Exploring the Dark Side of Job Embeddedness During COVID-19 Pandemic. *South Asian Journal of Human Resources Management,* 1-21.

Chen, H., & Eyoun, K. (2021). Do mindfulness and perceived organizational support work? Fear of COVID-19 on restaurant frontline employees' job insecurity and emotional exhaustion. *International Journal of Hospitality Management, 94,* 1-10.

Cheng, T., Mauno, S., & Lee, C. (2014). The buffering effect of coping strategies in the relationship between job insecurity and employee well-being. *Economic and Industrial Democracy, 35*(1), 71-94.

Chirumbolo, A. (2015). The impact of job insecurity on counterproductive work behaviors: The moderating role of honesty–humility personality trait. *The Journal of Psychology, 149*(6), 554-569.

Chirumbolo, A., & Areni, A. (2010). Job insecurity influence on job performance and mental health: Testing the moderating effect of the need for closure. *Economic and Industrial Democracy, 31*(2), 195-214.

Chirumbolo, A., Callea, A., & Urbini, F. (2020). Job insecurity and performance in public and private sectors: a moderated mediation model. *Journal of Organizational Effectiveness: People and Performance, 7*(2), 237-253.

Chiu, S. F., Lin, S. T., & Han, T. S. (2015). Employment status and employee service-oriented organizational citizenship behaviour: The mediating roles of internal mobility opportunity and job insecurity. *Career Development International, 20*(2), 133-146.

Choi, S. B., Cundiff, N., Kim, K., & Akhatib, S. N. (2018). The effect of work-family conflict and job insecurity on innovative behavior of Korean workers: the mediating role of organizational commitment and job satisfaction. *International Journal of Innovation Management, 22*(1), 1-29.

Chowhan, J., & Pike, K. (2022). Workload, work–life interface, stress, job satisfaction and job performance: a job demand–resource model study during COVID-19. *International Journal of Manpower,* (ahead-of-print).

Claes, R. (2011). Employee correlates of sickness presence: A study across four European countries. *Work & Stress, 25*(3), 224-242.

Conway, N., Kiefer, T., Hartley, J., & Briner, R. B. (2014). Doing more with less? Employee reactions to psychological contract breach via target similarity or spillover during public sector organizational change. *British Journal of Management, 25*(4), 737-754.

Costa, S., & Neves, P. (2017). Job insecurity and work outcomes: The role of psychological contract breach and positive psychological capital. *Work & Stress, 31*(4), 375-394.

Dahiya, R. (2021). Insecure people can eclipse your sun; so identify before it is too late: revisit to the nexus between job insecurity, organizational identification and employee performance behavior. *Evidence-based HRM: a Global Forum for Empirical Scholarship, 10*(1), 1-16.

Dang-Van, T., Vo-Thanh, T., Usman, M., & Nguyen, N. (2022). Investigating employees' deviant work behavior in the hotel industry during COVID-19: Empirical evidence from an emerging country. *Tourism Management Perspectives, 44,* 101042.

Darvishmotevali, M., & Ali, F. (2020). Job insecurity, subjective well-being and job performance: The moderating role of psychological capital. *International Journal of Hospitality Management, 87*, 1-10.

De Angelis, M., Mazzetti, G., & Guglielmi, D. (2021). Job insecurity and job performance: A serial mediated relationship and the buffering effect of organizational justice. *Frontiers in Psychology, 12*, 1-15.

De Clercq, D., Fatima, T., & Jahanzeb, S. (2022). Pandemic crisis and employee skills: how emotion regulation and improvisation limit the damaging effects of perceived pandemic threats on job performance. *Journal of Management & Organization*, 1-20.

De Cuyper, N., Baillien, E., & De Witte, H. (2009). Job insecurity, perceived employability and targets' and perpetrators' experiences of workplace bullying. *Work & Stress, 23*(3), 206-224.

De Cuyper, N., & De Witte, H. (2007). Job insecurity in temporary versus permanent workers: Associations with attitudes, well-being, and behaviour. *Work & Stress, 21*(1), 65-84.

De Cuyper, N., Schreurs, B., Vander Elst, T., Baillien, E., & De Witte, H. (2014). Exemplification and perceived job insecurity: Associations with self-rated performance and emotional exhaustion. *Journal of Personnel Psychology, 13*(1), 1-10.

De Cuyper, N., Sulea, C., Philippaers, K., Fischmann, G., Iliescu, D., & De Witte, H. (2014). Perceived employability and performance: moderation by felt job insecurity. *Personnel Review, 43*(4), 536-552.

De Cuyper, N., Van der Heijden, B. I., & De Witte, H. (2011). Associations between perceived employability, employee well-being, and its contribution to organizational success: a matter of psychological contracts? *The International Journal of Human Resource Management, 22*(7), 1486-1503.

De Cuyper, N., Van Hootegem, A., Smet, K., Houben, E., & De Witte, H. (2019). All Insecure, All Good? Job Insecurity Profiles in Relation to Career Correlates. *International Journal Of Environmental Research And Public Health, 16*(15), 1-16.

Değirmenci, B. The Effect of Job Insecurity on Job Performance During The Covid-19 Pandemic: The Moderating Role of Employee Resilience. Istanbul Management Journal, 92, 29-46.

De Neve, D., & Devos, G. (2017). Psychological states and working conditions buffer beginning teachers' intention to leave the job. *European Journal of Teacher Education, 40*(1), 6-27.

De Spiegelaere, S., Van Gyes, G., De Witte, H., Niesen, W., & Van Hootegem, G. (2014). On the relation of job insecurity, job autonomy, innovative work behaviour and the mediating effect of work engagement. *Creativity and innovation management, 23*(3), 318-330.

De Witte, H., De Cuyper, N., Handaja, Y., Sverke, M., Näswall, K., & Hellgren, J. (2010). Associations between quantitative and qualitative job insecurity and well-being: A test in Belgian banks. *International Studies of Management & Organization, 40*(1), 40-56.

Dextras-Gauthier, J., & Marchand, A. (2018). Does organizational culture play a role in the development of psychological distress? *The International Journal of Human Resource Management, 29*(12), 1920-1949.

El Khawli, E., Keller, A. C., Agostini, M., Gützkow, B., Kreienkamp, J., Leander, N. P., & Scheibe, S. (2022). The rise and fall of job insecurity during a pandemic: The role of habitual coping. *Journal of Vocational Behavior, 139*, 103792.

Emberland, J. S., & Rundmo, T. (2010). Implications of job insecurity perceptions and job insecurity responses for psychological well-being, turnover intentions and reported risk behavior. *Safety Science, 48*(4), 452-459.

Etehadi, B., & Karatepe, O. M. (2019). The impact of job insecurity on critical hotel employee outcomes: The mediating role of self-efficacy. *Journal of Hospitality Marketing & Management, 28*(6), 665-689.

Feather, N. T., & Rauter, K. A. (2004). Organizational citizenship behaviours in relation to job status, job insecurity, organizational commitment and identification, job satisfaction and work values. *Journal of occupational and organizational psychology, 77*(1), 81-94.

Feng, J., & Wang, C. (2019). Does abusive supervision always promote employees to hide knowledge? From both reactance and COR perspectives. *Journal of Knowledge Management, 23*(7), 1455-1474.

Filipkowski, M., & Johnson, C. M. (2008). Comparisons of performance and job insecurity in union and nonunion sites of a manufacturing company. *Journal of Organizational Behavior Management, 28*(4), 218-237.

Fischmann, G., De Witte, H., Sulea, C., & Iliescu, D. (2018). Qualitative job insecurity and in-role performance: a bidirectional longitudinal relationship? *European Journal of Work and Organizational Psychology, 27*(5), 603-615.

Fischmann, G., Sulea, C., Kovacs, P., Iliescu, D., & De Witte, H. (2015). Qualitative and quantitative job insecurity: relations with nine types of performance. *Psihologia Resurselor Umane, 13*(2), 152-164.

Fried, Y., Slowik, L. H., Shperling, Z., Franz, C., Ben-David, H. A., Avital, N., & Yeverechyahu, U. (2003). The moderating effect of job security on the relation between role clarity and job performance: A longitudinal field study. *Human Relations, 56*(7), 787-805.

Ghosh, S. K. (2017). The direct and interactive effects of job insecurity and job embeddedness on unethical pro-organizational behavior: An empirical examination. *Personnel Review, 46*(6), 1182-1198.

Giunchi, M., Vonthron, A. M., & Ghislieri, C. (2019). Perceived job insecurity and sustainable wellbeing: Do coping strategies help? *Sustainability, 11*(3), 784.

Goldenhar, L. M., Swanson, N. G., Hurrell Jr, J. J., Ruder, A., & Deddens, J. (1998). Stressors and adverse outcomes for female construction workers. *Journal of occupational health psychology, 3*(1), 19-32.

Goldenhar, L. M., Williams, L. J., & Swanson, N. G. (2003). Modelling relationships between job stressors and injury and near-miss outcomes for construction laborers. *Work & Stress, 17*(3), 218–240.

Greenberg, L., & Barling, J. (1999). Predicting employee aggression against coworkers, subordinates and supervisors: The roles of person behaviors and perceived workplace factors. *Journal of Organizational Behavior, 20*(6), 897-913.

Greenglass, E. R., Burke, R. J., & Fiksenbaum, L. (2001). Workload and burnout in nurses. *Journal of community & applied social psychology, 11*(3), 211-215.

Griep, Y., Lukic, A., Kraak, J. M., Bohle, S. A. L., Jiang, L., Vander Elst, T., & De Witte, H. (2021). The chicken or the egg: The reciprocal relationship between job insecurity and mental health complaints. *Journal of Business Research, 126*, 170-186.

Grunberg, L., Moore, S. Y., & Greenberg, E. (2001). Differences in psychological and physical health among layoff survivors: the effect of layoff contact. *Journal of Occupational Health Psychology, 6*(1), 15-25.

Gu, W., Chen, X., Zhang, R., & Zhang, W. (2021). The effect of emotional leadership and job security on employees' mental health. *Social Behavior and Personality: an international journal, 49*(12), 1-13.

Guo, M., Liu, S., Chu, F., Ye, L., & Zhang, Q. (2019). Supervisory and coworker support for safety: buffers between job insecurity and safety performance of high-speed railway drivers in China. *Safety science, 117*, 290-298.

Gupta, M., Ravindranath, S., & Kumar, Y. L. N. (2018, April). Voicing concerns for greater engagement: Does a supervisor's job insecurity and organizational culture matter? *Evidence-based HRM: A global forum for empirical scholarship. 6*(1), 54-65.

Han, H., Lee, K. S., Kim, S. S., Wong, A. K. F., & Moon, H. (2022). What influences company attachment and job performance in the COVID-19 era?: Airline versus hotel employees. *Tourism Management Perspectives, 44*, 101001.

Han, X., Xue, M., Zhang, Q., & Dong, X. (2022). Impact of COVID-19 Risk Perception on Emotional Exhaustion among Chinese Hospitality Employees: The Mediating Effect of Job Insecurity. *International Journal of Environmental Research and Public Health, 19*(22), 15146.

He, K., Wang, J., & Sun, M. (2022). Is Job Insecurity Harmful to All Types of Proactivity? The Moderating Role of Future Work Self Salient and Socioeconomic Status. *Frontiers in Psychology, 13*, 1-13.

Hewlin, P. F., Kim, S. S., & Song, Y. H. (2016). Creating facades of conformity in the face of job insecurity: A study of consequences and conditions. *Journal of Occupational and Organizational Psychology, 89*(3), 539-567.

Van Hootegem, A., Niesen, W., & De Witte, H. (2019). Does job insecurity hinder innovative work behavior? A threat rigidity perspective. *Creativity and Innovation Management, 28*(1), 19-29.

Huang, G. H., Niu, X., Lee, C., & Ashford, S. J. (2012). Differentiating cognitive and affective job insecurity: Antecedents and outcomes. *Journal of Organizational Behavior, 33*(6), 752-769.

Huang, H., Yu, S., & Peng, P. (2022). Can Organizational Identification Weaken the Negative Effects of Customer Bullying?—Testing the Moderating Effect of Organizational Identification. *Frontiers in psychology,* 13, 769087, 1-14.

Huang, G. H., Zhao, H. H., Niu, X. Y., Ashford, S. J., & Lee, C. (2013). Reducing job insecurity and increasing performance ratings: Does impression management matter? *Journal of Applied Psychology, 98*(5), 852.

Itzkovich, Y., Heilbrunn, S., & Dolev, N. (2021). Drivers of intrapreneurship: an affective events theory viewpoint. *Personnel Review, 51*(4), 1449-1470.

Jackson, L., & Rothmann, S. (2005). Work-related well-being of educators in a district of the North-West Province. *Perspectives in Education, 23*(1), 107-122.

Jalali, A., Jaafar, M., & Hidzir, N. I. (2020). Indirect effect of workplace bullying on emotional exhaustion through job insecurity among Malaysian workers: The buffering role of religion. *Journal of Islamic Accounting and Business Research, 11*(7), 1325-1342.

Jiang, L., Bohle, S. L., & Roche, M. (2019). Contingent reward transactional leaders as "good parents": Examining the mediation role of attachment insecurity and the moderation role of meaningful work. *Journal of Business and Psychology, 34*(4), 519-537.

Jiang, L., Debus, M., Hu, X., Lopez-Bohle, S., Petitta, L., Roll, L., Stander, M., Wang, H-J., & Xu, X. *The moderating roles of cultural value orientations in the relationships between job insecurity and proactivity* [unpublished manuscript].

Jiang, L., Hu, S., Näswall, K., Lopez Bohle, S., & Wang, H. J. (2020). Why and when cognitive job insecurity relates to affective job insecurity? A three-study exploration of negative rumination and the tendency to negative gossip. *European Journal of Work and Organizational Psychology, 29*(5), 678-692.

Johns, G. (2011). Attendance dynamics at work: the antecedents and correlates of presenteeism, absenteeism, and productivity loss. *Journal of Occupational Health Psychology, 16*(4), 483-500.

Kang, D. S., Gold, J., & Kim, D. (2012). Responses to job insecurity: The impact on discretionary extra-role and impression management behaviors and the moderating role of employability. *Career Development International. 17*(4), 314-332.

Karatepe, O. M., & Olugbade, O. A. (2016). The mediating role of work engagement in the relationship between high-performance work practices and job outcomes of employees in Nigeria. *International Journal of Contemporary Hospitality Management, 28*(10), 2350-2371.

Karatepe, O. M., & Vatankhah, S. (2014). The effects of high-performance work practices and job embeddedness on flight attendants' performance outcomes. *Journal of Air Transport Management, 37,* 27-35.

Kelly, E.L. (2013). *An examination of public mental hospitals using the Person-Environment Fit Model.* [Unpublished doctoral dissertation]. University of California.

Khalid, S., Hashmi, H. B. A., Abbass, K., Ahmad, B., Niazi, A. A. K., & Achim, M. V. (2022). Unlocking the effect of supervisor incivility on work withdrawal behavior: conservation of resource perspective. *Frontiers in Psychology, 13,* 887352, 1-15.

Kim, S. M., & Jo, S. J. (2022). An Examination of the Effects of Job Insecurity on Counterproductive Work Behavior Through Organizational Cynicism: Moderating Roles of Perceived Organizational Support and Quality of Leader-Member Exchange. *Psychological Reports, 0*(0), 1–37.

Kim, J. H., Jung, S. H., Yang, S. Y., & Choi, H. J. (2019). Job security and workaholism among non-permanent workers: The moderating influences of corporate culture. *Journal of Psychology in Africa, 29*(5), 443-451.

King, J. E. (2000). White-collar reactions to job insecurity and the role of the psychological contract: Implications for human resource management. *Human Resource Management, 39*(1), 79-92.

Kinnunen, U., Mauno, S., & Siltaloppi, M. (2010). Job insecurity, recovery and well-being at work: Recovery experiences as moderators. *Economic and industrial democracy, 31*(2), 179-194.

Kmieciak, R. (2021). Knowledge-withholding behaviours among IT specialists: the roles of job insecurity, work overload and supervisor support. *Journal of Management & Organization,* 1, 1-17.

Koen, J., Low, J. T., & Van Vianen, A. (2019). Job preservation efforts: when does job insecurity prompt performance?. *Career Development International, 25*(3), 287-305.

Koen, J., & Parker, S. K. (2020). In the eye of the beholder: How proactive coping alters perceptions of insecurity. *Journal of Occupational Health Psychology, 25*(6), 385-400.

Koen, J., & van Bezouw, M. J. (2021). Acting proactively to manage job insecurity: how worrying about the future of one's Job may obstruct future-focused thinking and behavior. *Frontiers in Psychology, 12*, 1-12.

König, C. J., Debus, M. E., Häusler, S., Lendenmann, N., & Kleinmann, M. (2010). Examining occupational self-efficacy, work locus of control and communication as moderators of the job insecurity—job performance relationship. *Economic and Industrial Democracy, 31*(2), 231-247.

Kraimer, M. L., Wayne, S. J., Liden, R. C., & Sparrowe, R. T. (2005). The role of job security in understanding the relationship between employees' perceptions of temporary workers and employees' performance. *Journal of applied psychology, 90*(2), 389-398.

Kundi, Y. M., Aboramadan, M., Elhamalawi, E. M., & Shahid, S. (2020). Employee psychological well-being and job performance: exploring mediating and moderating mechanisms. *International Journal of Organizational Analysis, 29*(3), 736-754.

Lam, C. F., Liang, J., Ashford, S. J., & Lee, C. (2015). Job insecurity and organizational citizenship behavior: exploring curvilinear and moderated relationships. *Journal of Applied Psychology, 100*(2), 499-510.

LaMontagne, A. D., Smith, P. M., Louie, A. M., Quinlan, M., Ostry, A. S., & Shoveller, J. (2012). Psychosocial and other working conditions: Variation by employment arrangement in a sample of working Australians. *American journal of industrial medicine, 55*(2), 93-106.

Landsbergis, P. A. (1988). Occupational stress among health care workers: a test of the job demands-control model. *Journal of Organizational behavior, 9*(3), 217-239.

Langerak, J. B., Koen, J., & Van Hooft, E. A. J. (2022). How to minimize job insecurity: The role of

proactive and reactive coping over time. *Journal of Vocational Behavior, 136,* 1-16.

Låstad, L., Näswall, K., Berntson, E., Seddigh, A., & Sverke, M. (2018). The roles of shared perceptions of individual job insecurity and job insecurity climate for work-and health-related outcomes: A multilevel approach. *Economic and Industrial Democracy, 39*(3), 422-438.

Låstad, L., Berntson, E., Näswall, K., & Sverke, M. (2014). Do core self-evaluations and coping style influence the perception of job insecurity? *European Journal of Work and Organizational Psychology, 23*(5), 680-692.

Latorre, F., Guest, D., Ramos, J., & Gracia, F. J. (2016). High commitment HR practices, the employment relationship and job performance: A test of a mediation model. *European Management Journal, 34*(4), 328-337.

Lavigne, K. N., Whitaker, V. L., Jundt, D. K., & Shoss, M. K. (2019). When do job insecure employees adapt to change? *Career Development International, 25*(3), 271-286.

Lee, C., Bobko, P., Ashford, S., Chen, Z. X., & Ren, X. (2008). Cross-Cultural Development of an Abridged Job Insecurity Measure. *Journal of Organizational Behavior, 29*(3), 373-390.

Lee, H. J., Probst, T. M., Bazzoli, A., & Lee, S. (2022). Technology Advancements and Employees' Qualitative Job Insecurity in the Republic of Korea: Does Training Help? Employer-Provided vs. Self-Paid Training. *International Journal of Environmental Research and Public Health, 19*(21), 14368, 1-13.

Leung, M. Y., Liang, Q., & Olomolaiye, P. (2016). Impact of job stressors and stress on the safety behavior and accidents of construction workers. *Journal of Management in Engineering, 32*(1), 1-10.

Li, Y. (2022). Influencing mechanism of coal miners' safety compliance: A chain mediating model. *Frontiers in Psychology, 13,* 942038, 1-10.

Li, Y., & Li, Z. (2022). Dual-Channel Effect of Job Insecurity on Knowledge Workers' Innovative Behavior. *Discrete Dynamics in Nature & Society*, 1-11.

Li, J., Zhou, L., Van der Heijden, B., Li, S., Tao, H., & Guo, Z. (2022). Lockdown social isolation and lockdown stress during the COVID-19 pandemic in China: the impact of mindfulness. Frontiers in Psychology, 13, 778402, 1-15.

Lierich, D., & O'Connor, C. (2009). The effect of fixed-term contracts on rural secondary teachers. *International Employment Relations Review, 15*(2), 58-82.

Lim, V. K. (1996). Job insecurity and its outcomes: Moderating effects of work-based and nonwork-based social support. *Human Relations, 49*(2), 171-194.

Lim, V. K. (1997). Moderating effects of work-based support on the relationship between job insecurity and its consequences. *Work & Stress, 11*(3), 251-266.

Lin, X. S., Chen, Z. X., Ashford, S. J., Lee, C., & Qian, J. (2018). A self-consistency motivation analysis of employee reactions to job insecurity: The roles of organization-based self-esteem and proactive personality. *Journal of Business Research, 92,* 168-178.

Lin, W., Shao, Y., Li, G., Guo, Y., & Zhan, X. (2021). The psychological implications of COVID-19 on employee job insecurity and its consequences: The mitigating role of organization adaptive practices. *Journal of Applied Psychology, 106*(3), 317-329.

Liu, S., Qin, C., Liu, X., & Lu, W. (2021). Employment status and counterproductive work behavior: a chain mediating effect in the Chinese context. *Asia Pacific Journal of Human Resources, 59*(3), 460-481.

Loi, R., Ngo, H. Y., Zhang, L., & Lau, V. P. (2011). The interaction between leader–member exchange

and perceived job security in predicting employee altruism and work performance. *Journal of Occupational and Organizational Psychology, 84*(4), 669-685.

Lu, C. Q., Du, D. Y., Xu, X. M., & Zhang, R. F. (2017). Revisiting the relationship between job demands and job performance: The effects of job security and traditionality. *Journal of occupational and Organizational Psychology, 90*(1), 28-50.

Lu, W., Liu, X., Liu, S., & Qin, C. (2021). Job Security and Organizational Citizenship Behaviors in Chinese Hybrid Employment Context: Organizational Identification Versus Psychological Contract Breach Perspective Differences Across Employment Status. *Frontiers in Psychology, 12,* 1-13.

Lu, C. Q., Wang, H. J., Lu, J. J., Du, D. Y., & Bakker, A. B. (2014). Does work engagement increase person–job fit? The role of job crafting and job insecurity. *Journal of vocational behavior, 84*(2), 142-152.

Lyu, Y., Wu, C. H., Kwan, H. K., Lee, C., & Deng, H. (2022). Why and when job insecurity hinders employees' taking charge behavior: The role of flexibility and work-based self-esteem. *Economic and Industrial Democracy, OnlineFirst*, 1-12.

Ma, B., Liu, S., Liu, D., & Wang, H. (2016). Job security and work performance in Chinese employees: The mediating role of organizational identification. *International Journal of Psychology, 51*(2), 123-129.

Mahmoud, A. B., & Reisel, W. D. (2015). Exploring personal experience of wartime crisis effects on job insecurity in Syria. *Psihologia Resurselor Umane, 13*(2), 245-256.

Mak, A. S., & Mueller, J. (2000). Job insecurity, coping resources and personality dispositions in occupational strain. *Work & Stress, 14*(4), 312-328.

Mäder, I. A., & Niessen, C. (2017). Nonlinear associations between job insecurity and adaptive performance: The mediating role of negative affect and negative work reflection. *Human Performance, 30*(5), 231-253.

Makhbul, Z. M., & Khairuddin, S. M. H. H. S. (2014). Measuring the Effect of Commitment on Occupational Stressors and Individual Productivity Ties. *Jurnal Pengurusan, 40*, 103-113.

Manuel, S. K., Howansky, K., Chaney, K. E., & Sanchez, D. T. (2017). No rest for the stigmatized: A model of organizational health and workplace sexism (OHWS). *Sex Roles, 77*(9), 697-708.

Marchand, A., Durand, P., Haines, V., & Harvey, S. (2015). The multilevel determinants of workers' mental health: results from the SALVEO study. *Social Psychiatry and Psychiatric Epidemiology, 50*(3), 445-459.

Masia, U., & Pienaar, J. (2011). Unravelling safety compliance in the mining industry: examining the role of work stress, job insecurity, satisfaction and commitment as antecedents. *SA Journal of Industrial Psychology, 37*(1), 1-10.

Mathies, C., & Ngo, L. V. (2014). New insights into the climate–attitudes–outcome framework: Empirical evidence from the Australian service sector. *Australian Journal of Management, 39*(3), 473-491.

Mazzetti, G., Lancioni, C., Derous, E., & Guglielmi, D. (2018). Tackling job insecurity: Can a boundaryless career orientation boost job crafting strategies and career competencies? *Psicologia Sociale, 13*(2), 129-146.

McDonough, P. (2000). Job insecurity and health. *International Journal of Health Services, 30*(3), 453-476.

McInroe, J.A. (2015). *Job insecurity, organizational citizenship behaviors, and job search activities: How*

work locus of control and control-oriented coping moderate these relationships [Doctoral dissertation, Bowling Green State University]. OhioLINK Electronic Theses and Dissertations Center.

Mehreen, A., Hui, Y., & Ali, Z. (2019). A social network theory perspective on how social ties influence perceived employability and job insecurity: evidence from school teachers. *Social Network Analysis and Mining, 9*(1), 1-17.

Menéndez-Espina, S., Llosa, J. A., Agulló-Tomás, E., Rodríguez-Suárez, J., Sáiz-Villar, R., & Lahseras-Díez, H. F. (2019). Job insecurity and mental health: The moderating role of coping strategies from a gender perspective. *Frontiers in Psychology, 10,* 1-10.

Mer, A., Virdi, A. S., & Sengupta, S. (2022). Unleashing the Antecedents and Consequences of Work Engagement in NGOs through the Lens of JD-R Model: Empirical Evidence from India. *Voluntas, Online publication,* 1-13.

Miana, B. S., González-Morales, M. G., Caballer, A., & Peiró, J. M. (2011). Consequences of job insecurity and the moderator role of occupational group. *The Spanish Journal of Psychology, 14*(2), 820-831.

Nabi, G. R. (2000). Motivational attributes and organizational experiences as predictors of career-enhancing strategies. *Career Development International, 5*(2), 91-98.

Näswall, K., Lindfors, P., & Sverke, M. (2012). Job insecurity as a predictor of physiological indicators of health in healthy working women: an extension of previous research. *Stress and Health, 28*(3), 255-263.

Nauman, S., Zheng, C., & Naseer, S. (2020). Job insecurity and work–family conflict: A moderated mediation model of perceived organizational justice, emotional exhaustion and work withdrawal. *International Journal of Conflict Management, 31*(5), 729-751.

Nawrocka, S., De Witte, H., Brondino, M., & Pasini, M. (2021). On the reciprocal relationship between quantitative and qualitative job insecurity and outcomes. Testing a cross-lagged longitudinal mediation model. *International Journal of Environmental Research and Public Health, 18*(12), 1-28.

Nemțeanu, M. S., Dinu, V., Pop, R. A., & Dabija, D. C. (2022). Predicting job satisfaction and work engagement behavior in the COVID-19 pandemic: a conservation of resources theory approach. *Economics and Management, 25*(2), 23–40

Nguyen, T. M., Malik, A., & Budhwar, P. (2022). Knowledge hiding in organizational crisis: The moderating role of leadership. *Journal of Business Research, 139*, 161-172.

Niesen, W., Van Hootegem, A., Handaja, Y., Batistelli, A., & De Witte, H. (2018). Quantitative and Qualitative Job Insecurity and Idea Generation: The Mediating Role of Psychological Contract Breach. *Scandinavian Journal of Work and Organizational Psychology , 3*(1), 1-14.

Niesen, W., Van Hootegem, A., Vander Elst, T., Battistelli, A., & De Witte, H. (2018). Job insecurity and innovative work behaviour: A psychological contract perspective. *Psychologica Belgica, 57*(4), 174-189.

Nikolova, I., Van der Heijden, B., Låstad, L., & Notelaers, G. (2018). The “silent assassin” in your organization? Can job insecurity climate erode the beneficial effect of a high-quality leader-member exchange? *Personnel Review, 47*(6), 1174-1193.

Niu, L., & Yang, Z. (2022). Impact of Performance Climate on Overtime Behaviors of New Generation Employees: The Moderating Effect of Perceived Employability and Mediating Role of Job Insecurity. *Psychology Research and Behavior Management, 15*, 3733-3749.

Noble, C. H. (2008). The influence of job security on field sales manager satisfaction: Exploring frontline tensions. *Journal of Personal Selling & Sales Management, 28*(3), 247-261.

Ohunakin, F., Adeniji, A. A., Ogunlusi, G., Igbadumhe, F., & Sodeinde, A. G. (2020). Talent retention strategies and employees' behavioural outcomes: empirical evidence from hospitality industry. *Business: Theory and Practice, 21*(1), 192-199.

Okay-Somerville, B., & Scholarios, D. (2013). Shades of grey: Understanding job quality in emerging graduate occupations. *Human Relations, 66*(4), 555-585.

Oluwole, O. J., Aderibigbe, J. K., & Mjoli, T. Q. (2020). The Attenuating Effects of Organizational Justice on Job Insecurity and Counterproductive Work Behaviors Relationship. *African Journal of Business & Economic Research, 15*(1), 205-227.

Oprea, B., & Iliescu, D. (2015). Burnout and job insecurity: the mediating role of job crafting. *Psihologia Resurselor Umane, 13*(2), 232-244.

Ouwerkerk, J. W., & Bartels, J. (2022). Is Anyone Else Feeling Completely Nonessential? Meaningful Work, Identification, Job Insecurity, and Online Organizational Behavior during a Lockdown in The Netherlands. *International Journal of Environmental Research and Public Health, 19*(3), 1-20.

Parent-Lamarche, A., Marchand, A., & Saade, S. (2020). Does depression mediate the effect of work organization conditions on job performance? *Journal of Occupational and Environmental Medicine, 62*(4), 296-302.

Park, K. H., Youn, S. J., & Moon, J. (2020). The effect of workforce restructuring on withdrawal behavior: the role of job insecurity, career plateau and procedural justice. *The Journal of Asian Finance, Economics and Business, 7*(7), 413-424.

Parker, S. K., Axtell, C. M., & Turner, N. (2001). Designing a safer workplace: importance of job autonomy, communication quality, and supportive supervisors. *Journal of Occupational Health Psychology*, *6*(3), 211-228.

Peiró, J. M., Sora, B., & Caballer, A. (2012). Job insecurity in the younger Spanish workforce: Causes and consequences. *Journal of Vocational Behavior, 80*(2), 444-453.

Petrisor, A., Maricutoiu, L., & Sava, F. A. (2021). The do's and don'ts of supervisor behavior. Supervisor personality as predictor for subordinate's job insecurity and citizenship behaviors. *Psihologia Resurselor Umane, 19*(1), 6-16.

Piccoli, B., De Witte, H., & Reisel, W. D. (2017). Job insecurity and discretionary behaviors: Social exchange perspective versus group value model. *Scandinavian Journal of Psychology, 58*(1), 69-79.

Piccoli, B., Callea, A., Urbini, F., Chirumbolo, A., Ingusci, E., & De Witte, H. (2017). Job insecurity and performance: the mediating role of organizational identification. *Personnel Review, 46*(8), 1508-1522.

Piccoli, B., Reisel, W. D., & De Witte, H. (2021). Understanding the relationship between job insecurity and performance: hindrance or challenge effect? *Journal of Career Development, 48*(2), 150-165.

Prentice, C. (2018). Linking internal service quality and casino dealer performance. *Journal of Hospitality Marketing & Management, 27*(6), 733-753.

Probst, T. M. (2004). Safety and insecurity: exploring the moderating effect of organizational safety climate. *Journal of Occupational Health Psychology, 9*(1), 3-10.

Probst, T. M. (2000). Wedded to the job: Moderating effects of job involvement on the consequences of job insecurity. *Journal of Occupational Health Psychology, 5*(1), 63-73.

Probst, T. M., & Brubaker, T. L. (2001). The effects of job insecurity on employee safety outcomes: cross-sectional and longitudinal explorations. *Journal of occupational health psychology, 6*(2), 139-159.

Probst, T. M., & Ekore, J. O. (2010). An exploratory study of the costs of job insecurity in Nigeria. *International Studies of Management & Organization, 40*(1), 92-104.

Probst, T. M., Jiang, L., & Bohle, S. A. L. (2019). Job insecurity and impression management: Which is the horse and which is the cart when it comes to job performance? *Career Development International, 25*(3), 306-324.

Probst, T. M., Jiang, L., & Graso, M. (2016). Leader–member exchange: Moderating the health and safety outcomes of job insecurity. *Journal of safety research, 56*, 47-56.

Probst, T. M., Stewart, S. M., Gruys, M. L., & Tierney, B. W. (2007). Productivity, counterproductivity and creativity: The ups and downs of job insecurity. *Journal of Occupational and Organizational Psychology, 80*(3), 479-497.

Punnett, B. J., Greenidge, D., & Ramsey, J. (2007). Job attitudes and absenteeism: A study in the English speaking Caribbean. *Journal of World Business, 42*(2), 214-227.

Qian, S., Lim, V. K., & Gao, Y. (2022). Can qualitative job insecurity instigate workplace incivility? The moderating roles of self-compassion and rumination. *Career Development International, 27*(5), 511-525

Qian, S., Yuan, Q., Niu, W., & Liu, Z. (2022). Is job insecurity always bad? The moderating role of job embeddedness in the relationship between job insecurity and job performance. *Journal of Management & Organization, 28*(5), 956-972.

Qin, C., Wu, K., Liu, X., Liu, S., & Lu, W. (2021). The Effect of Job Security on Deviant Behaviors in Diverse Employment Workplaces: From the Social Identity Perspective. *International Journal of Environmental Research and Public Health, 18*(14), 1-15.

Quansah, P. E., Zhu, Y., & Obeng, A. F. (2021). Assessment of the effects of supervisor behavior, safety motivation and perceived job insecurity on underground miner's safety citizenship behavior. *Chinese Management Studies, 16*(2), 356-381.

Rajabi, F., Mokarami, H., Cousins, R., & Jahangiri, M. (2022). Structural equation modeling of safety performance based on personality traits, job and organizational-related factors. *International Journal of Occupational Safety and Ergonomics, 28*(1), 644-658.

Reisel, W. D. (1997). *A model of the antecedents and consequences of job insecurity.* (Publication No. 9807987) [Doctoral dissertation, City University of New York]. ProQuest Dissertations & Theses Global.

Reisel, W. D., Probst, T. M., Chia, S. L., Maloles, C. M., & König, C. J. (2010). The effects of job insecurity on job satisfaction, organizational citizenship behavior, deviant behavior, and negative emotions of employees. *International Studies of Management & Organization, 40*(1), 74-91.

Richter, A., Näswall, K., De Cuyper, N., Sverke, M., De Witte, H., & Hellgren, J. (2013). Coping with job insecurity: Exploring effects on perceived health and organizational attitudes. *Career Development International, 18*(5), 484-502.

Richter, A., Vander Elst, T., & De Witte, H. (2020). Job insecurity and subsequent actual turnover: Rumination as a valid explanation? Frontiers in Psychology, 11, Article 712. https://doi.org/10.3389/fpsyg.2020.00712

Rigotti, T., Mohr, G., & Isaksson, K. (2015). Job insecurity among temporary workers: Looking through the gender lens. *Economic and Industrial Democracy, 36*(3), 523-547.

Rivière, M., Leroyer, A., Carreira, L. F., Blanchon, T., Plancke, L., Melchior, M., & Younès, N. (2018). Which work-related characteristics are most strongly associated with common mental disorders? A cross-sectional study. *BMJ Open, 8,* 1-12.

Roczniewska, M., Puchalska-Kamińska, M., & Łądka-Barańska, A. (2022). Facing education reform: Change-related self-efficacy is linked to job insecurity via appraisal. *Economic and Industrial Democracy, 43*(3), 1164-1188.

Roll, L. C., Siu, O. L., Li, S. Y., & De Witte, H. (2015). Job insecurity: Cross-cultural comparison between Germany and China. *Journal of Organizational Effectiveness: People and Performance, 2*(1), 36-54.

Roll, L. C., Siu, O. L., & Li, S. Y. (2015). The job insecurity-performance relationship in Germany and China: The buffering effect of uncertainty avoidance. *Psihologia Resurselor Umane, 13*(2), 165-178.

Röllmann, L. F., Weiss, M., & Zacher, H. (2021). Does voice benefit or harm occupational well-being? The role of job insecurity. *British Journal of Management, 32*(3), 708-724.

Ruppel, C., Stranzl, J., & Einwiller, S. (2022). Employee-centric perspective on organizational crisis: how organizational transparency and support help to mitigate employees' uncertainty, negative emotions and job disengagement. *Corporate Communications: An International Journal, 27*(5), 1-22.

Safavi, H. P., & Karatepe, O. M. (2019). The effect of job insecurity on employees' job outcomes: The mediating role of job embeddedness. *Journal of Management Development, 38*(4), 288-297.

Sahi, Q. B., & Ahmad, M. (2019). Impact of job insecurity and moral disengagement on counterproductive work behavior. *City University Research Journal, 9*(2), 276-295.

Sanders, J., Oomens, S., Blonk, R. W., & Hazelzet, A. (2011). Explaining lower educated workers' training intentions. *Journal of Workplace Learning, 23*(6), 402-416.

Sarwar, A., Naseer, S., & Zhong, J. Y. (2020). Effects of bullying on job insecurity and deviant behaviors in nurses: Roles of resilience and support. *Journal of Nursing Management, 28*(2), 267-276.

Schreurs, B. H., Hetty van Emmerik, I. J., Günter, H., & Germeys, F. (2012). A weekly diary study on the buffering role of social support in the relationship between job insecurity and employee performance. *Human Resource Management, 51*(2), 259-279.

Schreurs, B., Van Emmerik, H., De Cuyper, N., Probst, T., Van den Heuvel, M., & Demerouti, E. (2014). Religiousness in times of job insecurity: job demand or resource? *Career Development International, 19*(7), 755-778.

Schreurs, B., Guenter, H., & De Cuyper, N. (2015). Speaking up when feeling job insecure: The moderating role of punishment and reward sensitivity. *Journal of Organizational Change Management*, *28*(6), 1107-1128.

Selenko, E., Mäkikangas, A., Mauno, S., & Kinnunen, U. (2013). How does job insecurity relate to self-reported job performance? Analysing curvilinear associations in a longitudinal sample. *Journal of Occupational and Organizational Psychology, 86*(4), 522-542.

Selenko, E., Mäkikangas, A., & Stride, C. B. (2017). Does job insecurity threaten who you are? Introducing a social identity perspective to explain well-being and performance consequences of job insecurity. *Journal of Organizational Behavior, 38*(6), 856-875.

Selenko, E., Stiglbauer, B., & Batinic, B. (2020). More evidence on the latent benefits of work: Bolstered by volunteering while threatened by job insecurity. *European Journal of Work and Organizational Psychology, 29*(3), 364-376.

Shahid, A. U., Tufail, H. S., Shahid, J., & Ismail, A. (2021). Antecedents and consequences of perceived job security of professional accountants. *Asian Review of Accounting, 29*(5), 601-616.

Shamsudin, F. M., Al-Badi, S. H., Bachkirov, A., & Alshuaibi, A. S. (2016). Perceived Career-related Practices and Knowledge Sharing Behaviour: a preliminary study in Oman. *Asian Academy of Management Journal, 21*(1), 25-47.

Shao, H., Fu, H., Ge, Y., Jia, W., Li, Z., & Wang, J. (2022). Moderating effects of transformational leadership, affective commitment, job performance, and job insecurity. *Frontiers in Psychology, 13,* 1-10.

Shin, Y., & Hur, W. M. (2019). When do service employees suffer more from job insecurity? The moderating role of coworker and customer incivility. *International Journal of Environmental Research and Public Health, 16*(7), 1-17.

Shin, Y., & Hur, W. M. (2021). When do job-insecure employees keep performing well? The buffering roles of help and prosocial motivation in the relationship between job insecurity, work engagement, and job performance. *Journal of Business and Psychology, 36*(4), 659-678.

Shin, Y., Hur, W. M., Moon, T. W., & Lee, S. (2019). A motivational perspective on job insecurity: Relationships between job insecurity, intrinsic motivation, and performance and behavioral outcomes. *International Journal of Environmental Research and Public Health, 16*, 1-16.

Shoss, M. K., Su, S., Schlotzhauer, A. E., & Carusone, N. (2022). Working hard or hardly working? An examination of job preservation responses to job insecurity. *Journal of Management, OnlineFirst,* 1-28.

Smith, R. E. (2014). *Insecure commitment and resistance: An examination of change leadership, self-efficacy, and trust on the relationship between job insecurity, employee commitment, and resistance to organizational change.* [Doctoral dissertation, University of Minnesota Digital Conservancy]. ScholarWorks@BGSU.

Soehnlein, K. M. (1998). *The relationship of job insecurity, career planning, self-efficacy, goal orientation and the self-development of survivors of a downsizing corporation.* (Publication No. 9832771) [Doctoral dissertation, New York University]. ProQuest Dissertations & Theses Global.

Son, S., Yang, T. S., & Park, J. (2022). How organizational politics and subjective social status moderate job insecurity–silence relationships. *Journal of Management & Organization, Online publication,* 1-21.

Soomro, S. A., Kundi, Y. M., & Kamran, M. (2019). Antecedents of workplace deviance: role of job insecurity, work stress, and ethical work climate. *Problemy Zarządzania, 17*(6), 74-90.

Sora, B., Höge, T., Caballer, A., Peiró, J. M., & Boada, J. (2021). Job insecurity and performance: the mediating role of organizational justice in terms of type of contract. *Psicothema, 33*(1), 86-94.

Soral, P., Pati, S. P., & Kakani, R. K. (2022). Knowledge hiding as a coping response to the supervisors' dark triad of personality: A protection motivation theory perspective. *Journal of Business Research, 142*, 1077-1091.

Stankevičiūtė, Ž., Staniškienė, E., & Ramanauskaitė, J. (2021). The impact of job insecurity on organizational citizenship behavior and task performance: evidence from robotized furniture sector companies. *International Journal of Environmental Research and Public Health, 18*(2), 1-17.

Staufenbiel, T., & König, C. J. (2010). A model for the effects of job insecurity on performance, turnover intention, and absenteeism. *Journal of Occupational and Organizational Psychology, 83*(1), 101-117.

Stepina, L. P., & Perrewe, P. L. (1991). The stability of comparative referent choice and feelings of inequity: A longitudinal field study. *Journal of Organizational Behavior, 12*(3), 185-200.

Størseth, F. (2006). Changes at work and employee reactions: Organizational elements, job insecurity, and short-term stress as predictors for employee health and safety. *Scandinavian Journal of Psychology, 47*(6), 541-550.

Storseth, F. (2007). Affective job insecurity and risk taking at work. *International Journal of Risk Assessment and Management, 7*(2), 189-204.

Stynen, D., Forrier, A., Sels, L., & De Witte, H. (2015). The relationship between qualitative job insecurity and OCB: Differences across age groups. *Economic and Industrial Democracy, 36*(3), 383-405.

Sverke, M., & Hellgren, J. (2001). Exit, voice and loyalty reactions to job insecurity in Sweden: Do unionized and non-unionized employees differ? *British Journal of Industrial Relations, 39*(2), 167-182.

Tang, T. L. P., Singer, M. G., & Roberts, S. (2000). Employees' perceived organizational instrumentality: An examination of the gender differences. *Journal of Managerial Psychology, 15*(5), 378-406.

Teng, E., Zhang, L., & Qiu, Y. (2019). Always bad for creativity? An affect-based model of job insecurity and the moderating effects of giving support and receiving support. *Economic and Industrial Democracy, 40*(3), 803-829.

Teng, E., Zhang, L., & Lou, M. (2020). Does approach crafting always benefit? The moderating role of job insecurity. *The Journal of Psychology, 154*(6), 426-445.

Tetteh, S., Wu, C., Sungu, L. J., Opata, C. N., & Agyapong, G. N. Y. A. (2019). Relative impact of differences in job security on performance among local government employees: The moderation of affective commitments. *Journal of Psychology in Africa, 29*(5), 413-420.

Tian, Q., Zhang, L., & Zou, W. (2014). Job insecurity and counterproductive behavior of casino dealers: the mediating role of affective commitment and moderating role of supervisor support. *International Journal of Hospitality Management, 40*, 29-36.

Torkelson, E., Holm, K., Bäckström, M., & Schad, E. (2016). Factors contributing to the perpetration of workplace incivility: the importance of organizational aspects and experiencing incivility from others. *Work & Stress, 30*(2), 115-131.

Urbanaviciute, I., Christina Roll, L., Tomas, J., & De Witte, H. (2021). Proactive strategies for countering the detrimental outcomes of qualitative job insecurity in academia. *Stress and Health, 37*(3), 557-571.

Vale, C., Rodrigues, M., Azevedo, R., Ramos, D., & Loureiro, I. (2018). Employees' views about the impact of the economic crisis on occupational safety and quality of life: a pilot study in the North of Portugal. *International Journal of Quality Research, 12*(4), 941-956.

Van den Brande, W., Baillien, E., Vander Elst, T., De Witte, H., Van den Broeck, A., & Godderis, L. (2017). Exposure to workplace bullying: the role of coping strategies in dealing with work stressors. *BioMed Research International, 2017*, 1-12.

Van den Broeck, A., Sulea, C., Vander Elst, T., Fischmann, G., Iliescu, D., & De Witte, H. (2014). The mediating role of psychological needs in the relation between qualitative job insecurity and counterproductive work behavior. *Career Development International, 19*(5), 526-547.

Van den Broeck, A., Van Hootegem, A., Vander Elst, T., & De Witte, H. (2019). Do self-enhancing and affiliative humor buffer for the negative associations of quantitative and qualitative job insecurity? *The Spanish Journal of Psychology*, *22*(8), 1-15.

Van Hootegem, A., & De Witte, H. (2019). Qualitative job insecurity and informal learning: A longitudinal test of occupational self-efficacy and psychological contract breach as mediators. *International Journal of Environmental Research and Public Health, 16*, 1-24.

Van Hootegem, A., De Witte, H., De Cuyper, N., & Vander Elst, T. (2019). Job insecurity and the willingness to undertake training: the moderating role of perceived employability. *Journal of Career Development, 46* (4), 395-409.

Van Hootegem, A., Nikolova, I., Van Ruysseveldt, J., Van Dam, K., & De Witte, H. (2021). Hit by a double whammy? Trajectories of perceived quantitative and qualitative job insecurity in relation to work-related learning aspects. *European Journal Of Work And Organizational Psychology, 30*(6), 915-930.

Van Hootegem, A., Sverke, M., & De Witte, H. (2022). Does occupational self-efficacy mediate the relationships between job insecurity and work-related learning? A latent growth modelling approach. *Work And Stress, 36*(3), 229-250.

Van Vuuren, T., de Jong, J. P., & Smulders, P. G. (2020). The association between subjective job insecurity and job performance across different employment groups: Evidence from a representative sample from the Netherlands. *Career Development International, 25*(3), 229-246.

Van Zyl, L., Van Eeden, C., & Rothmann, S. (2013). Job insecurity and the emotional and behavioral consequences thereof. *South African Journal of Business Management, 44*(1), 75-86.

Vander Elst, T., De Cuyper, N., Baillien, E., Niesen, W., & De Witte, H. (2016). Perceived control and psychological contract breach as explanations of the relationships between job insecurity, job strain and coping reactions: Towards a theoretical integration. *Stress and Health, 32*(2), 100-116.

Vander Elst, T., De Witte, H., & De Cuyper, N. (2014). The Job Insecurity Scale: A psychometric evaluation across five European countries. *European Journal of Work and Organizational Psychology, 23*(3), 364-380.

Vo-Thanh, T., Vu, T. V., Nguyen, N. P., Nguyen, D. V., Zaman, M., & Chi, H. (2020). How does hotel employees' satisfaction with the organization's COVID-19 responses affect job insecurity and job performance? *Journal of Sustainable Tourism, 29*(6), 907-925.

Vu, T. V., Vo-Thanh, T., Nguyen, N. P., Van Nguyen, D., & Chi, H. (2022). The COVID-19 pandemic: Workplace safety management practices, job insecurity, and employees' organizational citizenship behavior. *Safety science, 145,* 1-11.

Wang, H. J., Demerouti, E., Blanc, P. L., & Lu, C. Q. (2018). Crafting a job in 'tough times': When being proactive is positively related to work attachment. *Journal of Occupational and Organizational Psychology, 91*(3), 569-590.

Wang, D., Li, X., Zhou, M., Maguire, P., Zong, Z., & Hu, Y. (2019). Effects of abusive supervision on employees' innovative behavior: The role of job insecurity and locus of control. *Scandinavian journal of psychology, 60*(2), 152-159.

Wang, H., Liu, X., Luo, H., Ma, B., & Liu, S. (2016). Linking procedural justice with employees work outcomes in China: The mediating role of job security. *Social Indicators Research, 125*(1), 77-88.

Wang, H. J., Lu, C. Q., & Lu, L. (2014). Do people with traditional values suffer more from job insecurity? The moderating effects of traditionality. *European Journal of Work and Organizational Psychology, 23*(1), 107-117.

Wang, H. J., Lu, C. Q., & Siu, O. L. (2015). Job insecurity and job performance: The moderating role of organizational justice and the mediating role of work engagement. *Journal of applied psychology, 100*(4), 1249–1258.

Wang, H., Ma, B., Liu, X., & Liu, S. (2014). Job security and work outcomes in China: Perceived organizational support as mediator. *Social Behavior and Personality: An International Journal, 42*(7), 1069-1076.

Wang, D., Weng, Q., Kiani, A., & Ali, A. (2022). Job insecurity and unethical pro-organizational behavior: The joint moderating effects of moral identity and proactive personality. *Personality and Individual Differences, 195,* 111685, 1-7.

Wardlaw, M. P. (2015). *How does psychological liability affect the relationship between psychological capital and team quality?* (Publication No. 3710755) [Doctoral dissertation, Bellevue University]. ProQuest Dissertations & Theses Global.

Wodociag, S., Dolce, V., & Molino, M. (2022). Cross-border and sedentary workers' job satisfaction. *Personnel Review, 51*(4), 1314-1335.

Wong, Y. T. (2012). Job security and justice: predicting employees' trust in Chinese international joint ventures. *The International Journal of Human Resource Management, 23*(19), 4129-4144.

Wong, Y. T., Ngo, H. Y., & Wong, C. S. (2003). Antecedents and outcomes of employees' trust in Chinese joint ventures. *Asia Pacific Journal of Management, 20*(4), 481-499.

Wood, S. J., Michaelides, G., Inceoglu, I., Hurren, E. T., Daniels, K., & Niven, K. (2021). Homeworking, well-being and the Covid-19 pandemic: A diary study. *International Journal of Environmental Research and Public Health, 18*, 1-24.

Wood, S., Michaelides, G., & Ogbonnaya, C. (2020). Recessionary actions and absence: A workplace-level study. *Human Resource Management, 59*(6), 501-520.

Xiao, Z., Wu, D., & Liao, Z. (2018). Job insecurity and workplace deviance: the moderating role of locus of control. *Social Behavior and Personality, 46*(10), 1673-1686.

Xu, J., Zhu, D., & Li, Y. (2022). Does small and medium enterprise differential leadership increase subordinate knowledge hiding? Evidences from job insecurity, territorial consciousness and leadership performance expectation. *Frontiers in Psychology, 13,* 983669., 1-25.

Yang, M., & Xu, P. (2021). Understanding the antecedents of knowledge sharing behavior from the theory of planned behavior model: Cross-cultural comparisons between mainland China and Malaysia. *Frontiers in psychology, 12,* 1-13.

Yang, Q., Jin, G., Fu, J., & Li, M. (2019). Job insecurity and employees taking charge: The role of global job embeddedness. *Social Behavior and Personality: An International Journal, 47*(4), 1-12.

Yao, X., Li, M., & Zhang, H. (2021). Suffering Job Insecurity: Will the Employees Take the Proactive Behavior or Not? *Frontiers in Psychology, 12*, 1-10.

Yi, X., & Wang, S. (2015). Revisiting the curvilinear relation between job insecurity and work withdrawal: The moderating role of achievement orientation and risk aversion. *Human Resource Management, 54*(3), 499-515.

Yiwen, F., & Hahn, J. (2021). Job insecurity in the COVID-19 pandemic on counterproductive work behavior of millennials: A time-lagged mediated and moderated model. *International Journal of Environmental Research and Public Health, 18*, 1-17.

Yoo, D. Y. (2022). How to Alleviate Hotel Employees' Job Stress in the Associations between Job Stressors and Its Consequences. *Sustainability, 14,* 8979, 1-14.

Yu, S., Wu, N., Liu, S., & Gong, X. (2021). Job insecurity and employees' extra-role behavior: moderated mediation model of negative emotion and workplace friendship. *Frontiers in Psychology, 12*, 1-12.

Zeytinoglu, I. U., Yılmaz, G., Keser, A., Inelmen, K., Uygur, D., & Özsoy, A. (2013). Job satisfaction,

flexible employment and job security among Turkish service sector workers. *Economic and Industrial Democracy, 34*(1), 123-144.

Zhang, J., Wang, S., Wang, W., Shan, G., Guo, S., & Li, Y. (2020). Nurses' job insecurity and emotional exhaustion: the mediating effect of presenteeism and the moderating effect of supervisor support. *Frontiers in Psychology, 11,* 1-9.

Zhang, X., Zhao, C., Niu, Z., Xu, S., & Wang, D. (2021). Job insecurity and safety behaviour: The mediating role of insomnia and work engagement. *International Journal of Environmental Research and Public Health, 18*(2), 1-15.

Supplemental Material C: Reference list of the sample measures

Abramis, D. J. (1994). Relationship of job stressors to job performance: Linear or an inverted-U? *Psychological Reports, 75*(1), 547-558.

Armstrong-Stassen, M. (1993). Production workers' reactions to a plant closing: The role of transfer, stress, and support. *Anxiety, Stress and Coping, 6*(3), 201-214.

Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology, 85*(3), 349–360.

Brough, P., O'Driscoll, M. P., & Kalliath, T. J. (2005). The ability of 'family friendly' organizational resources to predict work–family conflict and job and family satisfaction. *Stress and Health, 21*(4), 223-234.

Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology, 81*(4), 358–368.

Caplan, R. D., Cobb, S., French, J. R. P. Jr, van Harrison, R. V., & Pinneau, S. R. (1980). *Job demands and worker health: Main effects and occupational differences.* Survey Research Center, Institute of Social Research, University of Michigan.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267–283.

Cheyne, J. A., Carriere, J. S., & Smilek, D. (2006). Absent-mindedness: Lapses of conscious awareness and everyday cognitive failures. *Consciousness and Cognition, 15*(3), 578-592.

Chirumbolo, A., & Areni, A. (2010). Job insecurity influence on job performance and mental health: Testing the moderating effect of the need for closure. *Economic and Industrial Democracy, 31*(2), 195-214.

Claes, R., & Ruiz-Quintanilla, S. A. (1998). Influences of early career experiences, occupational group, and national culture on proactive career behavior. *Journal of Vocational behavior, 52*(3), 357-378.

Cook, J., & Wall, T. (1980). New work attitude measures of trust, organizational commitment and personal need non-fulfilment. *Journal of Occupational Psychology, 53*(1), 39-52.

Cortina, L. M., Magley, V. J., Williams, J. H., & Langhout, R. D. (2001). Incivility in the workplace: Incidence and impact. *Journal of Occupational Health Psychology, 6*(1), 64–80.

Cui J., Li X., & Xue Y. (2020). Can overtime behavior improve employees' workplace well-being? *Journal of Capital University of Economics and Business, 1,* 80–91.

De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and innovation management, 19*(1), 23-36.

De Jong, J. P., & Kemp, R. (2003). Determinants of co-workers' innovative behaviour: An investigation into knowledge intensive services. *International Journal of Innovation Management, 7*(2), 189-212.

Demerouti, E., Taris, T. W., & Bakker, A. B. (2007). Need for recovery, home–work interference and performance: Is lack of concentration the link? Journal of Vocational Behavior, 71, 204–220.

Edwards, J. R., & Baglioni Jr, A. J. (1993). The measurement of coping with stress: Construct validity of the Ways of Coping Checklist and the Cybernetic Coping Scale. *Work & Stress, 7*(1), 17-31.

Goldenhar, L. M., Williams, L. J., & Swanson, N. G. (2003). Modelling relationships between job stressors and injury and near-miss outcomes for construction laborers. *Work & Stress, 17*(3), 218–240.

Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal, 50*(2), 327-347.

Grunberg, L., Moore, S. Y., & Greenberg, E. (2001). Differences in psychological and physical health among layoff survivors: the effect of layoff contact. *Journal of Occupational Health Psychology, 6*(1), 15-25.

Guppy, A., Edwards, J. A., Brough, P., Peters-Bean, K. M., Sale, C., & Short, E. (2004). The psychometric properties of the short version of the Cybernetic Coping Scale: A multigroup confirmatory factor analysis across four samples. *Journal of Occupational and Organizational Psychology, 77*(1), 39-62.

Hellgren, J., Sverke, M., & Isaksson, K. (1999). A two-dimensional approach to job insecurity: Consequences for employee attitudes and well-being. *European Journal of Work and Organizational Psychology, 8*(2), 179-195.

Höge, T., & Schnell, T. (2012). Kein Arbeitsengagement ohne Sinnerfüllung. Eine Studie zum Zusammenhang von Work Engagement, Sinnerfüllung und Tätigkeitsmerkmalen. *Wirtschaftspsychologie, 1*, 91-99.

Huang, G. H., Lee, C., Ashford, S., Chen, Z., & Ren, X. (2010). Affective job insecurity: A mediator of cognitive job insecurity and employee outcomes relationships. *International Studies of Management & Organization, 40*(1), 20-39.

Huang, G. H., Niu, X., Lee, C., & Ashford, S. J. (2012). Differentiating cognitive and affective job insecurity: Antecedents and outcomes. *Journal of Organizational Behavior, 33*(6), 752-769.

Izadpanah, S., Barnow, S., Neubauer, A. B., & Holl, J. (2019). Development and validation of the Heidelberg Form for Emotion Regulation Strategies (HFERST): Factor structure, reliability, and validity. *Assessment, 26*(5), 880-906.

Jiménez, P., & Kallus, K. W. (2016). *RESTQ-Work.* In K. W. Kallus & M. Kellmann (Eds.), The recovery–stress questionnaires: User Manual (p. 327–346). Frankfurt: Pearson Assessment.

Jiménez, P., Milfelner, B., Žižek, S. Š., & Dunkl, A. (2017). Moderating effects between job insecurity and intention to quit in samples of Slovene and Austrian workers. *Our Economy, 63*(1), 27-37.

Johns, G. (2011). Attendance dynamics at work: the antecedents and correlates of presenteeism, absenteeism, and productivity loss. *Journal of Occupational Health Psychology, 16*(4), 483-500.

Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., & Amick, B. (1998). The Job Content Questionnaire (JCQ): An instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology, 3*(4), 322–355.

Kelloway, E. K., Loughlin, C., Barling, J., & Nault, A. (2002). Self-reported counterproductive behaviors and organizational citizenship behaviors: Separate but related constructs. *International Journal of Selection and Assessment, 10*(1-2), 143-151.

Kleysen, R. F., & Street, C. T. (2001). Toward a multi-dimensional measure of individual innovative behavior. *Journal of Intellectual Capital, 2*(3), 284-296.

Lavigne, K. N., Whitaker, V. L., Jundt, D. K., & Shoss, M. K. (2019). When do job insecure employees adapt to change? *Career Development International, 25*(3), 271-286.

Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology, 87*(1), 131–142.

Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles

Questionnaire. *Journal of Research in Personality, 37*(1), 48-75.

Maes, S., Van Elderen, T., Van der Ploeg, H. & Spielberger, C. (1987). *The Dutch Version of the Self-Expression and Control Scale*. Swets en Zeitlinger.

Marchand, A., Durand, P., Haines, V., & Harvey, S. (2015). The multilevel determinants of workers' mental health: results from the SALVEO study. *Social Psychiatry and Psychiatric Epidemiology, 50*(3), 445-459.

Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of Research in Personality, 37*(1), 48-75.

Maynes, T. D., & Podsakoff, P. M. (2014). Speaking more broadly: an examination of the nature, antecedents, and consequences of an expanded set of employee voice behaviors. *Journal of Applied Psychology*, 99(1), 87–112.

McDonough, P. (2000). Job insecurity and health. *International Journal of Health Services, 30*(3), 453-476.

Metselaar, E. E., & Cozijnsen, A. J. (1997). *Van weerstand naar veranderingsbereidheid: over willen, moeten en kunnen veranderen.* Holland Business Publications.

Min, K. H., Kim, J. H., Yoon, S. B., & Jahng, S. M. (2000). A study on the negative emotion regulation strategies: variations in regulation styles related to the kind of emotions and the personal characteristics. *Korean Journal of Social and Personality Psychology, 14*(2), 1-16.

Mohr, G., Rigotti, T., & Müller, A. (2005). Irritation-ein instrument zur Erfassung psychischer Beanspruchung im arbeitskontext. Skalen-und itemparameter aus 15 Studien. *Zeitschrift für Arbeits-und Organisationspsychologie, 49*(1), 44-48.

Moorman, R. H., & Blakely, G. L. (1995). Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior, 16*(2), 127-142.

Niesen, W., Van Hootegem, A., Handaja, Y., Batistelli, A., & De Witte, H. (2018). Quantitative and qualitative job insecurity and idea generation: The mediating role of psychological contract breach. *Scandinavian Journal of Work and Organizational Psychology, 3*(1), 1-14.

Oldham, G. R., Kulik, C. T., Stepina, L. P., & Ambrose, M. L. (1986). Relations between situational factors and the comparative referents used by employees. *Academy of Management Journal, 29*(3), 599-608.

Osipow, S. H., & Spokane, A. R. (1987). *Manual for the Occupational Stress Inventory.* Odessa, FL: Psychological Assessment Resources.

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quarterly, 1*, 107–142.

Probst, T. M. (2003). Development and validation of the Job Security Index and the Job Security Satisfaction scale: A classical test theory and IRT approach. *Journal of Occupational and Organizational Psychology, 76*(4), 451-467.

Probst, T. M., Barbaranelli, C., & Petitta, L. (2013). The relationship between job insecurity and accident under-reporting: A test in two countries. *Work & Stress, 27*(4), 383-402.

Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology, 12*(3), 204–221.

Strauss, K., Griffin, M. A., & Parker, S. K. (2012). Future work selves: how salient hoped-for identities motivate proactive career behaviors. *Journal of applied psychology, 97*(3), 580.

Tobin, D. L., Holroyd, K. A., Reynolds, R. V., & Wigal, J. K. (1989). The hierarchical factor structure of the Coping Strategies Inventory. *Cognitive Therapy and Research, 13*(4), 343-361.

Vander Elst, T., De Witte, H., & De Cuyper, N. (2014). The Job Insecurity Scale: A psychometric evaluation across five European countries. *European Journal of Work and Organizational Psychology, 23*(3), 364-380.

Van den Broeck, A., Sulea, C., Vander Elst, T., Fischmann, G., Iliescu, D., & De Witte, H. (2014). The mediating role of psychological needs in the relation between qualitative job insecurity and counterproductive work behavior. *Career Development International. 19*(5), 526-547.

Van Dyne, L. V., Ang, S., & Botero, I. C. (2003). Conceptualizing employee silence and employee voice as multidimensional constructs. *Journal of Management Studies, 40*(6), 1359-1392.

Van Dyne, L., Graham, J. W., & Dienesch, R. M. (1994). Organizational citizenship behavior: Construct redefinition, measurement, and validation. *Academy of Management Journal, 37*(4), 765-802.

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management journal, 41*(1), 108-119.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of management, 17*(3), 601-617.

Summary

The share of workers engaged in non-standard work has risen to a quarter of the European and American workforce (CBS, 2020; Karpman et al., 2022), nearly a third of the workforce has a job with a high risk of being automated (OECD, 2023), and the COVID-19 pandemic initiated a global career shock that severely influenced the working lives of many (Akkermans et al., 2020). In light of such developments, it may not be surprising that job insecurity has become an increasingly prevalent and chronic work stressor within contemporary careers (Wu et al., 2020). That is, for many workers, the perception of threat to the continuity and stability of their employment forms no longer a temporary experience (e.g., as it used to be for new labor market entrants), but instead a constant and enduring experience that varies in intensity throughout the working life. This is troubling, because job insecurity harms both individual well-being as well as organizational prosperity. Workers who endure high levels of job insecurity experience both damaging effects at work (i.e., lower job satisfaction, decreased career success, poorer job performance) and in other facets of life (i.e., lower physical and psychological health, lower life satisfaction, increased work-family conflicts). For organizations in which employees endure high levels of job insecurity, negative consequences include increased absenteeism, increased turnover, decreased work engagement, and poorer organizational performance (Cheng & Chan, 2008; Jiang & Lavaysse, 2018; Sverke et al., 2002).

To prevent such consequences, it is imperative to take measures aimed at minimizing job insecurity among workers. This can partly be achieved by ongoing policy- and organizational-level initiatives aimed at minimizing job insecurity (e.g., better employment protection), yet it remains crucial to recognize individual agency as well. In this dissertation, I therefore investigated whether and how workers can manage and minimize the experience of job insecurity by their own means. Specifically, I examined the potential of proactive coping in this regard. Proactive coping refers to efforts undertaken in advance of potentially stressful events or situations to prevent them or to modify their form before they occur (Aspinwall & Taylor, 1997). Throughout this dissertation, I addressed three research questions aimed at uncovering how proactive coping manifests itself in the context of job insecurity (Research Question 1), whether such proactive coping can alleviate contemporary workers' experience of different types of job insecurity (Research Questions 2a and 2b), and how resources play a role in this process (Research Questions 3a, 3b, and 3c). I sought answers to these questions with longitudinal, meta-analytical, and experimental methods in four empirical chapters (Chapters 2 – 5). Together, these answers helped

realizing the primary aim of this dissertation: uncovering whether and how proactive coping can minimize the experience of job insecurity among contemporary workers.

Empirical Findings

In Chapter 2, I first translated the five theoretical stages of proactive coping (Aspinwall & Taylor, 1997) into specific career behaviors: career planning, scenario thinking, career consultation, networking, and reflecting. Next, I tested whether these behaviors could lower the experience of job insecurity (i.e., proactive coping, aimed at preventing or managing the stressor itself) and the psychological strain resulting from job insecurity (i.e., reactive coping, aimed at reducing the consequences of the stressor) in a 5-wave weekly survey study among 266 workers. The results showed that these career behaviors were ineffective for both proactive and reactive coping purposes on a weekly basis, for generally all types of job insecurity. Furthermore, the results showed that workers who engaged in more proactive coping, experienced more (rather than less) job insecurity – but this relation was less pronounced for workers high in career and financial resources. These findings indicate that: 1) the difference between proactive and reactive coping may lie in the proposed function of efforts (i.e., influencing a potential stressor), rather than in the type of behavior or its effectiveness, 2) the beneficial effects of proactive coping may need more than several weeks of time to establish, and 3) proactive coping may be harmful in the short term – and even more so for workers with relatively few resources.

Building upon the conclusion of Chapter 2 that proactive coping may include any effort with the potential to influence a potential stressor, Chapter 3 reviewed the literature on the various forms of efforts that may influence job insecurity in a proactive manner, and meta-analytically examined their relationships with job insecurity. To this purpose, I combined traditional coping theories (Tobin et al., 1989; Kraaij & Garnefski, 2019) and proactive coping theory (Aspinwall & Taylor, 1997) into a proactive coping framework that categorizes behavioral and cognitive efforts within their level of engagement with the work situation (engaged or disengaged). For disengaged coping we further distinguish between adaptive and maladaptive forms. Based on 324 independent samples comprising data from over 300,000 workers, the meta-analytic results indicated that – regardless of job insecurity type – behavioral and mental engagement (e.g., performing well, cognitive restructuring) and adaptive behavioral and mental disengagement (e.g., recovery activities, mindfulness) are associated with lower amounts of job insecurity. Maladaptive behavioral and mental disengagement (e.g., counterproductive work behaviors, avoidance) were

associated with higher amounts of job insecurity. These findings indicate that: 1) workers who use more engaged and adaptive disengaged forms of proactive coping experience less job insecurity than others, and 2) proactive coping may, as with traditional reactive coping models, include maladaptive forms of coping, which were shown to relate to a stronger experience of job insecurity.

While Chapter 3 provided support for the idea that proactive coping can lower job insecurity, it remained unclear *how* such proactive coping could establish these changes. In Chapter 4, I therefore investigated whether proactive coping (specifically: career planning, scenario thinking, career consultation, networking, and skill development) relates to less job insecurity through the accumulation of career resources. In addition, building upon the finding from Chapter 2 that proactive coping may be harmful in the short term, I tested whether job insecurity may hinder future proactive coping through increased psychological strain. The results from the 5-wave monthly survey study among 243 self-employed workers support the hypothesis that monthly proactive coping can decrease subsequent job insecurity via career resources, but indicated no relationship between job insecurity and subsequent proactive coping. Moreover, I found a cross-level interaction of self-compassion and job insecurity on psychological strain and a direct relationship between recovery and proactive coping. These findings indicate that: 1) the beneficial effects of proactive coping on job insecurity can show after a month of effort, 2) proactive coping has an indirect effect on job insecurity through the accumulation of career resources, and 3) proactive coping may be stimulated through indirect and direct resource replacement in the form of self-compassion and recovery (Hobfoll et al., 2018).

Lastly, Chapter 5 presented two studies that experimentally tested the effects of proactive coping on (qualitative) job insecurity in the form of two career planning interventions. While Study 1 (N_{S1} = 256) indicated that both the exploitation (goal-oriented) intervention and the exploration (option-oriented) intervention could lower feelings of job insecurity, these findings were not replicated in Study 2 (N_{S2} = 212). Combined, these studies suggest that more research is needed to establish boundary conditions for effective proactive coping. We propose that a sense of necessity or “reason to” motivation to engage with their career future (Parker at al., 2010) may form such a boundary condition, considering that Study 1 was conducted during COVID-19 induced lockdowns and Study 2 was conducted during a period of labor market shortages.

Conclusion

The findings from this dissertation reveal that not only policy- and organizational-level initiatives, but also individual action in the form of proactive coping can help to reduce the experience of job insecurity among contemporary workers. I proposed that proactive coping is not effective by definition, but that proactive coping in the form of engagement and adaptive disengagement is more likely to be – which was supported by the meta-analytic findings of Chapter 3. The longitudinal findings from Chapters 2 and 4 indicate the importance of prolonged effort for effective engaged proactive coping in the form of proactive career behavior: Although proactive career behavior could not lower job insecurity in a matter of weeks, it could lower job insecurity in a matter of months through the accumulation of resources. However, the findings also suggest the need for further exploration of the conditions that foster effective proactive coping in the context of job insecurity. Simply instructing workers to engage in proactive coping appears insufficient to prompt a change in their experience of job insecurity, as demonstrated in Chapter 5 with different career planning interventions. In summary, this dissertation underlines that, even amid significant external factors like ongoing flexibilization processes and pandemic-related restrictions, workers retain the ability to contain their job insecurity with proactive coping.

Practical Implications

The research in this dissertation has several implications for practice. First, because proactive coping is harder for workers who need the beneficial outcomes of proactive coping the most (i.e. workers low in resources), it is important that employers take care not to initiate loss spirals and that (semi-)public organizations support workers who have already begun to spiral downwards. Second, effective proactive coping is not a one-time effort and both employers and workers themselves should therefore keep in mind that the needed accumulation of resources requires prolonged use of proactive coping, which can be fostered through routinization and preventing excessive amounts of sudden effort. Third, because proactive coping requires the investment of resources, individuals are advised to counteract the short-term resource loss by creating new resources, for example through recovery and practicing mindfulness.

Future Research Directions

This dissertation points to three future research directions. First, to more objectively assess whether individuals' efforts have proactive purposes I recommend the construction of a proactive coping scale that consists of sub-scales depicting the categories of the proposed proactive coping framework. That way, not only engaged, but also disengaged adaptive and disengaged maladaptive proactive coping and their impact can be further investigated. Ideally, this proactive coping scale is focused on undefined future stressors (e.g., "a potential setback" or "future threats") and can be adjusted to target specific (career) threats. As such, the concept of proactive coping may not only be a valuable contribution within the context of careers, but also in other contexts in which individuals are subjected to potential future threats. Second, I recommend that the construction of a comprehensive meso-level theory of career proactivity (cf. Jiang et al., 2023) does not misinterpret the existence of overlapping concepts as a jangle fallacy (i.e., unjustified belief that things are different from each other because they are called by different names), but instead recognizes such overlapping concepts as a potentially valuable representation of reality (e.g., proactive career behavior is a form of engaged proactive coping, which in turn is a form of proactive coping). Third, I urge future researchers to investigate proactive coping that is initiated by organizations and institutions rather than individuals. If we can uncover how organizations can act more proactively, this has the potential to avert stressors that are beyond the grasp of individuals.

Samenvatting

Het aandeel werknemers met niet-standaardwerk is gestegen tot een kwart van de Europese en Amerikaanse beroepsbevolking (CBS, 2020; Karpman et al., 2022), bijna een derde van de beroepsbevolking heeft een baan met een hoog risico op automatisering (OESO, 2023), en de coronapandemie heeft een wereldwijde carrièreshock veroorzaakt die het werkende leven van velen ernstig heeft beïnvloed (Akkermans et al., 2020). In het licht van dergelijke ontwikkelingen is het wellicht niet verrassend dat baanonzekerheid een steeds meer voorkomende en chronische werkstressor is geworden binnen hedendaagse loopbanen (Wu et al., 2020). Dat wil zeggen, voor veel werkenden is een waargenomen dreiging betreffende de continuïteit en stabiliteit van hun baan niet langer een tijdelijke ervaring (zoals het bijvoorbeeld vroeger was voor nieuwkomers op de arbeidsmarkt), maar in plaats daarvan een meer chronische ervaring die varieert in intensiteit gedurende het hele werkende leven. Dit is verontrustend, want baanonzekerheid schaadt zowel het individuele welzijn als de welvaart van organisaties. Werkenden die te maken hebben met een hoge mate van baanonzekerheid ervaren zowel schadelijke effecten op het werk (d.w.z. een lagere werktevredenheid, minder loopbaansucces, slechtere werkprestaties) als in andere facetten van het leven (d.w.z. een lagere fysieke en psychologische gezondheid, minder levenstevredenheid, meer conflicten tussen werk en gezin). Voor organisaties waarin werknemers te maken hebben met een hoge mate van baanonzekerheid, zijn de negatieve gevolgen onder meer een hoger verzuim, een hoger verloop, een verminderde werkbetrokkenheid en slechtere organisatieprestaties (Cheng & Chan, 2008; Jiang & Lavaysse, 2018; Sverke et al., 2002).

Om dergelijke gevolgen te voorkomen, is het noodzakelijk om maatregelen te nemen die de baanonzekerheid onder werkenden kunnen minimaliseren. Dit kan deels worden bereikt met lopende initiatieven op beleids- en organisatieniveau die gericht zijn op het inperken van baanonzekerheid (bijv. betere arbeidsbescherming), maar het blijft cruciaal om ook de invloed van individuen te erkennen. In dit proefschrift onderzoek ik daarom of en hoe werkenden *zelf* baanonzekerheid kunnen managen en inperken. Specifiek onderzoek ik het potentieel van proactief coping in dit opzicht. Proactief coping verwijst naar inspanningen die worden ondernomen voorafgaand aan potentieel stressvolle gebeurtenissen of situaties, om deze te voorkomen of veranderen voordat ze zich voordoen (Aspinwall & Taylor, 1997). In dit proefschrift behandel ik drie onderzoeksvragen gericht op hoe proactief coping zich manifesteert in de context van baanonzekerheid (Onderzoeksvraag 1), of zulk proactief coping de verschillende soorten baanonzekerheid onder hedendaagse werkenden kan verlichten (Onderzoeksvragen 2a en 2b), en

hoe hulpbronnen (resources) een rol spelen in dit proces (Onderzoeksvragen 3a, 3b, en 3c). Ik zoek antwoorden op deze vragen met longitudinale, meta-analytische en experimentele methoden in vier empirische hoofdstukken (Hoofdstukken 2 - 5). Samen helpen deze antwoorden bij het realiseren van het hoofddoel van dit proefschrift: ontdekken of en hoe proactief coping de ervaring van baanonzekerheid onder hedendaagse werkenden kan inperken.

Empirische Bevindingen

In Hoofdstuk 2 heb ik eerst de vijf theoretische stadia van proactief coping (Aspinwall & Taylor, 1997) vertaald naar specifieke loopbaangedragingen: loopbaanplanning, scenario-denken, loopbaanoverleg, netwerken en reflecteren. Vervolgens heb ik getest of deze gedragingen de ervaring van baanonzekerheid (als proactief coping, gericht op het voorkomen of inperken van de stressor zelf) en de psychologische belasting als gevolg van baanonzekerheid (als reactief coping, gericht op het verminderen van de gevolgen van de stressor) konden verminderen in een wekelijkse survey studie met 5 meetmomenten onder 266 werkenden. Uit de resultaten bleek dat deze gedragingen voor zowel proactieve als reactieve coping doeleinden niet effectief waren op wekelijkse basis. Dit gold voor vrijwel alle soorten baanonzekerheid. Bovendien toonden de resultaten aan dat werkenden die meer proactief coping vertoonden, meer (in plaats van minder) baanonzekerheid ervoeren – maar deze relatie was minder uitgesproken voor werkenden met veel loopbaangerichte en financiële hulpbronnen. Deze bevindingen geven aan dat: 1) het verschil tussen proactief en reactief coping mogelijk ligt in het voorgestelde doel van de inspanningen (d.w.z. het beïnvloeden van een potentiële stressor), in plaats van in het type gedrag of de effectiviteit ervan, 2) de gunstige effecten van proactief coping mogelijk meer dan enkele weken nodig hebben om tot stand te komen, en 3) proactief coping op korte termijn schadelijk kan zijn – en nog schadelijker voor werkenden met relatief weinig hulpbronnen.

Voortbouwend op de conclusie uit Hoofdstuk 2 dat proactief coping elke inspanning kan omvatten met de potentie om een potentiële stressor te beïnvloeden, heb ik in Hoofdstuk 3 literatuur verzameld over de verschillende soorten inspanningen die baanonzekerheid op een proactieve manier kunnen beïnvloeden. Vervolgens, heb ik de relaties tussen deze inspanningen en baanonzekerheid meta-analytisch onderzocht. Hiertoe combineerde ik traditionele coping theorieën (Tobin et al., 1989; Kraaij & Garnefski, 2019) en proactief coping theorie (Aspinwall & Taylor, 1997) tot een proactief coping raamwerk dat gedragsmatige en cognitieve inspanningen categoriseert binnen hun mate van betrokkenheid bij de werksituatie (betrokken of onbetrokken).

Voor onbetrokken coping maak ik verder onderscheid tussen adaptieve en maladaptieve vormen. Gebaseerd op 324 onafhankelijke steekproeven met gegevens van meer dan 300.000 werkenden, gaven de meta-analytische resultaten aan dat – ongeacht het type baanonzekerheid – gedragsmatige en cognitieve betrokkenheid (bijv. goed presteren, omdenken) en adaptieve gedragsmatige en cognitieve onbetrokkenheid (bijv. herstelactiviteiten, mindfulness) geassocieerd zijn met minder baanonzekerheid. Maladaptieve gedragsmatige en cognitieve onbetrokkenheid (bijvoorbeeld contraproductief werkgedrag, vermijding) waren geassocieerd met een hogere mate van baanonzekerheid. Deze bevindingen geven aan dat: 1) werkenden die meer betrokken en adaptieve onbetrokken vormen van proactief coping gebruiken, minder baanonzekerheid ervaren dan anderen, en 2) proactief coping, net als bij traditionele reactieve coping modellen, maladaptieve vormen van coping kan omvatten. Deze maladaptieve vormen bleken inderdaad samen te hangen met meer ervaren baanonzekerheid.

Hoewel Hoofdstuk 3 ondersteuning bood voor het idee dat proactief coping baanonzekerheid kan inperken, bleef het onduidelijk *hoe* proactief coping deze veranderingen tot stand zou kunnen brengen. In Hoofdstuk 4 onderzocht ik daarom of proactief coping (specifiek: carrièreplanning, scenario-denken, loopbaanoverleg, netwerken en ontwikkelen van vaardigheden) verband houdt met minder baanonzekerheid middels de opbouw van hulpbronnen. Daarnaast heb ik, voortbouwend op de bevinding uit Hoofdstuk 2 dat proactief coping op korte termijn schadelijk kan zijn, getest of baanonzekerheid toekomstig proactief coping kan belemmeren door een verhoogde psychologische belasting. De resultaten van de maandelijkse survey studie met 5 metingen onder 243 zelfstandigen ondersteunen de hypothese dat maandelijks proactief coping latere baanonzekerheid kan verminderen via hulpbronnen, maar gaven geen relatie aan tussen baanonzekerheid en latere proactief coping. Verder vond ik een cross-level interactie van zelfcompassie en baanonzekerheid op psychologische belasting en een directe relatie tussen herstel en proactief coping. Deze bevindingen geven aan dat: 1) de gunstige effecten van proactief coping op baanonzekerheid zichtbaar worden na een maand van inspanning, 2) proactief coping een indirect effect heeft op baanonzekerheid door de opbouw van hulpbronnen, en 3) proactief coping gestimuleerd kan worden door indirecte en directe vervanging van hulpbronnen in de vorm van zelfcompassie en herstel (Hobfoll et al., 2018).

Tot slot werden in Hoofdstuk 5 twee studies gepresenteerd waarin de effecten van proactief coping op (kwalitatieve) baanonzekerheid experimenteel werden getest in de vorm van twee

loopbaanplanning interventies. Terwijl Studie 1 (N_{S1} = 256) aangaf dat zowel de exploitatie (doelgerichte) interventie als de exploratie (optiegerichte) interventie gevoelens van baanonzekerheid konden verlagen, werden deze bevindingen niet gerepliceerd in Studie 2 (N_{S2} = 212). Samen suggereren deze studies dat er meer onderzoek nodig is om de randvoorwaarden voor effectief proactief coping vast te stellen. Wij verwachten dat een gevoel van noodzaak om bezig te zijn met de eigen loopbaantoekomst een randvoorwaarde vormt, aangezien Studie 1 werd uitgevoerd ten tijde van lockdowns en Studie 2 werd uitgevoerd tijdens een periode van krapte op de arbeidsmarkt.

Conclusie

De bevindingen van dit proefschrift laten zien dat niet alleen initiatieven op beleids- en organisatieniveau, maar ook individuele actie in de vorm van proactief coping kan helpen om baanonzekerheid onder werkenden te verminderen. Ik heb geopperd dat proactief coping niet per definitie effectief is, maar dat proactief coping in de vorm van betrokkenheid en adaptieve onbetrokkenheid meer kans heeft om effectief te zijn – wat ondersteund werd door de meta-analytische bevindingen van Hoofdstuk 3. De longitudinale bevindingen uit Hoofdstuk 2 en 4 wijzen naar het belang van langdurige inspanning voor effectieve betrokkenheid in de vorm van proactief loopbaangedrag: Hoewel proactief loopbaangedrag baanonzekerheid niet kon verlagen in een kwestie van weken, kon het wel baanonzekerheid wel verlagen in een kwestie van maanden middels het opbouwen van hulpbronnen. De bevindingen wijzen er echter ook op dat verder onderzoek naar de voorwaarden voor effectief proactief coping in de context van baanonzekerheid nodig is. Het simpelweg instrueren van werkenden om aan proactief coping te doen, lijkt onvoldoende om een verandering teweeg te brengen in baanonzekerheid, zoals Hoofdstuk 5 laat zien met verschillende loopbaanplanning interventies. Samenvattend benadrukt dit proefschrift dat, zelfs in de context van externe factoren zoals flexibiliseringsprocessen en (dreigende) lockdowns, individuen in staat zijn om hun baanonzekerheid te managen door middel van proactief coping.

Praktische Implicaties

Het onderzoek in dit proefschrift heeft verschillende implicaties voor de praktijk. Ten eerste, omdat proactief coping moeilijker is voor werkenden die de gunstige uitkomsten van proactief coping het hardst nodig hebben (d.w.z. werkenden met weinig hulpbronnen), is het

belangrijk dat werkgevers ervoor waken dat zij geen “loss spirals” initiëren en dat (semi-)publieke organisaties werkenden ondersteunen die al in een neerwaartse spiraal terecht zijn gekomen. Ten tweede is effectief proactief coping geen eenmalige inspanning en zowel werkgevers als werkenden zelf moeten er daarom rekening mee houden dat de nodige opbouw van hulpbronnen een langdurig gebruik van proactief coping vereist, wat kan worden bevorderd door routines te creëren en buitensporige hoeveelheden plotselinge inspanning te voorkomen. Ten derde, omdat proactief coping de investering van hulpbronnen vereist, adviseer ik dat mensen het korte termijn verlies van hulpbronnen tegengaan door nieuwe hulpbronnen te creëren, bijvoorbeeld door activiteiten gericht op herstel en het beoefenen van mindfulness.

Suggesties voor Toekomstig Onderzoek

Dit proefschrift wijst op drie kansen voor toekomstig onderzoek. Ten eerste, om objectiever te kunnen beoordelen of de inspanningen van mensen proactieve doeleinden hebben, raad ik aan om een schaal voor proactief coping te construeren met sub-schalen bestaande uit de categorieën van het proactief coping raamwerk. Op die manier kunnen niet alleen betrokken, maar ook adaptieve en maladaptieve onbetrokken vormen van proactief coping en hun impact verder onderzocht worden. Idealiter is deze schaal voor proactief coping gericht op ongedefinieerde toekomstige stressoren (bv. “een potentiële tegenslag” of “toekomstige bedreigingen”) en kan de schaal worden aangepast voor specifieke (loopbaan)dreigingen. Op deze manier kan het concept proactief coping niet alleen een waardevolle bijdrage leveren binnen de context van loopbanen, maar ook in andere contexten waarin mensen worden blootgesteld aan potentiële toekomstige dreigingen. Ten tweede raad ik aan om bij de constructie van een allesomvattende mesoniveau theorie van loopbaan proactiviteit (cf. Jiang et al., 2023) het bestaan van overlappende concepten niet onjuist te interpreteren als een “jangle fallacy” (d.w.z., ongerechtvaardigd geloof dat dingen van elkaar verschillen omdat ze verschillende namen hebben), maar in plaats daarvan overlappende concepten te erkennen als een potentieel waardevolle representatie van de werkelijkheid (bijv. proactief loopbaangedrag is een vorm van betrokken proactief coping, wat op zijn beurt weer een vorm van proactief coping is). Ten derde vraag ik toekomstige onderzoekers om proactief coping dat geïnitieerd wordt door organisaties en instituties te onderzoeken. Als we kunnen ontdekken hoe organisaties meer proactief kunnen handelen, heeft dit de potentie om stressoren die buiten het bereik van individuen liggen af te wenden of in te perken.

Contributions to Empirical Chapters

Chapter 2
Langerak, J. B., Koen, J., & Van Hooft, E. A. J. (2022). How to minimize job insecurity: The role of proactive and reactive coping over time. *Journal of Vocational Behavior, 136*, Article 103729. https://doi.org/10.1016/j.jvb.2022.103729

The study was designed in collaboration between all authors. Data were collected and analyzed by Langerak with support from Koen and Van Hooft. The interpretation of the results and further theorizing was first done by Langerak and then refined through collaboration between all authors. The chapter was written by Langerak, while Koen and Van Hooft provided critical revisions and suggestions.

Chapter 3
Langerak, J. B., Koen, J., & Van Hooft, E. A. J. (under review). Don't wait for the storm to pass: A meta-analytic review on proactive coping with job insecurity.

The study was designed in collaboration between all authors. Data were collected, screened, coded, and analyzed by Langerak. The interpretation of the results and further theorizing was first done by Langerak and then refined through collaboration between all authors. The chapter was written by Langerak, while Koen and Van Hooft provided critical revisions and suggestions.

Chapter 4
Langerak, J. B., Koen, J., & Van Hooft, E. A. J. (under review). What goes around, comes around? Testing a cyclic model of proactive coping with job insecurity among non-standard workers.

The study was designed in collaboration between all authors. Data were collected and analyzed by Langerak with support from Koen and Van Hooft. The interpretation of the results and further theorizing was first done by Langerak and then refined through collaboration between all authors. The chapter was written by Langerak, while Koen and Van Hooft provided critical revisions and suggestions.

Chapter 5
Langerak, J. B., Koen, J., Van Hooft, E. A. J., & Parker, S. K. (manuscript in preparation). Planning against qualitative job insecurity: Testing two online interventions.

The study was designed in collaboration between all authors. Data were collected and analyzed by Langerak with support from Koen and Van Hooft. The interpretation of the results and further theorizing was first done by Langerak and then refined through collaboration between all authors. The chapter was written by Langerak, while Koen, Van Hooft, and Parker provided critical revisions and suggestions.

Portfolio

Awards

Best Paper Award (Top 3) at WAOP 2023
for the paper "Don't Wait for the Storm to Pass: A Meta-Analytic Review on Proactive Coping with Job Insecurity".

Jongerenprijs Nederlandse Arbeidsmarkt Dag 2022
for the paper "Don't Wait for the Storm to Pass: A Meta-Analytic Review on Proactive Coping with Job Insecurity".

Arnon Reichers Best Student Paper Award (Top 3) at AOM Careers Division 2021
for the paper "How to Minimize Job Insecurity: The Role of Proactive and Reactive Coping over Time".

Publications

Langerak, J. B., Koen, J., & van Hooft, E. A. J. (2022). Hoe (niet) om te gaan met baanonzekerheid bij een tijdelijk contract: de rol van actief en passief copinggedrag. *Gedrag & Organisatie, 35*(4). https://doi.org/10.5117/GO2022.4.005.LANG

Van Bezouw, M. J., Koen, J., Langerak, J. B. (2022). Proactiviteit ten tijde van baanonzekerheid: over de modererende rol van 'Future Work Selves'. *Gedrag & Organisatie, 35*(4). https://doi.org/10.5117/GO2022.4.006.BEZO

Langerak, J. B., Koen, J., & van Hooft, E. A. J. (2022). How to minimize job insecurity: The role of proactive and reactive coping over time. *Journal of Vocational Behavior, 136,* Article 103729. https://doi.org/10.1016/j.jvb.2022.103729

Langerak, J. B., Koen, J., & van Hooft, E. A. J. (2021). How to minimize job insecurity during the COVID-19 pandemic: The role of proactive and reactive coping over time. Academy of Management. *Annual Meeting Proceedings,* 2021. https://doi.org/10.5465/AMBPP.2021.69

Media Appearance (selection)

Langerak, J. (2023, May 30). *Wat te doen bij dreigend onheil* [Radio] Werkverkenners. https://www.bnr.nl/podcast/werkverkenners/10514284/wat-te-doen-bij-dreigend-onheil

Retkowsky, J. & Langerak, J. (2022, December 21). *Uitzendorganisaties ontberen vaak een langetermijnvisie* [Web] Flexpraat. https://open.spotify.com/episode/6INFllwi9O7L2C0AGwYpQQ

Langerak, J.B. & Van Bezouw, M. J. (2021, March 9). *Zelf werkzekerheid creëren en vergroten.* Seminar presented at UWV, online. https://www.onlineseminar.nl/uwv/webinar/%20%0939148/zelf-werkzekerheid-creeren-en-vergroten

Langerak, J. B. (2020, December 17). *Proactief zekerheid creëren in onzekere tijden*. De Toekomst van Werk en Werkzekerheid. https://www.toekomstvanwerkzekerheid.nl/post/proactief-zekerheid-creëren-in-onzekere-tijden

Conferences

Career Success Research Symposium	2022
Duurzame Loopbanen voor Flexwerkers (DLF) Lab	2022
Nederlandse Arbeidsmarkt Dag	2022
KLI Conference	2021, 2022
AOM Annual Meeting	2021
Small Group Meeting: Towards Inclusive Careers across the Lifespan	2020
AOM Careers Division Community Conference	2020
Instituut Gak Annual Conference	2019, 2020, 2021, 2022
EAWOP Conference	2019
WAOP Conference	2018, 2019, 2022, 2023

Courses

KLI alumni experiences (KLI)	2022
Assessment of theses (TLC)	2022
Storytelling for scientists (KLI)	2021
Good research practices (KLI)	2020
Time management (KLI)	2020
Activating work methods (TLC)	2020
How to publish and review (KLI)	2020
Common experiences in academic careers, and how to approach them (KLI)	2020
Didactic skills for starting teachers (TLC)	2019
Job insecurity versus perceived employability (KLI)	2019
Programming in psychological science (UvA)	2019
Methodological seminars 1-5 (KLI)	2019
Career planning in the new era (KLI)	2019

KLI refers to the Kurt Lewin Institute (kurtlewininstituut.nl)
TLC refers to the Teaching and Learning Centre from the University of Amsterdam

Prior Work Experiences

Data analyst at NCOI Opleidingen	2018
Policy advisor at Ministry of Social Affairs and Employment	2017
Project manager (trainee) at the Municipality of Utrecht	2016 – 2017
HR assistant at the Municipality of Vianen	2015

Boards and Committees

Dissertation committee WAOP	2020
Board member Young Innovators alumni network	2015 – 2017

Kurt Lewin Institute Dissertation Series

The "Kurt Lewin Institute Dissertation Series" started in 1997. The following dissertations have been published during the last two years. The complete list can be found on our website: https://kurtlewininstituut.nl

2022-01: Iris van Sintemaartensdijk: *Burglary in virtual reality*
2022-02: Lu Liu: *Public participation in decision making on sustainable energy transitions*
2022-03: Rabia Kodapanakkal: *The role of tradeoffs and moralization in the adoption of big data technologies*
2022-04: Elissa El Khawli: *Why, When, and How Workers Regulate: A lifespan perspective on work design and emotion regulation at work*
2022-05: Chantal van Andel: *Clinical Grade Differences Between Ethnic Minority and Majority Students: Institutional-, assessor and student-related factors*
2022-06: Inga Rösler: *Hear me out: How to create an open mind towards moral criticism*
2022-07: Tessa Coffeng: *Bias in supervision: A social psychological perspective on regulatory decision-making*
2022-08: Babet Kanis: *Hope and Health in the Face of Adversity*
2022-09: Martijn Blikmans: *Do we live in the age of emotion politics? The effects of anger, disgust, hope, and nostalgia communication on political support and polarization*
2022-10: Anne van Valkengoed: *Reality, causes, consequences: The role of climate change perceptions in climate adaptation*
2022-11: Dan Sun: *How People Learn to Act on Goals: A New Examination of the Mechanistic Ideomotor Action Account*
2022-12: Carla Roos: *Everyday Diplomacy: Dealing with controversy online and face-to-face*
2022-13: Christhian Martínez: *Hate: Distinctive Features Across Individuals and Groups*
2022-14: Wenrui Cao: *Forgiveness in Work Relationships: Causes and Consequences*
2022-15: Jiafang Chen: *How Narcissists Navigate the Communal World*
2023-01: How Hwee Ong: *Demystifying Magical Justice Beliefs: Believing in Justice in a World of Injustices*
2023-02: Erdem Meral: *Talking about belonging: Whether, why, and how people talk about social exclusion*
2023-03: Maria Zwicker: *The Complexity of Consumer Attitudes Towards Sustainable Alternatives*
2023-04: Shuxian Jin: *Social Dilemmas and Institutional Solutions to Promote Cooperation*
2023-05: Frank Gootjes: *Societal discontent as a catalyst for action: Explaining protest and solidarity, why we help and protest*
2023-06: Nieke Lemmen: *The autonomy challenge, 5 ways to control control*
2023-07: Leonie Vrieling: *When others are in control: Understanding public responses to externally controlled energy projects*
2023-08: Piet Groot: *Born abroad, studied here: A historical and psychological account of migrant doctors integrating*
2023-09: Kunalan Manokara: *Expressing positive emotions as they are: Spontaneous Production, Display Rules, and the Role of Culture*
2023-10: Lei Fan: *Navigating Threats Through Disgust: From Pathogen Avoidance to Moral Punishment*
2023-11: Kaiyang Qin: *Revisiting Automatic Goal Pursuit: Exploring the Value of Goals in Cue-Based Behavior*
2023-12: Xiao Wang: *A tale of two identities: The role of environmental self-identity and environmental group-identity in motivating pro-environmental behaviour*
2023-13: Yingqiu Wu: *Cancer in the Media: Unintended Effects on Prevention*
2023-14: Valentina Lozano N*asi: Human Transilience in the Face of Adversities: Embracing Global Challenges as Stepping Stones, rather than Stumbling Blocks*
2023-15: Ana Leal: *An Intergroup Perspective on Attitude Moralization*
2023-16: Monique Chambon: *The Complexity of Behaviour in relation to Health, Safety and Sustainability: A Psychological Network Approach*
2023-17: Terence Daniel Dores Cruz: *The Cooperative and Competitive Functions of Gossip*
2024-01: Çağla Çınar: *Adapting Food Preferences: The Social, Emotional, and Genetic Roots of Preferences for Meats versus Plants*
2024-02: Judith Langerak: *One step ahead: Proactive coping to minimize job insecurity*

Many contemporary workers experience job insecurity. This can be caused by various factors, such as an expiring work contract or technological advancements. Can workers do something to minimize such feelings of job insecurity, despite their existing circumstances? This dissertation investigates the potential of proactive coping in this regard: actions to avoid or confine potential stressful events or situations before they occur. In other words: actions that can help workers with staying one step ahead.

Dissertatiereeks
Kurt Lewin Instituut
2024-02