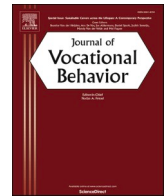




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journal homepage: www.elsevier.com/locate/jvbProactive coping and job insecurity among solo self-employed workers: Investigating a cyclic model with monthly measures[☆]Judith B. Langerak^{a,*}, Edwin A.J. van Hooft^b, Jessie Koen^{b,c}^a Department of Organization Science, Utrecht University, Utrecht, the Netherlands^b Department of Work and Organizational Psychology, University of Amsterdam, Amsterdam, the Netherlands^c Future of Work Department, TNO, Leiden, the Netherlands

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ABSTRACT

Job insecurity can harm workers' health and work performance. Adding to prior research that has mostly identified ways to minimize job insecurity among regular workers (e.g., employment protection legislation), the current research focusses on solo self-employed workers to investigate whether they can influence job insecurity by 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 influence each other. We expect that more proactive coping during a month relates to less current job insecurity through the accumulation of career resources during the month and that current job insecurity relates to less proactive coping during the next month through psychological strain. We test whether trait self-compassion and recovery experiences mitigate this negative relationship of job insecurity via psychological strain with later proactive coping. The multi-level path modelling results from a 5-wave monthly survey study among 243 solo self-employed workers show that proactive coping during a month decreases current job insecurity via increased career resources. However, while current job insecurity positively related to current psychological strain, this strain was not related to proactive coping during the next month. We found some indication that trait self-compassion may weaken the negative relationship of job insecurity with psychological strain, but found no moderating role of recovery experiences. Instead, recovery experiences directly positively related to proactive coping. We recommend future researchers to further investigate our cyclic model and to sample less advantaged workers to gain better insight into potential loss cycles.

1. Introduction

With the ongoing diversification of work, there is a growing number of non-standard workers who experience job insecurity as a major stressor (Fabrin-Petersen, 2022). In the context of non-standard employment, job insecurity refers to the perceived threat to the continuity and stability of work as it is currently experienced (Shoss, 2017). The continuity of work can feel threatened when the current work may possibly not be maintained in the future (i.e., quantitative job insecurity) and the stability of work can feel threatened when favorable features of the current work are at risk, such as job content or career development opportunities (i.e.,

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qualitative job insecurity). This experience of job insecurity is troubling, because job insecurity has been associated 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). However, there are hopeful signals from empirical research that indicate workers can use proactive coping – individual efforts undertaken in advance to manage, modify, or prevent potential stressors (Aspinwall & Taylor, 1997) – to reduce their job insecurity and improve their well-being (e.g., El Khawli et al., 2022; Koen & Parker, 2020; Koen & Van Bezouw, 2021).

In the current study, we investigate the relationship between proactive coping and job insecurity among one particular type of non-standard workers: the solo self-employed. Solo self-employed workers are independent contractors who provide services to clients or customers (Tanimoto et al., 2021). We know from prior research that solo self-employed workers use proactive coping (Eager et al., 2019; Schonfeld & Mazzola, 2015), yet it remains unclear whether and how proactive coping can help to minimize job insecurity among this group. At the same time, this knowledge would be extremely valuable, as prior research has mostly identified ways to minimize job insecurity that do not benefit solo self-employed workers (for meta-analytic reviews, see: Jiang & Lavaysse, 2018; Jiang et al., 2021; Keim et al., 2014). Examples of this are offering permanent contracts and improving employment protection legislation. Solo self-employed workers generally lack a ‘safety net’ of such organizational arrangements and national policies (Van de Ven et al., 2023) and rely on themselves for creating job security (Van Vuuren et al., 2020). While this also is the case for other types of self-employment (e.g., being a large business owner), we focus on solo self-employed workers because they are the most prone to precariousness (Conen & Schippers, 2019; Gevaert et al., 2021). By investigating the relationship between proactive coping and job insecurity, we aim for insights that help empower solo self-employed and potentially other non-standard workers to manage their job insecurity experience by their own means.

We investigate the relationship between proactive coping and job insecurity, by proposing and testing a cyclic model of proactive coping with job insecurity among solo self-employed in a 5-wave monthly survey study. As such, we investigate whether the within-person fluctuations that job insecurity shows over time (e.g., Klug et al., 2019; Langerak et al., 2022) may partly be explained by varying levels of prior proactive coping. In our cyclic model of proactive coping with job insecurity we propose a reciprocal relationship in which proactive coping and job insecurity influence each other, the mechanisms through which we expect this to happen, and two variables that may moderate this cycle (see Fig. 1). That is, based on proactive coping theory (Aspinwall & Taylor, 1997), our cyclical model suggests the accumulation of career resources as an important mechanism through which proactive coping during a month relates to less current 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

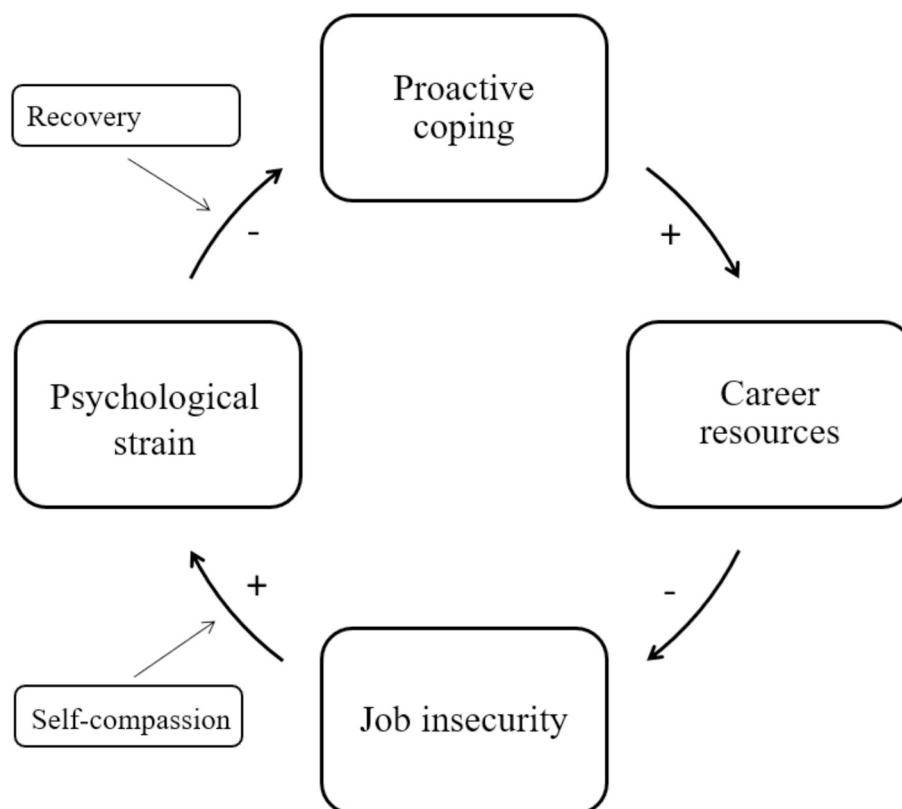


Fig. 1. Hypothesized Cyclic Model of Proactive Coping with Job Insecurity.

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

proactive coping and job insecurity in prior research may be explained by that it did not render new resources (networking may not necessarily result in more social resources, which may explain the null effect in [Koen & Parker, 2020](#)) or by deficiencies in time (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 (COR) theory ([Hobfoll, 1989](#)), 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. In order to prevent such loss cycles, we investigate whether workers can protect themselves against the impact of job insecurity by being self-compassionate ([Neff & Vonk, 2009](#)) and whether workers can mitigate the relation between psychological strain and proactive coping through recovery experiences ([Sonnentag & Fritz, 2007](#)). As such, we complement recent research aimed at finding out whether and how self-compassion and recovery experiences can help to protect and regain resources (e.g., [Headrick et al., 2023](#); [Schabram & Heng, 2022](#)).

By developing a cyclic model of proactive coping with job insecurity and testing the model among solo self-employed workers in a 5-wave monthly survey study, we make three contributions. First, we extend [Jiang et al.'s \(2021\)](#) meta-analytic finding that personal 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 add to 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 solo self-employed workers. Despite the presence of job insecurity in this group, solo self-employed workers are generally excluded from prior job insecurity research because the different nature of their work situation does not correspond with 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 solo self-employed workers may better sustain proactive coping over time – which may be a prerequisite for proactive coping to result in more resources and less job insecurity ([Giunchi et al., 2019](#); [Halbesleben et al., 2014](#)). We do this by examining whether loss cycles, in which job insecurity and psychological strain deteriorate workers' ability to engage in later proactive coping, can be broken through trait self-compassion and recovery experiences. In sum, the cyclic model of proactive coping with job insecurity aims to reveal how solo self-employed workers can use and sustain proactive coping, to help empower them in building more resources that can mitigate job insecurity.

2. Job insecurity among solo self-employed workers

Solo self-employed workers do not have an employment contract at an organization, but acquire their work through assignment contracts that are agreed upon with one or more clients. While this work does not fit the traditional definition of “job” (i.e., “a paid position of regular employment”, [Oxford English Dictionary, 1781](#)), more recent definitions acknowledge the diversification of work by defining “job” as “the regular work that a person does to earn money” ([Cambridge Dictionary, 2024](#)). In line with this broader definition, we conceptualize quantitative job insecurity as the perceived threat and worry about the continuity of work ([De Witte et al., 2010](#); [Shoss, 2017](#)) which among self-employed workers is not about the potential discontinuation of their employment contract, but the potential discontinuation of sufficient demand for their products or services. We further conceptualize qualitative job insecurity as the perceived threat and worry about the stability of desired work characteristics ([De Witte et al., 2010](#); [Shoss, 2017](#)) which among self-employed workers revolves around the fear of losing features such as income and career development opportunities.

One may argue that certain implications of solo self-employment, such as the risk of bankruptcy, the possibility of debts, and a lack of social security, would make job insecurity an entire different experience for solo self-employed workers than for workers in regular employment relations ([Grant & Ferris, 2015](#)). Indeed, solo self-employment can come with additional risks and stressors (e.g., perceived risk of bankruptcy) and may exacerbate stress in certain situations, such as the Covid-19 pandemic ([Khan & MacEachen, 2024](#)). We view financial stress and perceived risk of bankruptcy as important stressors that may exist next to the concept of job insecurity that is generally investigated in the careers literature. For the goal of the current paper, however, we focus solely on job insecurity. While relatively under investigated, recent literature starts to show more attention for job insecurity among self-employed workers ([Schonfeld & Mazzola, 2015](#); [Van Vuuren et al., 2020](#)). For example, [Schonfeld and Mazzola \(2015\)](#) describe in their qualitative study that job insecurity for self-employed workers may be more stressful and harder to solve as compared to regular workers (e.g., because of reputation loss and the absence of traditional workplace interventions from HR departments).

In its core, job insecurity revolves around the worry whether the paying party or parties will continue their demand for one's work (i.e., quantitative job insecurity) and whether one will keep receiving the desired benefits in return (i.e., qualitative job insecurity), which can apply for both regular and solo self-employed workers. We note that the ongoing developments in the nature of work and employment relationships have opened a discussion for the use of different labels such as “work insecurity” ([Probst et al., 2023](#)), which we also consider a promising label that could fit the reality of solo self-employed workers even better. However, we use the label “job insecurity” in the current study for the sake of consistency with prior literature and consistency with the label of the original measure we have adapted for the data collection.

3. Job insecurity as a within-person process

Job insecurity reflects a state in which workers worry about the continuity of work and stability of work characteristics. 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 over time. For example, Langerak et al. (2022) found negative within-person relations between current and next week's job insecurity levels, suggesting that job insecurity vacillates. Moreover, Kinnunen and colleagues (2014) and Klug et al. (2019) found that job insecurity growth trajectories over time can differ depending on work features. 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 for situations in which permanent contracts are not possible.

4. A cyclic model of proactive coping with job insecurity

To uncover how solo self-employed workers can best manage their job insecurity, we develop and test a cyclic model of proactive coping with job insecurity that integrates insights from proactive coping theory (Aspinwall & Taylor, 1997) and COR theory (Hobfoll, 1989). In its core, this cyclic model assumes a reciprocal relationship in which proactive coping and job insecurity 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.

4.1. Conceptualizing proactive coping

Proactive coping theory posits that individuals can manage, modify, or prevent potential stressors by taking actions before stressors are (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 to minimize their impact. Resources refer to objects, personal characteristics, conditions, or energies that are valued by the individual (e.g., skills, social connections; Hobfoll, 1989). While proactive coping transcends the work environment (i.e., one can cope proactively in other life domains), the current study focuses on proactive coping efforts which may be particularly helpful in crafting one's work and career. As proactive coping involves actions to generate resources to better prepare for stressors, proactive coping in the work and career context is an umbrella term which includes various career proactivity concepts such as proactive career behavior, career self-management, and career adaptivity (cf. Jiang et al., 2023 for an overview).

In the current study we investigate a combination of five commonly used proactive coping activities that may help mitigate job insecurity among solo self-employed workers: career planning, skill development, career consultation, networking, and scenario thinking (Bindl et al., 2012; Langerak et al., 2022; Strauss et al., 2012). These five proactive coping activities are based on the theoretical stages of proactive coping, in which proactive coping implies screening the environment for danger, considering possible future developments, preparing for the potential stressor, and accumulating resources (Aspinwall & Taylor, 1997), and input from our advisory committee that was composed of experts on non-standard work arrangements (incl. two experienced solo self-employed). As these stages are theorized to be interrelated through multiple feedback loops, we investigate an overall measure of proactive coping that combines proactive coping activities that theoretically align with different stages,¹ rather than exploring the proactive coping activities separately.

4.2. How proactive coping affects job insecurity

Integrating proactive coping theory (Aspinwall & Taylor, 1997) and COR theory (Hobfoll, 1989), we expect that proactive coping during a month relates negatively to the experience of job insecurity at the end of the month through the accumulation of career resources. For example, solo self-employed workers can network and build connections with multiple clients, so they feel less threatened when a large assignment ends. Another example is that solo self-employed workers can visualize multiple possible scenarios for the continuation of their business, so they oversee many options and feel less threatened when a customer demands change. In these examples, the connections with clients and the knowledge of options may be valuable career resources for solo self-employed workers.

In prior research, it has been assumed based on proactive coping theory (Aspinwall & Taylor, 1997) and COR theory (Hobfoll, 1989), yet not tested, that 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). That is, resource accumulation is often put forward as the explanation for inconsistent findings regarding the relation between proactive coping and job insecurity that have been found. For example, negative relations between proactive coping and job insecurity in cross-sectional research have been explained by the possibility that proactive coping has adverse effects in the short term due to the consumption of resources, but beneficial effects in the long term due to the gain of resources (cf. Giunchi et al., 2019; Stiglbauer & Batinic, 2015). In line with this idea, research adopting a repeated-measures design indicates that daily proactive coping is related to resource drain (Cangiano et al., 2021) and that weekly proactive coping is related to more, rather than less, job insecurity (Langerak et al., 2022), while proactive coping relates to less job insecurity over the course of a month (El Khawli et al., 2022) or two months later (Koen & Van Bezouw, 2021). These findings are in line with the resource investment principle of COR theory (Halbesleben et al., 2014).

As the goal of the current study involves finding out how solo self-employed workers can use proactive coping to accumulate more resources and minimize job insecurity, we build upon proactive coping theory (Aspinwall & Taylor, 1997), COR theory (Hobfoll, 1989), and these prior findings to investigate whether their proactive coping during a month is related to a lowered experience of job

¹ While it would be possible to link specific proactive coping activities to specific proactive coping stages (for examples, see Langerak et al., 2022), we decided not to because this is not relevant to our research question and is complicated by the fact that the same proactive coping activities can be applied for multiple purposes and therefore for multiple proactive coping stages.

insecurity at the end of the month. We thus expect that monthly effort is required to surface the beneficial effects of proactive coping on career resources. Regarding the relation between career resources and job insecurity we expect that the possession of more career resources has an immediate impact on the amount of job insecurity that solo self-employed workers experience, because the possession of resources gives workers an immediate larger sense of control and more perceived ways to avert threats to employment (cf. Jiang et al., 2021, for a review and discussion on this). As we did not use observational methods or measure variables repeatedly in between the monthly measurement points, we assessed proactive coping during the month with a retrospective measure that solo self-employed workers filled in at the end of the month.

Hypothesis 1. The amount of proactive coping that respondents did during the month as reported at T relates negatively to the experience of job insecurity at T through the amount of career resources at T.

4.3. How job insecurity affects proactive coping

Based on the integration of proactive coping theory and COR theory, we expect a negative relationship between the current level of job insecurity and the use of proactive coping during the following month. COR theory (Hobfoll, 1989) posits that individuals strive to acquire and protect resources to maintain their wellbeing. Coping activities require an investment of resources (Aspinwall & Taylor, 1997; Hobfoll, 2001). As such, possessing many resources makes one better equipped to prepare for future contingencies and further enhance one's resources, while possessing few resources makes proactive coping challenging. Possessing few resources may mean that one cannot risk resource investment because one has no appropriate resources to invest, or that one needs to save these resources for emergencies. As such, solo self-employed workers are expected to try to accumulate resources with proactive coping, but only within the limits set by the current amount of resources they possess.

We expect that job insecurity, as a stressful state, drains psychological resources. To measure this resource-depleted state, we assess the amount of psychological strain workers experience. We expect the positive relation between job insecurity and psychological strain to be immediate, as ruminating about job insecurity and experiencing stress can occur in a matter of seconds, and prior within-level results on the relation between job insecurity and strain are in line with this immediate relationship (Langerak et al., 2022). Based on COR theory (Hobfoll, 1989, 2001), we expect that when workers experience more psychological strain, they have fewer psychological resources left to invest in subsequent proactive coping, and will thus engage less in proactive coping.

The proposition that it is more difficult to act proactively when one experiences more job insecurity, has priorly been discussed and tested by Koen and Van Bezouw (2021). While their results indicated a negative relation between job insecurity and cognitive functioning among self-employed workers, their results did not show the expected inhibiting effect of cognitive functioning on proactive coping efforts two months later. The authors suggest that their measure of cognitive function may not have reflected (cognitive) resources properly, which consisted of a 1-item scale that asked to what extent self-employed had experienced difficulties with cognitive functioning. More empirical research on the relation between job insecurity and proactive coping is provided by Sun et al. (2022), whose results did show the expected negative relation between job insecurity and proactive coping (there: "taking charge behaviors") one month later. In the current research, we build upon these prior studies, by using a validated scale to measure psychological resource depletion (Kalliath et al., 2004) and by further investigating the one-month timeframe.

Hypothesis 2. The experience of job insecurity at T relates negatively to proactive coping during the next month as reported at T + 1 through the amount of psychological strain at T.

4.4. Preventing loss spirals: self-compassion and recovery

Our hypothesized research model explains the mechanisms underlying a loss cycle in which solo self-employed who experience high levels of job insecurity, are less able to engage in subsequent proactive coping, which consequently makes them more susceptible for future job insecurity due to a lack of resources. To prevent or mitigate loss cycles, COR theory (Hobfoll, 1989) asserts that individuals must try to protect themselves against the impact of resource loss and try to recover from resource loss. Therefore, we also investigate two factors that may help protect against resource loss and stimulate recovery from resource loss.

First, we investigate whether solo self-employed workers can protect themselves against losing psychological resources as a result of job insecurity, by being self-compassionate. Self-compassion is an important resource in the context of negative experiences. Specifically, self-compassionate individuals have an adaptive mindset that helps to put negative experiences in broader perspective and to take distance from negative emotions without self-judgment (Neff, 2003). 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). A self-compassionate mindset implies being understanding rather than critical, realizing that many others are going through similar experiences, and having a balanced view on situations without amplifying painful thoughts and emotions. As such, a more self-compassionate mindset may help workers to prevent ruminating about job insecurity, which could protect workers from a further loss of psychological resources.

Based on COR theory (Hobfoll, 1989), we pose that self-compassion may function as a personal resource that can be used to offset the loss of other resources (Hobfoll et al., 2018). This is in line with prior research on self-compassion showing that the positive relation between work-related demands and distress is weaker for workers high in self-compassion (Willems et al., 2021) and research showing that trait self-compassion attenuates the relation between stressors (i.e., experiencing difficulties in job search) and negative affect (Kreemers et al., 2018). Considering that job insecurity is also a work demand and stressor, we expect that self-compassion has a similar moderating function in the relation between job insecurity and psychological strain. Because self-compassion is known to be

relatively stable within individuals when they do not undergo any interventions (Neff, 2003), we investigate self-compassion as a between-person variable that moderates the within-person relation between job insecurity and psychological strain. To assess whether self-compassion can mitigate or prevent potential loss cycles, we test a cross-level interaction with the following hypothesis:

Hypothesis 3. The positive relationship between the experience of job insecurity at T and the amount of psychological strain at T is weaker for individuals high in trait self-compassion.

Second, we investigate whether solo self-employed workers can bounce back from psychological resource loss through recovery experiences. COR theory (Hobfoll, 1989) asserts that if individuals can recover from resource loss, loss cycles can be mitigated or prevented. We focus on Sonnentag et al.'s (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 test whether recovery experiences can buffer the negative relationship between current psychological strain and subsequent proactive coping during the following month.

In terms of COR theory, we assert that recovery experiences may function through a replacement of personal resources (Hobfoll et al., 2018): lost psychological resources are being replenished by new psychological resources. Consequently, the negative relation between psychological strain at T-1 and proactive coping during the following month as measured at T is expected to be less strong, because workers will be less depleted of psychological resources and thus better equipped to initiate proactive coping. Such replenishment of resources through recovery experiences is illustrated by a prior finding that shows the relation between distress after a work day and distress in the next morning can be buffered through recovery in the form of detachment (Park et al., 2018). Moreover, a cross-sectional study from Kinnunen et al. (2010) indicated that recovery in the form of relaxation and psychological detachment can buffer impaired well-being in conditions of high job insecurity. However, due to the cross-sectional design, the authors note their results could also mean that employees suffering from impaired well-being cannot enjoy recovery experiences. It has yet to be uncovered if recovery experiences can act as a buffer against the inhibitory role of psychological strain on proactive coping in a research design that investigates changes over time. Therefore, we test the following hypothesis:

Hypothesis 4. The negative relationship between the experience of psychological strain at T-1 and subsequent proactive coping during the next month as reported at T, is weaker when individuals have more recovery experiences during the next month as reported at T.

5. Methods

5.1. Study context

To investigate the cyclic model of proactive coping with job insecurity among solo self-employed workers, we conducted an online survey study among Dutch solo self-employed during the COVID-19 pandemic. In the Netherlands, 13% of all workers and 28% of non-standard workers are solo self-employed (Flexbarometer, 2023). The COVID-19 pandemic and corresponding restrictions presented 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 workers 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 solo self-employed workers are able to manage their experience job insecurity despite challenging external factors.

5.2. Participants and procedure

We collected² data from solo self-employed workers in the Netherlands during five weekends, with one month intervals, between December 2021 and May 2022 when COVID-19 restrictions were present. We recruited participants via social media and social media advertisements. To be eligible for the study, workers needed to: 1) be aged between 16 and 65 years, 2) not be a full-time student, and 3) be a solo self-employed worker spending at least 16 h 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 solo self-employed worker. 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,

² Before data collection, the study had been approved by the Ethics Review Board of the University of Amsterdam. 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.

financial services, and some reported being active in multiple sectors. Sample sizes for the subsequent monthly surveys were: $N_{T2} = 217$ (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.

5.3. Measures

All study variables³ were measured monthly (i.e., T1–T5) except for trait self-compassion and demographics, which were only measured at T1. We calculated the overall Cronbach's alpha's for all measurement scales and, where possible, we also calculated multi-level alpha's for the monthly measures (cf. Cortina et al., 2020; Geldhof et al., 2014). Calculating multi-level alpha's was only possible for the measurement scales with fewer than fifteen items. The multi-level reliability analyses for the measurement scales that included fifteen or more items resulted in more parameters than the amount of clusters (i.e., respondents), which made the resulting within-person and between-person alpha's untrustworthy (Muthén & Muthén, 1998). All items and response scales are presented in Appendix A of the Supplemental Materials.

5.4. Baseline variables

5.4.1. Trait self-compassion

Trait self-compassion was measured with the 26-item scale from Neff and Vonk (2009). An example item is "I'm kind to myself when I'm experiencing suffering". In the current study, the Cronbach's alpha was 0.90.

5.5. Monthly variables

5.5.1. Job insecurity

Workers' current experience of job insecurity was measured with Langerak et al.'s (2022) job insecurity scale, adapted in such a way that statements regarded the prior month instead of the prior week. This scale has 13 items and measures all components of the job insecurity experience (i.e., quantitative, qualitative, cognitive, and affective). Originally, this scale refers to "work" rather than "job" to make it applicable to a broad range of workers, including self-employed. However, based on feedback from our advisory committee that was composed of experts on non-standard work arrangements (incl. two experienced solo self-employed), we altered some questions on quantitative job insecurity to further improve the fit with the context of self-employed workers. Specifically, we replaced 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". As such, the quantitative measure items better reflect our definition of quantitative job insecurity (i.e., the perceived threat and worry about the continuity of work, which among self-employed workers is not about the potential discontinuation of their employment contract, but the potential discontinuation of sufficient demand for their products or services).

We evaluated the factor structure of the revised scale with multilevel confirmatory factor analysis (CFA) in Mplus 8.8. Following Hu and Bentler's (1999) suggested values, we found an acceptable fit for both a four factor model, $\chi^2(127) = 357.551$, CFI = 0.928, RMSEA = 0.042, SRMR_{within} = 0.045, and a four factor model with one higher order factor, $\chi^2(134) = 442.697$, CFI = 0.904, RMSEA = 0.047, SRMR_{within} = 0.052. Comparison of both models using the chi-square difference test is not recommended for multilevel models. Cheung and Rensvold (2002) argued against using this test for model comparison because of its dependence on sample size, and proposed to use other fit indices instead. Using their guidelines (i.e., a difference larger than 0.01 indicates better fit) suggests that the four plus one factor model fits worse than the four factor model when considering the CFI, but not when considering the RMSEA and SRMR_{within}. Considering the complexity of our research model and the novelty of the research topic, we followed the principle of parsimony to investigate job insecurity with the overall measure rather than its subscales. For this overall measure of job insecurity, the overall Cronbach's alpha's at T1–5 ranged between 0.91 and 0.92, the within-person alpha coefficient was 0.71 and the between-person alpha was 0.95.

5.5.2. Proactive coping

Proactive coping in the prior month was measured with 15 items that covered five proactive coping activities: career planning, skill development, career consultation, networking, and scenario thinking. The measures for the first four activities originate from Strauss et al. (2012) and the scenario thinking measure originates from Bindl et al. (2012). We chose these proactive coping activities based on the theoretical stages of proactive coping (Aspinwall & Taylor, 1997). Based on input from our advisory committee that was composed of experts on non-standard work arrangements (incl. two experienced solo self-employed), we repositioned the "reflecting and learning" component into the more focused component "skill development", as this is more concrete and was deemed especially relevant for solo self-employed workers in job insecure situations. Where necessary, we altered the wording of the original measures to fit the work context of self-employed. An example item is "Please indicate below, how often have you in the past month... been building and/or maintaining a network that you can ask for support in your career?". For the total proactive coping activities scale, the overall Cronbach's alpha's at T1–5 ranged between 0.93 and 0.94.

³ 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.

5.5.3. Career resources

The current amount of career resources was measured with 15 self-developed items corresponding to the 15 proactive coping activities. 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 career resources scale. Consequently, the scale measured five career resources: career plan, career skills, career knowledge, social network, and career insight. An example item is “I have a network I can ask for support during my career”. For the total resources scale, the overall Cronbach’s alpha’s at T1–5 ranged between 0.90 and 0.92.

To test whether the career resources measure was empirically distinct from the proactive coping measure, we ran two multilevel CFAs in Mplus 8.8: (a) a two-factor model with the five career resources and five proactive coping activities loading on two separate latent factors, and (b) a one-factor model with the five career resources and five proactive coping activities loading on one latent factor. Based on [Cheung and Rensvold’s \(2002\)](#) guidelines, the results indicated that the two-factor model fit better, CFI = 0.843; SRMR_{within} = 0.061, than the one-factor model, CFI = 0.513; SRMR_{within} = 0.108, both Δ CFI and Δ SRMR_{within} > 0.01 (i.e., Δ CFI = 0.330 and Δ SRMR_{within} = 0.047), supporting the distinctiveness of career resources and proactive coping activities.

5.5.4. Recovery experiences

Recovery experiences in the prior month were measured with 16 items from [Sonnentag and Fritz \(2007\)](#), including recovery experiences such as detachment, relaxation, mastery, and control. An example item is “Please indicate below, how often have you in the past month in your leisure time... used the time to relax?”. In the current study, the overall Cronbach’s alpha’s at T1–5 ranged between 0.87 and 0.90.

5.5.5. Psychological strain

The current amount of psychological strain was measured with eight items from [Kalliath et al. \(2004\)](#). An example item is “I feel I cannot overcome my difficulties”. In the current study, the overall Cronbach’s alpha’s at T1–5 ranged between 0.89 and 0.93, the within-person alpha coefficient was 0.76 and the between-person alpha was 0.96.

5.6. 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; $N = 241$). We first calculated the proportions of within-person and between-person variance for all monthly variables (see [Table 1](#)). Next, we tested our research model with multilevel path analysis in Mplus 8.8. More specifically, we estimated a multilevel model with random intercepts and random slopes (i.e., “type = twolevel random”), using the maximum likelihood estimation with robust standard errors, which is the default in Mplus for this type of analyses ([Muthén & Muthén, 1998](#)).

Our hypotheses concerned the within-person level associations between the monthly variables of our research model (i.e., proactive coping during the month, career resources, job insecurity, psychological strain). However, these monthly measured variables also contained variance at the between-person level. Mplus decomposes the variance of these monthly variables into a within- and between-person level part, and creates latent variables for the between-person variance ([Schuurman, 2023](#)). Therefore, we also estimated the relations between the model variables at the between-person level. As such, the within-person level results present the relations between variables while controlling for the relations between these variables at the between-person level ([Binnewies et al., 2010](#)).

In addition, to be sure that predictor variables were associated with actual changes in the outcome variables, we also modelled auto-regressive paths for the within-person level variables (cf. [Van Hooff & Van Hooff, 2023](#)). For example, in examining the relationship between “proactive coping during the past month T” and “career resources T”, we controlled for “proactive coping during the past month T-1”. In order to do this, we first calculated time-lagged variables for psychological strain, proactive coping during the past month, career resources, and job insecurity with the time-lag function in SPSS 29.0. Then, we person-mean centered these lagged variables before adding them to the model. We also modelled direct relationships from proactive coping to job insecurity, from proactive coping to psychological strain, and from career resources to psychological strain, in order to test whether the relations in the proposed model are direct or indirect (i.e., partly or fully mediated). In preparation for modelling the proposed moderating relationships in Mplus, we person-mean centered recovery in the past month for the within-level moderation analysis and we grand-mean centered trait self-compassion for the cross-level moderation analysis in SPSS 29.0 (cf. [Binnewies et al., 2010](#)). The Mplus syntaxes we used to model our main research model and the models described in the supplemental analyses are presented in Appendix B of the Supplemental Materials.

6. Results

[Table 1](#) displays descriptive statistics, proportions of within- and between-person variance, and within- and between-person correlations of the study variables. We found that 17 % of the variance in job insecurity resides at the within-person level. For the purpose of this study, we mainly focus on how the within-level factors of the proposed cyclic model (with within-person variances ranging between 20 % and 36 %) may explain within level-variance of job insecurity. Yet, we note that a substantial proportion of variance in job insecurity among solo self-employed workers resides at the between-person level (i.e., 83 %).

Table 1

Means, standard deviations, proportions of within- and between-person variance, and correlations for the study variables.

	<i>M</i>	<i>SD</i>	% wpv	%bpv	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 in prior month	3.80	1.16	0.31	0.69	–0.25**	–0.09	0.14*	–	0.29**	0.02**	–0.05**	–	0.14**
5. Career resources	5.27	0.88	0.20	0.80	0.23**	–0.17**	0.05	0.31**	–	–0.58**	–0.43**	–	0.28**
6. Job insecurity	3.28	1.14	0.17	0.83	–0.23**	0.14*	0.04	0.04	–0.58**	–	0.56**	–	–0.36**
7. Psychological strain	2.07	0.85	0.23	0.77	–0.38**	0.12	–0.03	–0.01	–0.49**	0.51**	–	–	–0.41**
8. Trait 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 in prior month	4.59	0.84	0.34	0.66	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 ($N = 235\text{--}241$) 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, bpv = between-person variance.

* $p < .05$, ** $p < .01$ (two-tailed).

^a 1 = Male, 2 = Female.

^b 1 = Primary education or high school, 2 = Vocational education, 3 = Bachelor education, 4 = Master education, 5 = PhD degree.

6.1. Main findings

The results of the multi-level path analyses testing the cyclic model of proactive coping with job insecurity are reported in Fig. 2. A summary of most important findings can be found in Fig. 3.

6.1.1. Hypotheses testing

The results from the multi-level path analyses indicate a positive relationship between the amount of proactive coping during the past month as reported at T and the amount of career resources at T ($B = 0.11$, 95 % CI: [0.05; 0.17], $p < .01$) and a negative relationship between the amount of career resources at T and the experience of job insecurity at T ($B = -0.31$, 95 % CI: [-0.44; -0.18], $p < .01$). Our results support [Hypothesis 1](#) by showing an indirect relationship between proactive coping and job insecurity via career resources ($B = -0.03$, 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.

Next, the results show a positive relationship between the experience of job insecurity at T and the experience of psychological strain at T ($B = 0.22$, 95 % CI: [0.10; 0.34], $p < .01$). Additionally, next to the relation of job insecurity, we found that the amount of career resources at T ($B = -0.20$, 95 % CI: [-0.33; -0.06], $p < .01$) and psychological strain at T-1 ($B = -0.13$, 95 % CI: [-0.24; -0.01], $p < .01$) are negatively related to the experience of psychological strain at T. The results further show that the expected negative relationship between the experience of psychological strain at T-1 and proactive coping during the following month as measured at T was not significant ($B = 0.04$, 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 subsequent proactive coping via psychological strain. Nevertheless, to fully test [Hypothesis 2](#), we also conducted a test of the indirect relationship from job insecurity T-1 to proactive coping T via strain T-1, of which the results are summarized in the supplemental results section and displayed in Appendix C1 of the Supplemental Materials. They show there is no indirect nor direct relationship between job insecurity and subsequent proactive coping. Concludingly, our results do not support the entire proposed cycle depicted in Fig. 1 among the solo self-employed workers in our sample.

To investigate how workers can mitigate the potential loss cycle in which a higher experience of job insecurity at T-1 lowers the amount of proactive coping during the following month as measured at T, which would further increase the amount of job insecurity at the end of following month (and so on), we investigated the moderating roles of trait self-compassion and of recovery experiences. We found a cross-level interaction approaching significance for trait self-compassion in the relationship between job insecurity at T and psychological strain at T ($B = -0.08$, 90 % CI: [-0.15; -0.01], $p = .05$; see Fig. 4). The positive relationship between job insecurity and psychological strain tended to be weaker for workers high in self-compassion (i.e., 1SD above the mean; $B = 0.16$, 95 % CI: [0.03, 0.28], $p = .02$) in comparison to workers low in self-compassion (i.e., 1SD below the mean; $B = 0.28$, 95 % CI: [0.14, 0.42], $p \leq .01$). Recovery experiences during the past month as reported at T did not moderate the relationship between psychological strain at T-1 and proactive coping during the past month as reported at T ($B = 0.11$, 95 % CI: [-0.24; 0.46], $p = .53$). Notably, we did find a positive direct relationship between recovery experiences during the past month and proactive coping during the past month ($B = 0.16$, 95 % CI: [0.02; 0.31], $p = .03$), indicating that months with more recovery experiences went together with more proactive coping.

6.2. Supplemental results

We conducted two supplemental analyses to in order provide an even more thorough investigation of the proposed cyclic research model. Appendix C of the Supplemental Materials provides the figures of the supplemental results. First, to test the cyclic nature as proposed in our theoretical model, we investigated only the relationship between psychological strain at T-1 and proactive coping T to make the expected cycle complete. However, a complete cycle could also exist if there were a direct relationship between job insecurity measured at T-1 and proactive coping measured at T. Yet, this relationship was not included in the original model. To assess whether this direct relationship is present, we tested a more elaborate model in which we modelled the relationship between job insecurity T-1 and proactive coping T. The supplemental results show that there is no significant direct relation between current job insecurity and proactive coping during the next month ($B = -0.05$, $p = .59$, 95 % CI [-0.23, 0.13]).

Second, as an additional robustness check, we investigated whether the model still holds with a time lag between career resources and job insecurity. This also answers the question whether the career resources that can be built through proactive coping, can still be beneficial for lowering job insecurity one month after these resources were acquired. The supplemental results show similar relations as in the original model. However, the relation between career resources and job insecurity is now only significant at $p < .10$ ($B = -0.11$, $p = .07$; 90 % CI [-0.21, -0.01]).

7. Discussion

To gain insights that can help workers with minimizing their future experience of job insecurity by their own means, the present study developed a cyclic model of proactive coping with job insecurity based on proactive coping theory ([Aspinwall & Taylor, 1997](#)) and COR theory ([Hobfoll, 1989](#)). We tested this model in a 5-wave monthly survey study among solo self-employed workers during the COVID-19 pandemic. The major findings and the relationships that are in need of further investigation are presented in Fig. 3 and further discussed below. The results from the multi-level path analyses showed that more proactive coping during the month related to less current job insecurity at the end of the month, through the accumulation of career resources (in support of [Hypothesis 1](#)). A stronger experience of job insecurity was not related to less proactive coping in the following month through increased psychological strain (in contrast with [Hypothesis 2](#)), as a negative relationship between psychological strain and subsequent proactive coping was

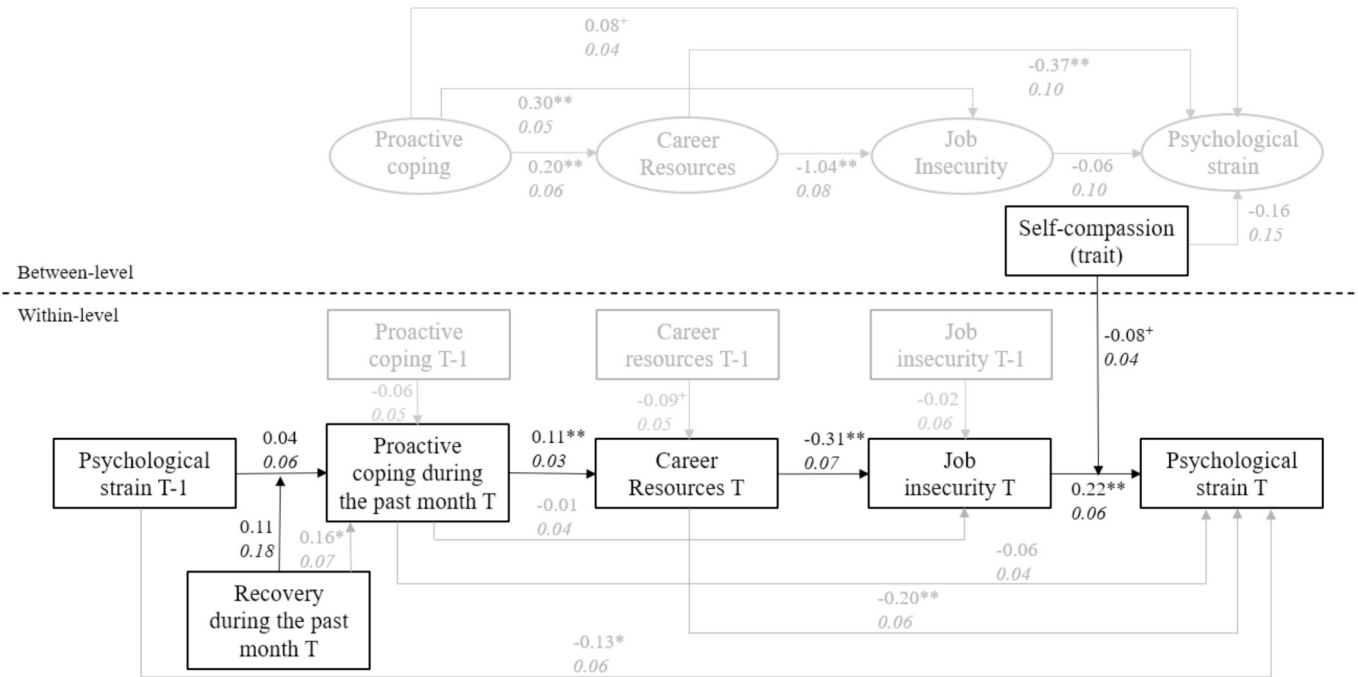


Fig. 2. Results of the Multilevel Path Analysis.

Note. Hypothesized relationships are depicted in black, other relationships are depicted in grey. *SEs* of estimates are noted in italics.

$^{+} p < .10$, $^{*} p < .05$, $^{**} p < .01$ (two-tailed). $N_{\text{between}} = 241$, $N_{\text{within}} = 988$.

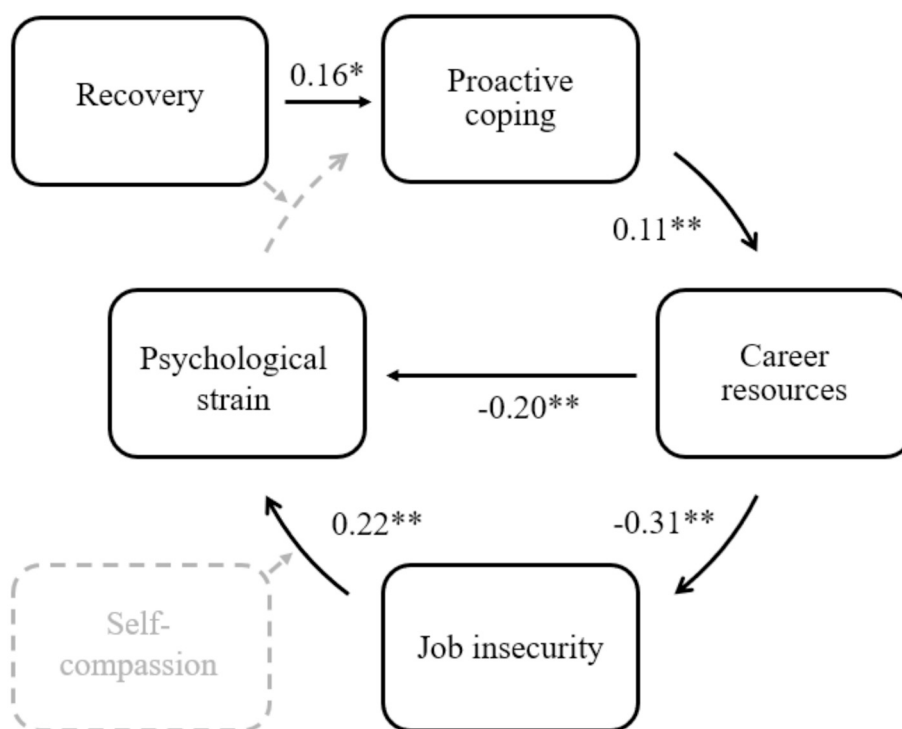


Fig. 3. Identified Model for Proactive Coping with Job Insecurity.

Note. $N = 739$ observations (within clusters of 214 persons). Black arrows indicate found relationships, grey indented arrows indicate relationships that need further investigation. * $p < .05$, ** $p < .01$ (two-tailed).

absent. There was a cross-level interaction approaching significance for trait self-compassion in the relationship between current job insecurity and current psychological strain (in line with [Hypothesis 3](#)) and a direct positive relationship between recovery experiences and proactive coping (in contrast to the interaction as posed in [Hypothesis 4](#)).

7.1. Major findings and theoretical implications

The results support the part of the cyclic model that suggests that the amount of proactive coping during the month relates negatively to job insecurity at the end of the month via the accumulation of career resources among this sample of solo self-employed workers. These findings are in line with the idea that proactive coping creates positive outcomes in the relatively long term as it may first consume rather than build resources ([Cangiano et al., 2021](#); [Giunchi et al., 2019](#); [Stiglbauer & Batinic, 2015](#)). In addition, they indicate that a time path concerning efforts throughout at least a month may be sufficient in this regard. The emerging pattern of empirical results suggest that this time perspective may be a valuable addition to proactive coping theory ([Aspinwall & Taylor, 1997](#)), which originally does not include the possibility of differing results in the short- and long-term. At times where solo self-employed workers reported higher amounts of proactive coping during the month, they reported a lowered experience of job insecurity at the end of that month. To be sure that this relation reflects actual changes in job insecurity, we controlled for the experience of job insecurity reported the month before. That we controlled for previous job insecurity and that the proactive coping measure items referred to the past month, makes reverse causality seem unlikely. Yet, it is a possibility that the results have been influenced by attribution bias because we used a retrospective measure: when workers feel less job insecure, they could report higher amounts of proactive coping in the past month because they attribute their relatively secure state to their own efforts (cf. [Shepperd et al., 2008](#)). Alternatives to prevent this could be making the measures more frequent (e.g., daily) or the use of observational methods, although one has to take care not to make the time investment of participating too high.

Next to the hypothesized mediating role of career resources in the relation between proactive coping and job insecurity, we also found a direct relation between career resources and psychological strain among this sample of solo self-employed workers. This is in line with proactive coping theory, which states that resources can not only mitigate potential stressors themselves (e.g., lower job insecurity) but also their consequences (e.g., lower psychological strain; [Aspinwall & Taylor, 1997](#)). For clarity, in this analysis we controlled for the experience of psychological strain reported in the prior month. This makes the relation between career resources and psychological strain reflect actual changes in the amount psychological strain that solo self-employed workers reported. As such, our proposed cyclical model should be complemented with a direct relationship from career resources to psychological strain (see [Fig. 3](#)), so that it more accurately reflects the pivotal role of career resources.

The results from the multi-level path analyses showed no support for the part of the cyclic model that suggested that job insecurity

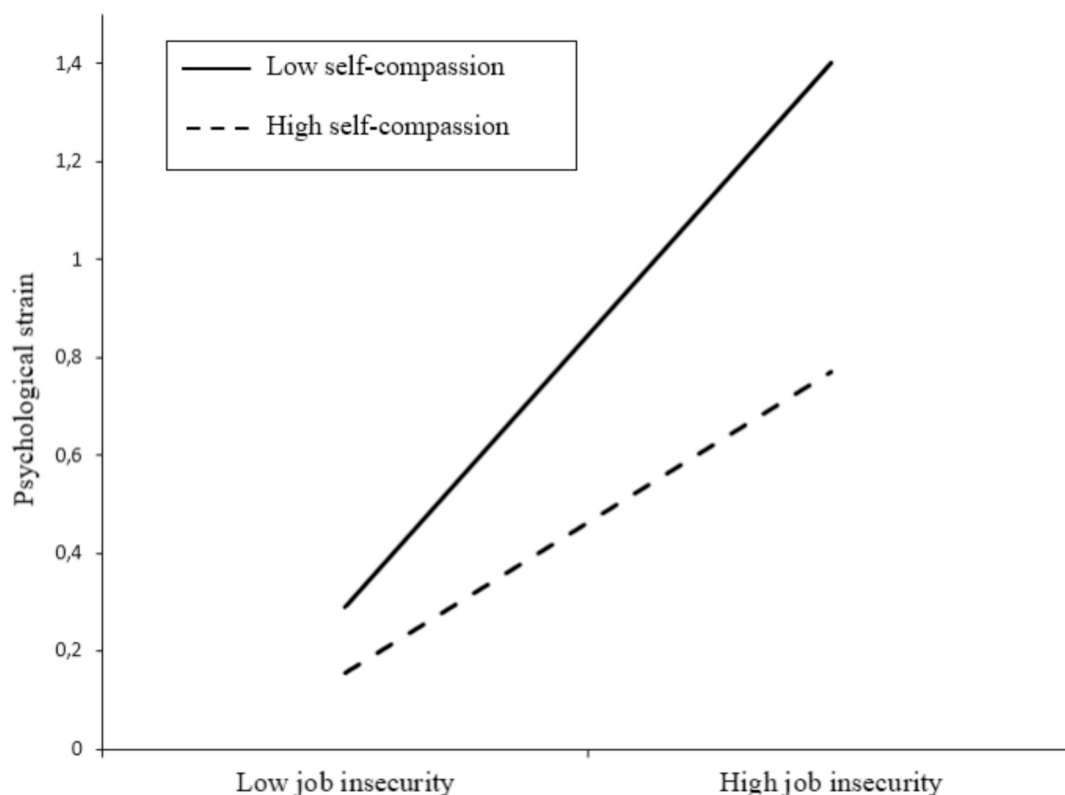


Fig. 4. Cross-level Interaction at the 90 % Confidence Level Between Self-compassion and Job Insecurity on Psychological Strain.
 Note. $N = 739$ observations (within clusters of 214 persons).

would indirectly obstruct workers' ability to engage in subsequent proactive coping because of psychological resource depletion, which we approximated with a measure of psychological strain. Specifically, while job insecurity indeed heightened psychological strain, this psychological strain was unrelated to the amount of subsequent proactive coping during the following month. We also found no direct relationship between job insecurity and subsequent proactive coping in the supplemental results. We see two viable explanations. First, some solo 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 psychological resources (Ohly et al., 2006). Solo 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 as measured by psychological strain. We note, however, that being proactive for work tasks does not necessarily imply being proactive towards one's career, as a lack of time can make solo self-employed workers prioritize their current work before their long-term career (Van den Groenendaal et al., 2022).

Second, since our sample of solo self-employed workers 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 COR theory's assertion that workers who possess more resources are less vulnerable to resource loss stemming from 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 subsequent 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. Moreover, while psychological strain does not seem to change the amount of proactive coping among this sample of solo self-employed, their amount of strain may potentially influence other forms of coping. For example, research by Fris et al. (2024) shows that workers who make career-related threat appraisals, tend to use more avoidant coping activities.

Regarding the potential cross-level interaction of trait self-compassion in the relationship between job insecurity and psychological strain, our results could not provide conclusive support. That is, the results did not show a significant cross-level moderation effect at the 95 % confidence level but only at the 90 % 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., 2020). Future researchers should further investigate when and how self-compassion may compensate for psychological resource loss caused by job insecurity. Next to self-compassion, we deem it likely that other personal resources, such as psychological capital (Darvishmotevali & Ali, 2020), resilience (Johnson et al., 2019), and self-efficacy (Peng et al., 2015), may function in such a compensatory manner.

Regarding recovery experiences, we did not find that these moderated the relationship between psychological strain and proactive coping in the following month. Instead, the results showed a direct relationship between recovery experiences and proactive coping. In months where solo self-employed workers had more recovery experiences (e.g., spending time not thinking about work or feeling in control of situations outside of work; [Sonnetag & Fritz, 2007](#)), they also engaged in more proactive coping. This is in line with prior research that shows that daily recovery experiences link to more proactive behavior in consequent days ([Ouyang et al., 2019](#); [Sonnetag, 2003](#)). Considering the relatively scarce knowledge of the relation between recovery experiences and coping ([Sawhney et al., 2018](#)), these results may imply multiple things. A first possibility is that recovery experiences may not function as a direct replacement of lost psychological resources ([Hobfoll et al., 2018](#)) as we speculated in our theory section. A direct replacement would mean that recovery experiences replenish psychological resources and thereby foster workers' ability to engage proactive coping despite initial strain. Instead, recovery experiences may not replace lost psychological resources, but compensate for this loss of psychological resources with different resources. Future research should investigate through which resources such compensation may occur (e.g., career optimism; [Eva et al., 2020](#)). A second possibility, as hypothesized by [Sonnetag and Fritz \(2007\)](#), can be that proactive coping – as a coping type that is aimed at solving (potential) problems – may result in more recovery. For example, because it is easier to detach and relax after a problem has been solved. However, because we controlled for proactive coping the month before and not for recovery the month before, we note that the results support an increase in proactive coping and not an increase in recovery experiences. Thirdly, it may be that both proactive coping and recovery have a common predictor (e.g., 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 1](#)), we deem the first proposition most likely: recovery experiences may stimulate proactive coping through offsetting the impact of psychological resource loss. More longitudinal research is required to further uncover the relationships between recovery experiences, resources, and proactive coping.

A last major finding pertains to the found within-person variances (wpv's; see [Table 1](#)). That is, the found wpv for job insecurity was 17 %, which is relatively low compared to other studies that investigated stressors and reported wpv's (cf. [Podsakoff et al., 2019](#)). This may be explained by the COVID-19 pandemic and forthcoming regulations and restrictions during the data collection period that did not impact all solo self-employed equally. For example, part of the remaining 83 % of between-person variance may be explained by whether or not one was granted governmental financial support (in the Netherlands, there was a "Temporary Bridging Scheme Self-Employed Entrepreneurs" in place; [CBP Netherlands Bureau for Economic Policy Analysis, 2023](#)). This would likely have influenced the amount of perceived threat that solo self-employed workers experienced about the continued demand for their product or service. For the purpose of this study, providing insights that can help solo self-employed workers with minimizing their experience of job insecurity, we were interested in whether proactive coping could explain variance within individuals. Yet, it should not be ignored that in addition to individual effort, there are always external factors present that impact job (in)security, of which governmental financial support is only one example. [Retkowsky and colleagues \(2023\)](#) illustrate this by describing how the career environment can constrain the development of sustainable careers. To address the between-person variance in job insecurity, changes in the work and societal context may be required (for examples see [Akkermans et al., 2018](#) and [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.

7.2. Evaluation of the cyclic model

In short, our multi-level results show support for the first half of our proposed research model in which proactive coping during a month relates to less current job insecurity via the accumulation of career resources. This brings resolution to prior unclarity on which timeframe is needed to find positive outcomes of proactive coping on job insecurity (e.g., [Cangiano et al., 2021](#); [Giunchi et al., 2019](#); [Stiglbauer & Batinic, 2015](#)). Moreover, this finding extends prior work on the relation between personal resources and job insecurity (e.g., [Jiang et al., 2021](#)) with bringing proactive coping to the fore as a viable means to build these resources. Our multi-level results did not indicate the proposed relationship in which current job insecurity relates to lowered use of proactive coping during the following month, as psychological strain did not thwart subsequent proactive coping in our sample. Yet, since our hypothesis was grounded upon the idea of resource scarcity, and our sample showed to be relatively well-off (i.e., high mean career resources) and potentially less afflicted by psychological strain (i.e., high psychological resources), we surmise that this relationship may only be visible among less advantaged workers. We recommend to further investigate our cyclic model as presented in our theory section ([Fig. 1](#)), albeit with two adaptations (see [Fig. 3](#)). First, career resources may not only relate to job insecurity but also directly to psychological strain. Second, recovery experiences may relate directly to proactive coping through offsetting the impact of resource loss.

7.3. Generalizability beyond solo self-employed workers?

Prior research has been inconsistent as to how non-standard work is associated with well-being outcomes such as job insecurity and psychological strain. This is potentially because mixed samples of non-standard workers are generally being investigated and this practice obscures the heterogeneity of non-standard work ([Imhof & Andresen, 2018](#)). By focusing specifically on solo self-employed workers, we provide insight into to applicability of a cyclic model of proactive coping with job insecurity for the particular situation of solo self-employed workers. However, the downside of this focused sample is that it remains unclear how the current findings generalize to other types of self-employment (e.g., medium/large business owners), non-standard work (e.g., temporary employees), and regular employed workers.

On the one side, there may be differences between solo self-employed workers and other types of workers. For example, while the current study did not find the expected negative relation between psychological strain and subsequent proactive coping, a sample of workers for which proactivity is less required for work performance and thereby possibly less routinized, may show different results. In addition, some non-standard workers may be more severely affected by external factors than solo self-employed (e.g., by re-organizations, expiring contracts), which could make it challenging to maintain their employment regardless of the career resources they accumulate.

On the other side, certain aspects of our findings may be generalizable and valuable beyond solo self-employed workers. For example, that workers experience less job insecurity after months where they used more proactive coping may be applicable for various types of workers. In addition, the pivotal role of career resources – these are negatively related to both job insecurity and psychological strain – may also hold for other types of workers. We therefore recommend future research to investigate to what extent the proposed cyclic model of proactive coping with job insecurity can be generalized to other types of workers.

7.4. Limitations and future research directions

Our study has some limitations that should be taken into account. First, while one of the reasons for selecting solo self-employed workers as our target group was their larger risk for precariousness compared to other self-employed workers, we note that our research sample on average possessed a relatively high amount of resources, both regarding the career ($M_{\text{career resources}} = 5.27$) and mental well-being ($M_{\text{psychological strain}} = 2.07$). Apparently, our sample had a fairly good idea of their career prospects, development opportunities, and how to engage their network, which is counter indicative of precariousness. Possibly there might have been some selection bias, such that more precarious workers may not have possessed the time or state of mind to participate in monthly survey research. As such, solo self-employed who are “pushed by necessity” may have been underrepresented in the current study (Van den Groenendaal et al., 2021). It remains as valuable as ever to discern whether and how these less advantaged workers are able to manage their job insecurity.

Second, we recommend future researchers to further investigate job insecurity and its measurement among solo self-employed workers. In this research, we measured job insecurity with a measure that conceptually differentiates between quantitative and qualitative job insecurity. Specifically, we used the scale of Langerak and colleagues (2022) and adapted the items on quantitative job insecurity (Items 1–6) by replacing “work” with “demand for my product or service”. Our factor analyses showed a similar factor structure as the original scale. However, we note that by this alteration, the quantitative dimension of job insecurity may be more strongly related to two items of the qualitative dimension of job insecurity that pertain to the continuation of desired income levels (Items 8 and 11) for self-employed workers than for regular workers receiving a fixed salary. We recommend future research to further investigate how job insecurity is experienced by solo self-employed workers: Does their experience reflect quantitative and qualitative job insecurity in a similar way as for standard workers or are these two more intertwined? Does qualitative job insecurity among solo self-employed workers indeed concern worries similar to those that standard workers have? As the current study used a measure that stems from research among standard workers, it may be possible, for example, that the measure overlooked certain job features that are especially valuable to solo self-employed workers (e.g., autonomy; Annink & Den Dulk, 2012).

In addition, the question remains whether “job insecurity” is an appropriate term to use for solo self-employed and other non-traditional workers or if academic literature should expand its vocabulary to better align with the diversification of work. On that note, Probst et al. (2023) have suggested the use of “quantitative work insecurity (i.e., threats to one’s opportunities for work)” and “qualitative work feature instability (i.e., threats that might lead to a deterioration of the qualitative features of one’s work)”. They also warn that specific items that are commonly used in measures of qualitative job insecurity, may be irrelevant for measuring the qualitative work insecurity that non-traditional workers experience. This further underlines the importance of future research that investigates how job/work insecurity is experienced by solo self-employed workers and how it can best be assessed through research measures.

Third, because the proactive coping activities in this study were largely chosen based on the idea that they align with the inter-related proactive coping stages proposed by Aspinwall and Taylor (1997), we used a combined measure of these proactive coping activities in our analyses. However, this leaves several important questions unanswered. First, assuming that the proactive coping stages are interrelated, exactly how do the proactive coping activities influence each other? It could be possible that effort in one activity triggers more effort in another, for example when career consultation with one’s network would lead one to think more about future scenario’s. However, depending on the content of the conversation, it could also be the other way around if one’s future path becomes more clear. Second, would it be wise to engage in a range of proactive coping activities as we now measured, or can there be situations where certain specific proactive coping activities are more valuable? For example, recent research conducted at call center facilities shows that workers use skill development in reaction to the threat and job insecurity they feel in response to AI developments (Burhan, 2025). To answer questions like these, future research should assess multiple proactive coping activities and conduct analyses in which the impact of each activity can be investigated and compared across situations.

Fourth, we note that while we investigated recovery by capturing solo self-employed workers’ activities and experiences during their non-work time, other valuable insights may be gained by investigating recovery as a state of being recovered (Sonnentag & Geurts, 2009). Recovery then refers to the state that workers are in, rather than the activities and experiences workers use to recover, which we investigated. When recovery is investigated as a state, one could position recovery as a mediating variable between job insecurity and psychological strain. For example, ruminating about job insecurity may impede feeling detached, which consequently may prevent the restoration of psychological resources, which finally makes it harder to cope proactively. Alternatively, job insecurity may impede the amount of control workers experience about their life (e.g., being unable to get a mortgage), which may also block the

restoration of psychological resources, and consequently the initiation of proactive coping.

Lastly, several issues need to be taken into account regarding investigating cyclic models based on COR theory. First, our study included various different constructs as resources. This corresponds to other research investigating gain and loss cycles (e.g., [De Cuyper et al., 2022](#); [Ford et al., 2023](#); [Jiang et al., 2023](#)). This can be explained by that COR theory does not indicate which resources would be the most relevant as predictors and outcomes of other resources ([Sonnentag & Meier, 2024](#)). We further based our decisions regarding the included variables and relations on proactive coping theory ([Aspinwall & Taylor, 1997](#)) and prior empirical research (e.g., [El Khawli et al., 2022](#); [Koen & Parker, 2020](#)). However, we note that the interrelations between resources are complex and are likely even more complex than depicted in our research model. For example, questions remain such as: How are the different types of resources related with each other (e.g., Do more self-compassionate people experience higher levels of recovery)? When do individuals draw on which type of resource (e.g., Are some career resources more helpful in certain situations than others)? In addition, while we chose psychological strain to measure a resource-depleted state, there may be other constructs at work in loss cycles, such as the experience of burnout ([Bakker et al., 2014](#)) or lowered self-esteem ([Jiang et al., 2023](#)).

Second, we based the spacing of our variables on theoretical grounds, taking into consideration that various parts of the cycle may not need the same time to unfold (cf. [Sonnentag & Meier, 2024](#)). Yet, replication of our cyclic model with different time lags may still be valuable. For example, even though we did not find a relationship between strain and subsequent coping during the next month, future research is needed to explore if this relationship unfolds at a shorter or longer time span than one month. In addition, future research may assess whether the relation between a resource-depleted state and later proactive coping may be curvilinear rather than linear (i.e., only extreme levels of strain are inhibitory) or assess whether the prolonged experience of strain may inhibit proactive coping.

Third, we used multi-level path modelling to investigate our research model. This analysis method makes it possible to investigate within-person relationships between the model variables. However, there are other suitable analysis methods to investigate longitudinal data, such as cross-lagged panel models or latent change score models. With cross-lagged panel models one can model whether relationships between variables increase or decrease in strength over time. Latent change score models are particularly valuable to assess how changes in one variable relate to changes in another variable. Future research may apply such alternative analysis methods to provide further information on the development of gain and loss cycles ([Sonnentag & Meier, 2024](#)).

7.5. Practical implications

Our research provides valuable insight into how solo self-employed 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 solo self-employed workers are able to build these resources through proactive coping. Since initiating proactive coping costs psychological resources, 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. This, 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 of continued proactive coping efforts to establish themselves. While solo self-employed 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.

8. Conclusion

Our study showed that proactive coping during the month relates to decreased job insecurity at the end of the month among solo self-employed workers through the accumulation of career resources, and signals that recovery experiences may stimulate this process. We did not find the expected reversed relationship between current job insecurity and proactive coping during the next month, but encourage researchers to further unpack this relationship among precarious workers to guard against potential loss cycles.

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CRedit authorship contribution statement

Judith B. Langerak: Writing – review & editing, Writing – original draft, Visualization, Software, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Edwin A.J. van Hooft:** Writing – review & editing, Validation, Supervision, Software, Formal analysis, Conceptualization. **Jessie Koen:** Writing – review & editing, Validation, Supervision, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplemental materials

Supplemental materials to this article (Appendix A, Appendix B, Appendix C) can be found online at <https://doi.org/10.1016/j.jvb.2025.104176>.

Data availability

Data will be made available on request.

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