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ARTICLE

A cross-lagged study investigating the relationship between burnout and subjective career success from a lifespan developmental perspective

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Abstract

This study draws on the conservation of resources theory to investigate the relationship between burnout (disengagement and emotional exhaustion) and subjective career success (SCS) through career insecurity over time. It also aims to shed light on the role of the occupational future time perspective (i.e., remaining opportunities and remaining time) as a personal resource that may moderate the direct and indirect relationship between burnout and SCS through career insecurity. A total of 362 full-time working individuals participated in the survey, which was administered at two time points, 9 months apart. The results from the cross-lagged analysis suggested a bidirectional relationship between disengagement and SCS; however, emotional exhaustion did not predict SCS across time. Career insecurity mediated the cross-lagged relationship between burnout and SCS. Finally, the findings showed that the negative cross-lagged relationship between disengagement and SCS was moderated by remaining opportunities, such that the relationship was stronger for individuals low on remaining opportunities. The negative cross-lagged relationship between emotional exhaustion and SCS was moderated by remaining time, such that the relationship was stronger for individuals low on the remaining time. Implications for practice and future research directions are discussed.

KEYWORDS

burnout, career insecurity, lifespan development, occupational future time perspective, subjective career success

Practitioner Points

- Employees' subjective career success is important for organizations because it influences organizational commitment and turnover intentions.
- Burnout has a stronger negative impact on subjective career success for employees who perceive they have few remaining opportunities and time left in their working lives.
- Organizations should focus on promoting employees' occupational future time perspective through their human resource management practices.

INTRODUCTION

Subjective career success (SCS), defined as an individual's evaluation of obtaining personally meaningful career outcomes (Spurk et al., 2019), has been a focal research topic in recent decades (Ng et al., 2005; Ng & Feldman, 2014). This is not surprising given the importance of SCS for both individuals and organizations. Research shows that SCS influences various individual- and organizational-related outcomes, such as life satisfaction (Abele et al., 2016), turnover intentions (Guan et al., 2015) and organizational commitment (Moon & Choi, 2017). Research so far has mainly focused on understanding the factors that promote SCS (Ng et al., 2005; Spurk et al., 2019), while limited research attention has been paid to factors that can undermine SCS. This is important because in the modern career context, characterized by turbulence and unpredictability (Sullivan & Baruch, 2009), individuals have to face many setbacks and failures during the course of their careers.

Career hurdles are defined as those obstacles that individuals encounter in the face of the pursuit of their career goals (Ng & Feldman, 2014). Research shows that low core self-evaluation, job dissatisfaction, low supervisor support, and unmet expectations are among the greatest hurdles to SCS (Ng & Feldman, 2014). From the conservation of resources (COR) perspective (Hobfoll et al., 2018), burnout can be considered a career hurdle because it involves a resource depletion process, which may reduce the attainment of career outcomes and lead to career unsustainability (Barthauer et al., 2020). Burnout is a psychological syndrome resulting from prolonged stress at work, characterized by disengagement and emotional exhaustion (Demerouti et al., 2021; Halbesleben & Demerouti, 2005), and it is one of the most common psychological conditions experienced by employees (Koutsimani et al., 2019). Although burnout is both theoretically and practically important (Casserley & Megginson, 2009; Demerouti et al., 2021; ten Brummelhuis et al., 2011), its role in the context of careers remains to a large extent unclear. Only a few studies have examined the relationship between burnout and SCS (e.g., Barthauer et al., 2020); they found that burnout was negatively related to SCS. Barthauer et al. (2020) combined the different burnout dimensions into an overall burnout concept. We distinguish between emotional exhaustion and disengagement because research consistently shows that they are empirically distinct constructs (Demerouti et al., 2002; Demerouti & Bakker, 2008). As Basinska and Gruszczynska (2020) argued, in order to enhance our understanding of the burnout syndrome, the two dimensions should be examined separately as they have different antecedents and serve different functions in the well-being of individuals. Moreover, research shows that emotional exhaustion and disengagement involve the depletion of different resources (Demerouti et al., 2021) and often relate differentially to employee outcomes (e.g., Demerouti et al., 2002, 2014). Accordingly, by examining these dimensions separately, we can gain a clearer understanding of how each dimension uniquely contributes to SCS.

There has recently been a call for research that adopts a resource-based perspective to answer the important question of how stress may pose a threat to SCS (Spurk et al., 2019). This is important, as an individual's evaluation of their career success is not only influenced by positive experiences, but also by negative experiences (e.g., burnout), which can also be more powerful in the context of SCS (Ng &

Feldman, 2014; Spurk et al., 2019). As such, the first aim of the current study is to adapt a cross-lagged design and examine the relationships between disengagement, emotional exhaustion, and SCS. We adopt the COR theory (Hobfoll et al., 2018) as a theoretical framework because it could explain the process through which resource depletion may decrease an individual's ability to obtain valuable outcomes (Wright & Hobfoll, 2004). Specifically, we posit that burnout is a resource-draining process that increases insecurity about career goals, ultimately reducing an individual's ability to attain SCS. Career insecurity refers to feeling insecure about one's ability to reach short-term and long-term career goals (Spurk et al., 2016). Given that individuals suffering from burnout feel powerless and lack the energy to put effort into reaching their goals (Wright & Hobfoll, 2004), they could also feel more insecure about their ability to attain their career goals, now and in the future. In turn, individuals who experience career insecurity may be less able to attain desirable career outcomes because they have fewer resources with which to achieve success in their careers (Colakoglu, 2011).

Another important research gap is that we lack knowledge about how burnout influences SCS from a lifespan perspective. Specifically, there have been limited insights into whether burnout may be more detrimental for individuals depending on how they see their future in employment unfold. A lifespan perspective considers "individual development as a lifelong, continuous, and multidirectional process that is influenced by the interplay of biological maturation, contextual opportunities and constraints" (Zacher & Froidevaux, 2021, p. 1). Recently, lifespan developmental researchers have argued that studies should move beyond focusing on chronological age (Beier et al., 2022; Kooij et al., 2013) because developmental changes are argued to occur due to changes in the subjective sense of time rather than due to chronological age. Building on the lifespan developmental literature, Zacher and Frese (2009) developed the concept of occupational future time perspective (OFTP), which refers to the time and opportunities individuals perceive they have left in their occupational life. They distinguished between remaining time and remaining opportunities. The former refers to individuals' perception of remaining time and the latter to individuals' perceptions of opportunities remaining in their careers (Zacher & Frese, 2009). In alignment with previous research (Kochoian et al., 2017; Oliveira, 2021; Weikamp & Göritz, 2016; Zacher & Rudolph, 2021), we distinguish between remaining time and remaining opportunities because they are conceptually and empirically distinct (Zacher & Frese, 2009). Moreover, as Rudolph et al. (2018, p. 243) argued, "differences in the strength of the relationships of the two OFTP dimensions with several variables also suggest that future research would be well served to focus on predictions related to these specific dimensions, rather than solely upon the overall conceptualization of OFTP".

OFTP builds on the socioemotional selective theory (SST), a lifespan developmental theory of motivation. The theory postulates that the future time perspective is the main driver of motivational changes across the lifespan (Carstensen, 1992). According to Rudolph et al. (2018), OFTP has a motivational and health promoting function in the context of work and careers. Research shows that individuals with more extensive OFPT have a more optimistic outlook on their future and put more effort into reaching their goals, which may impact their ability to cope with career hurdles (Rudolph et al., 2018). Accordingly, from the perspective of COR theory, OFTP can be considered a personal resource that may influence how individuals cope with burnout and minimize its negative impact for SCS. We propose and test that OFTP moderates the negative cross-lagged relationship between burnout and SCS, and the indirect relationship through career insecurity.

The research model is depicted in Figure 1.

The current study intends to contribute to the career literature in several important ways. First, by focusing on burnout as a career hurdle, the study responds to calls for more research on factors that may undermine success to achieve a more balanced and a realistic understanding of the career success experience (Baruch & Vardi, 2016; Ng & Feldman, 2014). The study advances existing research that has taken a unidimensional approach to burnout by clarifying the role of both disengagement and emotional exhaustion in SCS. This is important in practice because these dimensions are predicted by different resources (Bakker et al., 2004), which may give organizations a clearer understanding of how they can combat burnout and facilitate employees' SCS. Additionally, by investigating career insecurity

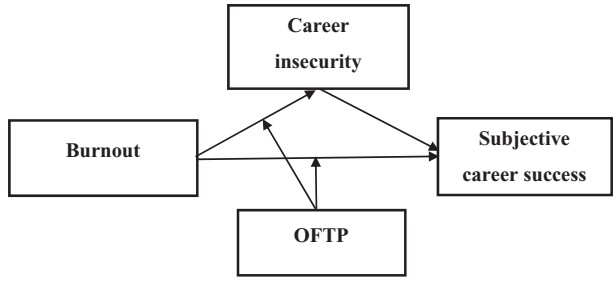

FIGURE 1 Proposed theoretical framework.

as an explanatory mechanism, the study advances previous research by adding insights regarding how a loss in resources resulting from burnout may negatively relate to SCS.

Second, by adopting a lifespan perspective and investigating the moderating role of OFTP, this study will offer insights into how individuals with different perceptions of their time and opportunities left in employment are impacted by burnout in relation to their career insecurity and SCS. By focusing on remaining time and remaining opportunities separately, we can enhance our understanding of their unique buffering role of different burnout dimensions in relation to SCS. From a practical perspective, the findings are valuable because they may help to identify those employees who require more support to handle career-related obstacles.

Finally, this study extends prior research, which has mainly been cross-sectional, by adopting a time-lagged design. Implementing a cross-lagged design and controlling for initial levels of SCS means that we can more clearly determine the relationship between burnout and SCS over time. Because a career is defined as an unfolding sequence of work experience across time (Arthur et al., 1989), careers and time are interrelated (Mayrhofer & Gunz, 2019).

THEORY AND HYPOTHESES

Burnout and subjective career success

Burnout is a response to excessive work-related stress and is a combination of disengagement and emotional exhaustion (Demerouti et al., 2021). Disengagement refers to distancing oneself from one's work tasks, work content and work in general (Demerouti & Bakker, 2008). Emotional exhaustion, the central dimension of burnout, has been defined as feeling emotionally drained and weary as a result of an extended experience of physical, emotional and cognitive strain (Demerouti et al., 2014). SCS refers to individuals' evaluation and experience of attaining personally meaningful career outcomes (e.g., Spurk et al., 2019). In recent years, SCS has been conceptualized as a multidimensional construct involving different facets such as growth and development, career satisfaction and work-life balance (Briscoe et al., 2021; Shockley et al., 2016). In the current study, we follow Ng and Feldman (2014), Steindórsdóttir et al. (2023), and Zhou et al. (2013) and consider SCS as a unidimensional construct of career satisfaction, which is one of the most traditionally applied approaches to study SCS.

The central tenet of COR theory is that individuals strive to obtain and protect those resources they consider to be of value (Hobfoll et al., 2018). Stress is argued to occur when resources are threatened or lost, or when resource gain fails after resource investment (Hobfoll, 1989). COR theory sees these circumstances as demands. The higher the demands and the fewer resources individuals have, the less they are able to cope with stress (Alarcon, 2011). Maladaptive coping behaviour is thus argued to lead to burnout (Westman et al., 2004). Resource loss is more powerful than resource gain (Hobfoll et al., 2018), and so resource loss resulting from burnout can induce loss cycles of resources, leading to future resource loss and accelerating the burnout process (ten Brummelhuis et al., 2011). When individuals lack

resources, they are more vulnerable to resource loss and less capable of resource gain (Halbesleben et al., 2014). Individuals suffering from burnout are low on resources (e.g., lower energy). Burnout thus reflects a situation where individuals are more vulnerable to resource loss and less capable of resource gain. One way to conserve resources is to reduce the energy spent on trying to meet work-related demands (Halbesleben et al., 2014; Hobfoll, 1989). This indicates that burnout could become an obstacle to SCS over time because it may reduce an individual's ability to achieve their own career success criteria.

An important implication of COR theory is that the different burnout dimensions may affect different resources (Halbesleben, 2006). Disengagement involves a depletion of motivational resources (Collie et al., 2018), which may negatively influence the pursuit of personally meaningful career outcomes. For example, disengagement concerns withdrawal behaviour, in which individuals "have largely given up" (Collie et al., 2018, p. 128), accepted failure and put limited effort into their work. Such withdrawal from work-related tasks is likely to influence the degree to which individuals develop the necessary skills to achieve career outcomes (Oliveira, 2021). In support of this notion, the results from a meta-analysis by Ng and Feldman (2014) showed that career hurdles in the form of low motivation were significantly negatively related to SCS. In addition, previous research has found that disengagement is negatively related to extra-role performance and affective commitment (Afrahi et al., 2022). Individuals suffering from disengagement are therefore less likely to go beyond the job requirements and to feel emotionally attached to their work. Organizations and leaders might thus be less likely to sponsor such individuals with career-relevant resources (Ng et al., 2005). For example, in a cross-sectional study among haematopoietic cell transplantation professionals, Neumann et al. (2018) found that those suffering from burnout had lower levels of career satisfaction and poorer work-family balance.

While disengagement involves a loss of motivational resources, emotional exhaustion involves a chronic depletion of emotional resources, where individuals feel emotionally overextended (Jennett et al., 2003; Wright & Cropanzano, 1998). Emotional exhaustion therefore involves an health impairment process, resulting in lower energy and higher levels of physical fatigue and psychological strain (Collie et al., 2018). Consequently, emotionally exhausted individuals are less likely to develop their career resources as they are low on energy. For example, they may not have the energy to pursue developmental opportunities important for reaching their career goals (Demerouti et al., 2014). As Wang et al. (2021) argued, individuals who feel that their emotional resources are worn out are less capable of searching for and utilizing opportunities to grow in their career. Emotional exhaustion might also reduce SCS by way of adverse emotional regulation. Research shows that individuals suffering from emotional exhaustion are more likely to experience negative emotions (e.g., anger, frustration) because their emotional responses are poorly regulated (Lee & Jang, 2019; Martínez-Iñigo et al., 2007). Being emotionally drained from work could thus reduce an individual's overall positive feelings towards their career (Federici & Skaalvik, 2012; Wright & Hobfoll, 2004). Taken together, the above discussion indicates that burnout can be considered a resource depletion process that may, over time, reduce an individual's ability to attain SCS. The following are thus hypothesized:

Hypothesis 1a. Time 1 disengagement will be negatively related to Time 2 SCS, controlling for Time 1 SCS.

Hypothesis 1b. Time 1 emotional exhaustion will be negatively related to Time 2 SCS, controlling for Time 1 SCS.

The mediating role of career insecurity

COR theory (Hobfoll et al., 2018) may also be useful in explaining how burnout can induce career insecurity. The theory emphasizes the importance of motivation in the burnout process (Hobfoll & Freedy, 2017; Wright & Hobfoll, 2004). Disengagement involves the depletion of motivational resources (Afrahi et al., 2022; Collie et al., 2018), which may lead to future resource loss—for example, in the form

of career insecurity (De Cuyper et al., 2012; Mäkikangas et al., 2010). For instance, disengagement may reduce individuals' ability to invest in their skill development (Hobfoll, 1989; Trougakos et al., 2015), which can, in turn, increase perceptions of insecurity about their future career. Emotional exhaustion, on the other hand, may be considered a loss of energetic resources (Bakker et al., 2004), where individuals often experience themselves as feeling 'stuck' and helpless (Casserley & Megginson, 2009). This 'stuckness' can lead the individual to feel powerless to pursue their career goals. In support of this, emotional exhaustion has been found to decrease confidence in achieving work-related goals (Nurmi et al., 2008), which might increase insecurity about current and future career goal attainment. Additionally, research shows that employees who feel emotionally exhausted have poorer work performance (Halbesleben & Bowler, 2007) and increased absenteeism (Carson et al., 2010), which may induce perceptions of career insecurity.

Career insecurity involves individuals' doubt regarding their ability to fulfil their career goals (Spurk et al., 2022). Career insecurity could therefore hinder processes related to self-management (Alisic & Wiese, 2020) and, in turn, lead to fewer career achievements. Indeed, in the modern career context, career development is primarily the responsibility of individuals themselves (Sullivan & Baruch, 2009), where self-management, such as proactive career behaviour, is an important driver of success (De Vos & Soens, 2008; Smale et al., 2019; Sullivan, 1999). Individuals experiencing insecurity about reaching their current and future career goals might be less likely to engage in career planning and lack the motivation to focus on skill development. According to Ng and Feldman (2014), career hurdles, such as career insecurity, may shift an individual's attention away from acquiring the resources they need to succeed in their career and lead to fewer career achievements. This notion is in line with COR theory (Hobfoll, 1989), which postulates that individuals may try to protect their resources by expending less effort in their work and choosing less ambitious career goals (Halbesleben & Bowler, 2007; Ng & Feldman, 2014). Only a few studies have examined the association between career insecurity and SCS, and they operationalized career insecurity differently from the current study. Colakoglu (2011) defined career insecurity as feeling powerless to maintain continuous employment. She explained that when individuals are worried about their future career, they engage in less self-exploration, which ultimately decreases their chance of achieving career success. Taken together, it is suggested that the resource loss resulting from disengagement and emotional exhaustion increases insecurity about obtaining short-term and long-term career goals, which, in turn, decreases SCS. Hence, we hypothesize:

Hypothesis 2a. Career insecurity mediates the negative relationship between Time 1 disengagement and Time 2 SCS, controlling for Time 1 SCS.

Hypothesis 2b. Career insecurity mediates the negative relationship between Time 1 emotional exhaustion and Time 2 SCS, controlling for Time 1 SCS.

Occupational future time perspective as a moderating personal resource for the relationship between burnout and subjective career success

Socioemotional selective theory (SST) postulates that changes in the future time perspective shift motivational priorities (Carstensen, 1995). A future time perspective refers to individuals perceptions of their remaining time left in life (Carstensen et al., 1999). SST argues that when future time is perceived as more open-ended, individuals prioritize goals related to resource accumulation, and that goals related to enjoyment in the present become more salient with a decreasing time horizon. Carstensen (2006) argued that while chronological age and future time are negatively related, these motivational shifts do not occur due to the effects of chronological age per se, but rather due to changes in perceptions of future time (see also Fung & Carstensen, 2004; Lang & Carstensen, 2002). Research shows that when the future time perspective is manipulated, age differences in goal selection disappear, supporting the main notion of SST (Barber et al., 2016; Fung & Carstensen, 2004). For example, when younger people

imagine conditions in which their future time is constrained, they prioritize emotionally meaningful goals (Fung & Carstensen, 2004). However, when they imagine a condition in which their future time is not constrained, they prioritize knowledge-related goals.

The future time perspective is distinct from personality trait-like temporal constructs, such as time orientation (Zimbardo & Boyd, 2014), temporal focus (Shipp et al., 2009), and temporal depth (Bluedorn & Standifer, 2006), which refer to personal characteristics that remain relatively stable throughout life. In contrast, the future time perspective is conceptualized as an age-related, cognitive-motivational, and flexible construct that changes over the lifespan (Carstensen, 2006; Fasbender et al., 2019; Lang & Carstensen, 2002; Zacher & Frese, 2009). Zacher and Frese (2009) extended the work of Carstensen into the context of careers by introducing the concept of the OFTP, referring to an individual's perception of time left in their working life. The authors distinguished between remaining time and remaining opportunities. Remaining time refers to an individual's beliefs concerning their time left in future occupational life, while remaining opportunities refers to an individual's beliefs about how many goals, options and possibilities are left in their occupational life.

Based on COR theory, we argue that OFTP is a personal resource that moderates the negative relationship between burnout and SCS. Resources can be defined as "anything perceived by the individual to help attain his or her goals" (Halbesleben et al., 2014, p. 1338). Personal resources are the positive characteristics of an individual that facilitate the ability to control and influence their environment, and are generally linked to resilience (Hobfoll et al., 2003). Personal resources are thus an important means to achieve goals, stimulate growth and overcome difficulties (Xanthopoulou et al., 2009) because of the following.

First, OFTP can be seen as a personal resource because remaining time and remaining opportunities facilitate the attainment of goals, including within the context of careers (Rudolph et al., 2018; Zacher & Rudolph, 2021). OFTP has a motivational function because individuals with a more extended OFTP are more likely to be devoted to their goals and believe that their actions will lead to success (Kochoian et al., 2017; Kooij & Zacher, 2016; Rudolph et al., 2018). As Carstensen (2006) argued, the subjective sense of (occupational) future time has a profound impact on motivation. Indeed, OFTP has been found to relate positively to learning goal orientation (Kooij & Zacher, 2016), learning self-efficacy (Kochoian et al., 2017), career-related behaviour (Zacher & Rudolph, 2021), late career planning and personal growth (Fasbender et al., 2019).

Second, OFTP may serve as a resource because remaining time and remaining opportunities promote individuals' ability to handle obstacles (Fasbender et al., 2019; Ho & Yeung, 2016). Individuals who anticipate positive future outcomes have greater confidence that they can endure in the face of challenges (Henry & Desmette, 2018; Oettingen & Mayer, 2002). Supporting this, research shows that OFTP is negatively related to psychological distress and emotional exhaustion (Barbieri et al., 2015; Henry & Desmette, 2018; Ho & Yeung, 2016) and positively related to career adaptability (Fasbender et al., 2019). Accordingly, we assume that individuals who perceive their occupational future as open and filled with opportunities may be more resilient when handling obstacles in their career.

Conversely, COR theory suggests that when individuals encounter obstacles, they utilize their current resources to counteract the challenges they are facing (Hobfoll, 2002). Accordingly, when individuals are low on resources (e.g., OFTP), they are less able to cope (Ito & Brotheridge, 2003). Those with a more constrained OFTP have a more pessimistic outlook on their future (Zacher & Rudolph, 2021) and are therefore less capable of coping with stressors (Rudolph et al., 2018). In support of this, Ho and Yeung (2016) found that individuals with a more expansive OFTP were more likely to use proactive and problem-focused coping to handle an obstacle, while those with a more constrained OFTP were more likely to use passive coping strategies. The theory also suggests that those who are low on resources are more vulnerable to resource loss and less capable of resource gains (Hobfoll et al., 2018). Accordingly, perceiving one's occupational future as more limited may exacerbate the resource loss caravans by strengthening the negative relationship between burnout and SCS (Halbesleben et al., 2014). Supporting this notion, Anser et al. (2020) found that subjective

age bias resulted in higher levels of burnout and lower job satisfaction. These authors argued that a limited future time perspective results in an employee's personal resource depletion, which may exacerbate perceptions of burnout.

Based on the above discussion, individuals with more constrained OFTP may be more negatively impacted by burnout and less capable of obtaining personally meaningful career outcomes. Hence, we hypothesize:

Hypothesis 3a. Remaining time moderates the negative relationship between Time 1 disengagement and Time 2 SCS, controlling for Time 1 SCS, such that the negative relationship is more negative for those who are low in remaining time.

Hypothesis 3b. Remaining opportunities moderates the negative relationship between Time 1 disengagement and Time 2 SCS, controlling for Time 1 SCS, such that the negative relationship is more negative for those who are low in remaining opportunities.

Hypothesis 4a. Remaining time moderates the negative relationship between emotional exhaustion and SCS, controlling for Time 1 SCS, such that the negative relationship is more negative for those who are low in remaining time.

Hypothesis 4b. Remaining opportunities moderates the negative relationship between Time 1 emotional exhaustion and Time 2 SCS, controlling for Time 1 SCS, such that the negative relationship is more negative for those who are low in remaining opportunities.

The above discussion further suggests that OFTP may moderate the indirect relationship between burnout and SCS through career insecurity. Individuals with fewer resources to cope with burnout will probably feel more powerless and lack the energy to focus on their career development (Westman et al., 2004). Individuals with a more constrained OFTP may therefore experience more career insecurity about their career progression now and in the future, which could accelerate the resource depletion process, in which the attainment of career outcomes becomes increasingly difficult. For example, coping with current career obstacles may not seem worthwhile if future career opportunities are perceived as limited. In such circumstances, career goal progress is unlikely to be prioritized. Indeed, research shows that individuals who perceive their future time and opportunities as limited have a more negative outlook on their future and are less confident towards obtaining desirable outcomes (Rudolph et al., 2018). Therefore, the following is proposed:

Hypothesis 5a. Remaining time moderates the first stage of the indirect (negative) relationship between disengagement and SCS through career insecurity, such that this relationship is stronger when remaining time is low.

Hypothesis 5b. Remaining opportunities moderates the first stage of the indirect (negative) relationship between disengagement and SCS through career insecurity, such that this relationship is stronger when remaining opportunities are low.

Hypothesis 6a. Remaining time moderates the first stage of the indirect (negative) relationship between emotional exhaustion and SCS through career insecurity such that this relationship is stronger when remaining time is low.

Hypothesis 6b. Remaining opportunities moderates the first stage of the indirect (negative) relationship between emotional exhaustion and SCS through career insecurity such that this relationship is stronger when remaining opportunities are low.

METHOD

Participants and procedure

Data were collected at two points in time (April 2021 and January 2022) via a survey, using Prolific, an online platform. Prolific is increasingly applied to collect data and in longitudinal research (Armour et al., 2020; Brooks & Clark, 2023). Empirical evidence that has compared data from Prolific with other samples indicates that Prolific can be used to collect data of high quality (Eyal et al., 2021; Stanton et al., 2022). The participants were from the United Kingdom, working full-time within different job sectors including social sciences, finance, engineering, information technology, business administration, science and education. The survey was administered in English, and all participants received £1 GBP for their participation. The participants were informed that participation was voluntary and that the project had been approved by Norwegian Data Security. The purpose of the project, the data collection procedure and the assurance of confidentiality were described. We included an attention check, which was a question at the end of the scale measuring OFTP: "It is important that you pay attention to this study; please tick Strongly Disagree". Sixteen participants failed the attention check and were removed from the analysis. The final sample at Time 1 (T1) consisted of 485 participants. At Time 2 (T2), approximately 9 months later, the same participants were invited to participate in a follow-up survey. Research has demonstrated that a time lag of between eight and 18 months is suitable for examining the proposed relationships (Burke & Greenglass, 1991; Nikolova et al., 2019). In the context of careers, a time lag of at least several months is probably needed to detect how burnout relates to SCS over time. A 9-month lag is also adequate to minimize biases due to the recollection of responses in the first survey (Caniëls et al., 2022). After removing seven participants who failed the attention check at T2, the final sample at T2 was 362 (74% of T1). The participant demographics were as follows: 257 male (50%); 7.1% were 20 and 25 years old, 16.4% were 26–30, 14.7% were 31–35, 8.3% were 31–40, 16.2% were 41–45, 9.9% were 46–50, 11.7% were 51–55, 6.7% were 56–60, 6.3% were 61–65, and 2.8% were over 65. Thirty-nine per cent of the sample had a bachelor's degree, 42.2% had a master's degree, and 10.3% had a doctorate. Approximately 50% had been working in their organization for less than 5 years, and 47.1% were in a leadership position.

A dropout analysis was conducted to estimate whether there were systematic differences between those who dropped out and those who remained in the study. No significant differences were found regarding levels of SCS, career insecurity or burnout. The results from analysis of variance showed no significant difference between the two groups in terms of gender: however, there were significant differences according to age ($F = 28.94$, $p < .01$). Those who dropped out were on average younger. The mean age of those who dropped out was around 34 years, while for those who remained it was around 42 years. Taken together, these patterns of results suggest that attrition does not appear to create substantial bias in the current study.

Measures

All variables were measured using a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), unless otherwise notified. All measures were administered at both time points, except for demographic variables, which were only administered at T1.

Burnout

Burnout was measured using the Oldenburg Burnout Inventory (Demerouti & Bakker, 2008), which is a widely used instrument for measuring burnout. The scale measures the emotional exhaustion and disengagement dimensions of burnout. The emotional exhaustion subscale includes eight items, such as "After my work, I usually feel worn out and weary". The disengagement subscale includes eight items,

such as "Sometimes I feel sickened by my work tasks". Both subscales include four positively phrased and four negatively phrased items. Cronbach's alpha for emotional exhaustion at T1 was $a = .81$, and $a = .84$ at T2. Cronbach's alpha for disengagement at T1 was $a = .84$ and $a = .83$ at T2.

Career insecurity

Career insecurity was measured using a four-item scale reported by Spurk et al. (2016). The items include "I am not sure whether I shall achieve my career aims" and "I often wonder how my career will develop". In their validation study, Höge et al. (2012) found that career insecurity was positively related to job insecurity and work–family conflict, and negatively related to wellbeing (Spurk et al., 2016). Cronbach's alpha at T1 was $a = .75$ and $a = .70$ at T2.

Subjective career success

Consistent with previous research (e.g., Abele & Spurk, 2009b; Colakoglu, 2011; Xie et al., 2016), SCS was measured using the career satisfaction scale by Greenhaus et al. (1990). The scale includes five items regarding satisfaction with progress towards goals involving income, growth, advancement, and overall success (e.g., "I am satisfied with the success I have made in my career"). Cronbach's alpha at T1 was $a = .92$ and $a = .92$ at T2.

Occupational future time perspective

The OFTP scale developed by Zacher and Frese (2009) was used to measure the OFTP. The scale consists of two subscales: remaining time and remaining opportunities. The remaining time subscale consists of three items and measures how much time individuals perceive they have left in their occupational life. Sample items include "Most of my occupational life lies ahead of me". Cronbach's alpha was $a = .74$. The remaining opportunities subscale includes three items and measures how many opportunities individuals perceive they have left in their occupational life. Sample items include "Many opportunities await me in my occupational future". Cronbach's alpha was $a = .91$. We used the T1 measure of OFTP in the analysis.

Control variables

Age was included as a control because it is a sociodemographic variable that positively relates to career success (Ng et al., 2005). For example, previous research has found that older individuals may perceive their career success differently as they may have developed more criteria with which to evaluate their success (Abele & Spurk, 2009a). A preliminary analysis found that age was significantly related to both the dependent variables (career insecurity and SCS) and should therefore be included as a control (Becker, 2005). Controlling for age is relevant because the moderating role of OFTP is examined, and by controlling for age we can establish whether OFTP is a significant moderator when accounting for the impact of age in the model. Age was measured on a scale of 20–25, 26–30, 31–35, 36–40, 41–45, 46–50, 51–55, 56–60, 61–65, and over 65 years. Gender was controlled for since research shows that men and women differ in their perceptions of career success (Ng & Feldman, 2014). Gender was coded as 1 = male and 2 = female.

Statistical analysis

The analysis was conducted in Mplus, version 8.7, using the robust maximum likelihood estimator (MLR). The data contained some missing values, and so the full information maximum likelihood

(FIML) estimation was applied to handle the missing data. It has been argued that this approach to handling missing data is less susceptible to biases compared to stricter approaches such as listwise deletion (Graham, 2009). A confirmatory factor analysis (CFA) was first conducted to evaluate whether the scale items would conform to the proposed structure of the data. Model fit was estimated with the root mean square error of approximation (RMSEA) below .05 or .08, comparative fit index (CFI) >.90, Tucker-Lewis's index (TLI) >.90 and standardized root mean square residual (SRMR) <.10.

Cross-lagged structural equation modelling was applied to test the hypothesized relationship between the two burnout dimensions and SCS, including all variables at T1 and T2, based on latent constructs. This procedure allows the estimation of temporal relationships while accounting for initial levels of the outcome variable (Selig & Little, 2012). Another benefit of this approach is that it allows an estimate of how variables causally relate to each other over time (Kearney, 2017). The cross-lagged analysis was conducted in four steps (one model for disengagement and one model for emotional exhaustion). It involved comparing several competing cross-lagged models to evaluate whether the proposed causal model generated the best fit with the data (Cole & Maxwell, 2003). To do so, a stability model was first estimated, including only autoregressive paths between T1 and T2 measures, and a correlation between the variables measured at the same time point. Second, the proposed causal relationship was added to the stability model. Third, a reverse causal model was estimated (controlling for autoregressive relations). Finally, a reciprocal model was estimated, including autoregressive, causal and reverse relations. Model fit was estimated with the same criteria described for the CFA. We used a robust chi-square difference test to compare the competing models (Satorra & Bentler, 2010), and accepted the most parsimonious model when differences were not observed (Kline, 2015). The most parsimonious model was chosen based on Akaike (AIC) statistics, lower values indicating a better fit (Wagenmakers & Farrell, 2004). We report results from this analysis in Table 3.

Career insecurity at T1 was determined to be a more appropriate mediator than career insecurity at T2 for the mediation analysis because perceptions of stress could instantly trigger uncertainty about one's future career. In turn, feeling insecure about one's future career is likely to reduce perceptions of career success over time rather than immediately. The mediation analysis was conducted by including a path between disengagement (T1) and career insecurity (T1), and between career insecurity (T1) and SCS (T2). Direct paths between disengagement (T1) and SCS (T2) were also specified. All autoregressive relations were controlled for in the analysis. The same procedure was conducted for the emotional exhaustion dimension. The indirect effect of career insecurity was estimated by generating 5000 samples with a 95% bias-corrected confidence interval. If the bias-corrected confidence interval excludes zero, mediation is supported (Hayes, 2017). All autoregressive relations were also included for the moderation analysis. The values of the moderator were probed at low (−1 SD), medium (mean) and high (1 SD above mean) levels of OFTP. The predictor variables were grand mean centred in order to minimize problems with multicollinearity (Aiken et al., 1991).

RESULTS

Table 1 presents descriptive statistics and the correlation between study variables. The majority of the study's variables were significantly correlated. Test–retest correlations ranged from .44 to .70, suggesting moderate stability over time.

Confirmatory factor analysis

The research model included six latent variables (emotional exhaustion, disengagement, career insecurity, SCS, remaining time, and remaining opportunities), and yielded a reasonable fit to the data (χ^2 (419) = 1251.095, $\chi^2/df = 2.98$, $p < .001$, RMSEA = .064, CFI = .87, TLI = .86, SRMR = .08).

TABLE 1 Descriptive statistics and correlations among the study variables.

Variable	*M*	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Emotional exhaustion T1	2.81	.75	(.81)											
2. Emotional exhaustion T2	2.84	.78	.71**	(.84)										
3. Disengagement T1	2.70	.83	.46**	.40**	(.84)									
4. Disengagement T2	2.67	.84	.37**	.55**	.55**	(.86)								
5. Career insecurity T1	2.90	.88	.32**	.27**	.35**	.24**	(.75)							
6. Career insecurity T2	2.91	.83	.33**	.43**	.24**	.35**	.62**	(.70)						
7. Remaining time	2.65	.96	.-.08	−.09	−.05	−.07	−.00	.06	(.74)					
8. Remaining opportunities	3.26	1.0	−.23**	−.19**	−.22**	−.20**	−.14**	−.05	.67**	(.91)				
9. SCS T1	3.35	.94	−.39**	−.37**	−.43**	−.43**	−.50**	−.41**	.11*	.29**	(.92)			
10. SCS T2	3.45	.94	−.37*	−.46**	−.39**	−.48**	−.40**	−.50**	.14**	.29**	.69**	(.92)		
11. Gender	1.47	.5	.15**	.14**	−.08	−.08	.04	.11**	−.08	−.05	.05	.02		
12. Age	4.9	2.5	−.18**	−.15**	−.23**	−.20**	−.28**	−.28**	−.60**	−.42*	.18**	.19**	.08	

**$p < .01$; *$p < .05$.

The modification indices showed that one item ("When I work, I usually feel energized") from the emotional exhaustion subscale had severe cross-loading with the disengagement subscale. In addition, one item ("Usually, I can manage the amount of my work well") from the disengagement subscale had a factor loading below the .40 criterion (Nunnally, 1994). These items were therefore removed from further analysis. This modification resulted in a substantially better model fit (χ^2 (362) = 1022.477, χ^2/df = 2.82, p < .001, RMSEA = .061, CFI = .89, TLI = .88, SRMR = .07). Alternative models were tested to evaluate whether the research model demonstrated better fit to the data. A five-factor model was examined, where emotional exhaustion and disengagement loaded on to the same factor (χ^2 (367) = 1387.497, χ^2/df = 3.78, p < .001, RMSEA = .076, CFI = .83, TLI = .82, SRMR = .81), as well as a five-factor model, where remaining time and remaining opportunities loaded on the same factor (χ^2 (367) = 1136.369, χ^2/df = 3.09, p < .001, RMSEA = .067, CFI = .87, TLI = .86, SRMR = .75). A general model was also tested in which all variables loaded on to one common factor. This model demonstrated a poor fit to the data (χ^2 (377) = 3637.585, χ^2/df = 9.64, p < .001, RMSEA = .134, CFI = .47, TLI = .43, SRMR = .13). Taken together, the six-factor research model demonstrated a superior fit to the data in comparison with the alternative models.

Measurement invariance

We evaluated the measurement equivalence of all variables on the two measurement occasions based on the approach described by Widaman et al. (2010). First, we fitted a configural model where item loadings and intercepts were allowed to vary across time points. The model included all items and factors measured at two time-points and included covariance between corresponding items' error terms as well as between latent traits. Second, we fitted a metric invariance (weak) model where item loadings were constrained to be equal across time points. Third, we fitted a scalar (strong) invariance model where both loadings and intercepts were constrained to be equal across groups. Finally, we fitted a strict invariance model where loadings, intercepts, and error variances where constrained to be equal. The large number of factors and items modelled makes the traditional chi-square difference test less suitable. Instead, we chose the criterion of $^{\Delta}$CFI < .01 (Cheung & Rensvold, 2002) to establish invariance. Additionally, we evaluated the model's RMSEA and Bayesian information criterion (BIC). The RMSEA considers both model discrepancy and degrees of freedom, offering a more nuanced assessment of model fit. The BIC incorporates a penalty for model complexity, effectively balancing model fit and parsimony. In invariance testing, the BIC is particularly advantageous when comparing alternative models with different levels of invariance constraints. All models were estimated with FIML.

The results of the invariance tests are shown in Table 2. The configural model showed acceptable fit to the data overall. The CFI indicates some misspecification, but the RMSEA shows a very good model fit (Browne & Cudeck, 1993). The weak invariance model showed no deterioration in model fit and a lower BIC, indicating improved model parsimony. Both strong and strict invariance models showed a small reduction in model fit as described by the CFI, but within the criterion. In addition, the RMSEA showed no change and the BIC improved in both models. The strict invariance model yielded the most parsimonious results. Taken together, the results suggest that the differences in the measurement of the factors are invariant between time points.

Hypothesis testing

As demonstrated in Figures 2 and 3, all variables showed a moderate to strong degree of stability over time, and all autoregressive relations were significant. It should be noted that all analyses were tested both with and without the control variables. The results were the same when including the control variables and did not change the interpretation of the findings. As recommended by Becker (2005) and

TABLE 2 Fit statistics of the configural, weak, strong and strict invariance models.

Model	df	χ^2	CFI	RMSEA	BIC	$^{\Delta}$CFI	$^{\Delta}$RMSEA	$^{\Delta}$BIC
Configural	938	2085	.898	.050	50,273	–	–	–
Weak	957	2100	.898	.049	50,170	.000	−.001	−103
Strong	976	2171	.894	.050	50,124	−.004	.000	−149
Strict	999	2204	.893	.050	50,014	−.005	.000	−259

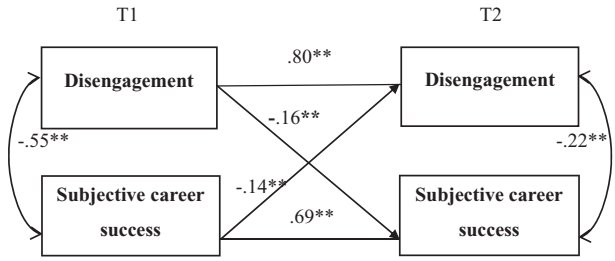

FIGURE 2 Causal model between disengagement and subjective career success. Dashed line indicates non-significant relations; $^{**}p < .01$; $^{*}p < .05$.

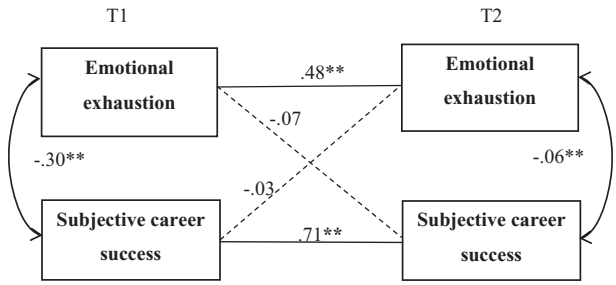

FIGURE 3 Causal model between emotional exhaustion and subjective career success. Dashed line indicates non-significant relations; $^{**}p < .01$; $^{*}p < .05$.

Bernerth and Aguinis (2016), the results are reported without the control variables so as to provide the most interpretable results and a clearer evaluation of effect sizes.

Hypothesis 1 predicted a negative cross-lagged relationship between burnout and SCS. First, the causal model between disengagement and SCS was examined. In comparison with the stability model (M1), the causal model (M2) had a significantly better fit with the data ($\Delta\ \chi^2 = 6.60$, $p < .05$). The causal path from disengagement at T1 to SCS at T2 was also significant ($\beta = -.16$, $p < .05$). The reverse causal model (M3) also showed a significantly better fit to the stability model ($\Delta\ \chi^2 = 4.69$, $p < .05$). This path was also significant ($\beta = -.14$, $p < .05$). The reciprocal model (M4) demonstrated a significantly better fit compared to the stability model ($\Delta\ \chi^2 = 8.31$, $p < .05$). This model was not significantly different from the causal model ($\Delta\ \chi^2 = 1.40$, $p > .05$); however, it was the most parsimonious based on AIC values. The AIC values were consistent with the chi-square difference, with lower values indicating a better fit. To examine whether the two paths (from T1 disengagement to T2 SCS and from T1 SCS to T2 disengagement) were significantly different, we constrained the paths to be equal. The restricted model ($\Delta\ \chi^2 = 808.885$, $p < .001$) did not demonstrate a better fit to the data based on a Santorra-Bentler scaled chi-square difference test ($\Delta\ \chi^2_{(1)} = .13$, $p > .05$). Taken together, these findings indicate that disengagement at T1 had a negative cross-lagged relationship

with SCS at T2, providing support for Hypothesis 1a. They also demonstrate support for the reverse relationship, where a reciprocal model is the most parsimonious to explain the relationship between the disengagement and SCS.

Next, the causal model between emotional exhaustion and SCS was examined. In comparison with the stability model (M5), the causal model (M6) did not demonstrate a significantly better fit ($\Delta \chi^2 = 2.2, p > .05$). The causal path between emotional exhaustion at T1 and SCS at T2 was also not significant ($\beta = -.07, p > .05$). The reverse causal model (M7) did not demonstrate a superior fit to the stability model (M5) and the reverse causal path was also not significant ($\beta = -.03, p > .05$). The reciprocal model (M8) did not show a better fit compared to the baseline model (see Table 3). These findings indicate that the causal relationship between emotional exhaustion and SCS was not significant when controlling for autoregressive relationships. Therefore, Hypothesis 1b was not supported.

Hypotheses 2a and 2b proposed that the negative relationship between (a) disengagement and (b) emotional exhaustion and SCS would be mediated by career insecurity. Results from the mediation analysis are presented in Figures 4 and 5. The bootstrapping procedure showed that career insecurity at T1 mediated the lagged relationship between disengagement at T1 and SCS at T2 ($\beta = -.08$, bootstrapSE = .03, 95% bootstrapCI = [−.13, −.03]). Although there was not a direct effect from emotional exhaustion to SCS, career insecurity mediated the lagged relationship between emotional exhaustion at T1 and SCS at T2 ($\beta = -.07$, bootstrapSE = .03, 95% bootstrapCI = [−.11, −.01]). Traditionally, it was assumed that mediation could only occur if there was a significant relationship between the independent variable and the dependent variable (Baron & Kenny, 1986). However, researchers have argued that a direct effect does not need to exist in order to establish mediation (Hayes, 2009; Zhao et al., 2010). As Hayes (2009, p. 415) argued, "A failure to test for indirect effects in the absence of a total effect can lead you to miss something potentially interesting." Taken together, these findings provide support for Hypotheses 2a and 2b. In order to quantify the total effects that can be explained by the mediator, we calculated the ratio of the indirect effect to the total effect (MacKinnon, 2008). The results showed that

TABLE 3 Cross-lagged model fit and comparison with alternative models.

Model	χ^2 (df)	CFI	TLI	RMSEA	Comparison	$\Delta\chi^2$	Δdf	AIC
M1 Stability	818.22 (248)	.90	.89	.068				24,852.558
M2 Causal	811.12 (247)	.90	.89	.068	M2–M1	6.60*	1	24,842.496
M3 Reverse	813.13 (247)	.90	.89	.068	M3–M1	4.69*	1	24,847.626
M4 Reciprocal	809.48 (246)	.90	.88	.060	M4–M1	8.31*	1	24,844.552
M5 Stability	756.80 (248)	.90	.89	.065				25,209.360
M6 Causal	754.58 (247)	.90	.89	.065	M6–M5	2.21	1	25,131.230
M7 Reverse	757.21 (247)	.90	.89	.065	M7–M5	.21	1	25,133.116
M8 Reciprocal	755.16 (246)	.90	.89	.065	M8–M6	.31	1	25,133.012

*$p < .05$.

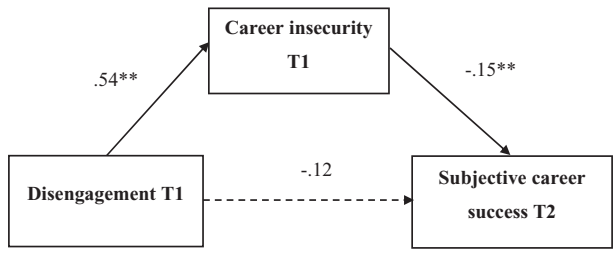

FIGURE 4 Mediation of career insecurity in the relationship between disengagement and subjective career success. Dashed line indicates non-significant relations; **$p < .01$; *$p < .05$.

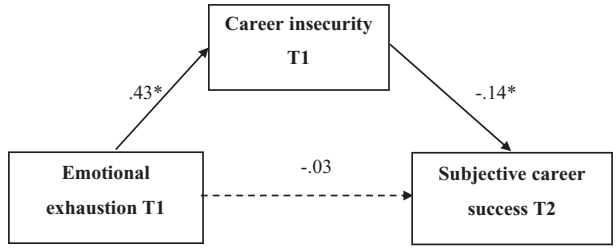

FIGURE 5 Mediation of career insecurity in the relationship between emotional exhaustion and subjective career success. Dashed line indicates non-significant relations; $^{**}p < .01$; $^{*}p < .05$.

career insecurity explains 76% of the effect of emotional exhaustion on SCS and 37% of the effect of disengagement on SCS.

Hypothesis 3 proposed that (a) remaining time and (b) remaining opportunities would moderate the negative relationship between disengagement and SCS, such that the negative relationship would be stronger for those lower in remaining time and remaining opportunities. Remaining time did not significantly moderate the cross-lagged relationship between disengagement and SCS ($\beta = .24$, $p > .05$). Therefore, Hypothesis 3a was not supported. In support of Hypothesis 3b, remaining opportunities significantly moderated the relationship between disengagement and SCS ($\beta = .37$, $p < .05$). As Figure 6 presents, the simple slope test demonstrated that the negative relationship between disengagement and SCS was significant for those with a low level of remaining opportunities ($\beta = -.40$, $p < .01$). The relationship was not significant for those with a high level of remaining opportunities ($\beta = -.20$, $p > .05$). Hypothesis 4 proposed that (a) remaining time and (b) remaining opportunities would moderate the cross-lagged relationship between emotional exhaustion and SCS such that the negative relationship would be stronger for those with low levels of remaining time and remaining opportunities. The results showed that remaining time significantly moderated the cross-lagged relationship between emotional exhaustion and SCS ($\beta = .10$, $p < .05$). As Figure 7 displays, the simple slope analysis showed that the negative relationship between emotional exhaustion and SCS was significant for those with low levels of remaining time ($\beta = -.20$, $p < .05$), while the relationship was not significant for those with high levels of remaining time ($\beta = .03$, $p > .05$). Because the interaction term between emotional exhaustion and remaining opportunities was only significant at the 10% level ($\beta = .07$, $p = .07$), we did not receive support for Hypothesis 4b.

Hypotheses 5 proposed that (a) remaining time and (b) remaining opportunities would moderate the first stage of the indirect (negative) relationship between disengagement and SCS through career insecurity, such that this relationship is stronger when remaining time and remaining opportunities are low. Remaining time did not moderate the relationship between disengagement and career insecurity ($\beta = .01$, $p > .05$), and remaining opportunities did not moderate the relationship between disengagement and career insecurity ($\beta = -.01$, $p > .05$). Hence, we found no support for moderated mediation (Hayes, 2017). Hypothesis 5 was therefore not supported. Hypothesis 6 predicted that (a) remaining time and (b) remaining opportunities would moderate the first stage of the indirect (negative) relationship between emotional exhaustion and SCS through career insecurity, such that this relationship is stronger when remaining time and remaining opportunities are low. Remaining time ($\beta = .03$, $p > .05$) and remaining opportunities ($\beta = -.01$, $p > .05$) did not moderate the relationship between emotional exhaustion and career insecurity. We thus found no support for Hypothesis 6.

Additional analysis

Reverse causal relations between the variables were examined because a reverse causal relationship between burnout and career insecurity could be plausible. For example, it could be that feeling insecure

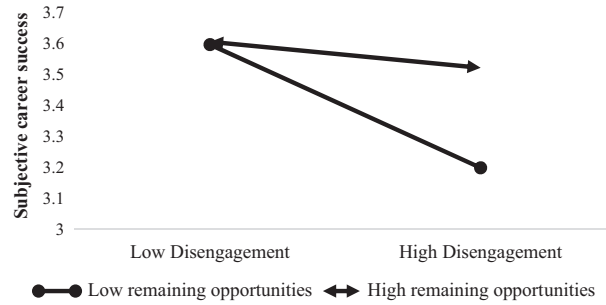

FIGURE 6 Interaction between disengagement, remaining opportunities, and subjective career success.

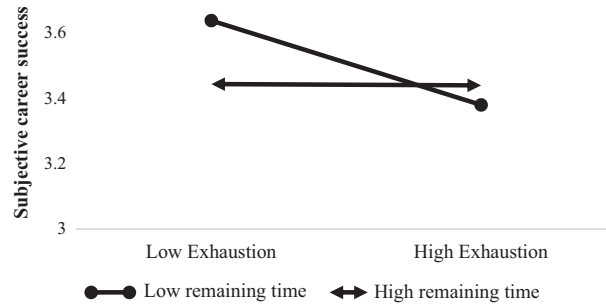

FIGURE 7 Interaction between emotional exhaustion, remaining time, and subjective career success.

about one's career might trigger burnout. In this case, career insecurity might be considered a stressor, which can eventually lead to the loss of resources and burnout. To test the possibility of such reverse causality, a cross-lagged analysis was conducted to examine the relationship between burnout and career insecurity, controlling for autoregressive relationships. The results from the analysis demonstrated a better fit when burnout was the independent variable. The cross-lagged path from career insecurity at T1 to disengagement at T2 was not significant (.04, $p = .28$), (χ^2 (1) = 2.512, $p = .11$, RMSEA = .55, CFI = .99, TLF = .98. AIC = 3728.77, BIC = 3783.30). The path from disengagement T1 to career insecurity T2 was also not significant (.08, $p = .09$), ($\chi^2(1) = .729$ (1), $p = .39$, RMSEA = .00, CFI = 1.00, TLF = .1.00, AIC = 3726.93, BIC = 3781.52). Although the causal path from disengagement at T1 to career insecurity at T2 was not significant when controlling for autoregressive relations, the model had a better fit compared to the reverse causal model (career insecurity as an independent variable).

The cross-lagged path from career insecurity at T1 to emotional exhaustion at T2 was not significant (.05, $p = .13$), ($\chi^2(1) = 12.44$, $p = .00$, RMSEA = .15, CFI = .97, TLF = .88. AIC = 3560.87, BIC = 3615.45). In contrast, the cross-lagged path from emotional exhaustion at T1 to career insecurity at T2 was significant (.151, $p = .00$), ($\chi^2(1) = 1.28$, $p = .02$, RMSEA = .24, CFI = .99, TLF = .99, AIC = 3549.71, BIC = 3604.29). Overall, these patterns of results partially support the causal model between burnout and career insecurity, while no support is found for the reverse causal model (career insecurity as the independent variable).

We performed a psychometric evaluation of the single- and two-factor solution of burnout using CFA with data at T1. Our CFA results provide compelling evidence in favour of the two-dimensional structure. First, the two-factor model demonstrated a substantially better fit to the data compared to the one-factor model. The CFI value for the two-factor model was .89, which, while slightly below the commonly accepted threshold of .95, was markedly better than the CFI of .69 for the one-factor model. The SRMR and the RMSEA values for the two-factor model were .070 and .093, respectively. These

values, although at the higher end, are closer to the acceptable thresholds than the corresponding values from the one-factor model (SRMR = .108, RMSEA = .150). Additionally, the BIC was lower for the two-factor model (18278) compared to the one-factor model (18606), suggesting that the two-factor model offers a more parsimonious representation of the data.

Beyond the model fit metrics, the distinction between exhaustion and disengagement was further substantiated by examining the relationship between the two latent factors. The squared correlation between the latent factors was .31. This value was notably less than the average variance extracted (AVE) for both disengagement (.47) and exhaustion (.39). The AVE represents the amount of variance captured by a construct in relation to the variance due to measurement error. When the AVE of each construct is greater than the squared correlation between them, it indicates that each construct is more strongly related to its indicators than to the other construct, further suggesting that they are distinct. In light of these findings, we argue that exhaustion and disengagement are distinct yet related dimensions of burnout. While they share a common thread as components of burnout, they also possess unique characteristics that warrant their separate consideration in both research and practice. Future work should consider the different antecedents and outcomes associated with each of these dimensions and explore interventions tailored to address each facet specifically.

Because personal resources may either function as mediators or moderators between stressors and work outcomes (Jang et al., 2020; Xanthopoulou et al., 2007), we tested a model where OFTP was a mediator. Remaining opportunities did not significantly mediate the relationship between emotional exhaustion and SCS ($\beta = -.01$, $p = .139$), or the relationship between disengagement and SCS ($\beta = -.01$, $p = .518$). Furthermore, remaining time did not mediate the relationship between emotional exhaustion and SCS ($\beta = -.01$, $p = .203$) or the relationship between disengagement and SCS ($\beta = -.01$, $p = .219$). Therefore, there is no support for OFTP as a mediator between burnout and SCS. Additionally, we tested a model where OFTP was the independent variable. For remaining opportunities, we found no evidence of a main effect on career insecurity ($\beta = .04$, $p = .29$). However, a significant effect was found of remaining time on career insecurity ($\beta = .09$, $p = .01$). Overall, there is more support for OFTP as a moderator rather than a mediator or an independent variable in the context of our study.

Our hypotheses of moderated mediation were not supported. However, it is plausible that OFTP moderates the long-term impact of burnout 9 months later (i.e., moderates the second stage of the mediation) rather than immediately. We therefore tested whether OFTP moderates the relationship between career insecurity and SCS. Remaining time did not moderate the relationship between career insecurity and SCS ($\beta = .01$, $p > .05$), and remaining opportunities did not moderate the relationship between career insecurity and SCS ($\beta = .01$, $p > .05$). Hence, there is no support for moderated mediation in the second stage of the mediation. Finally, because we had career insecurity at both T1 and T2, we conducted an additional mediation analysis with career insecurity at T2 as the mediator. The indirect effect of career insecurity T2 between disengagement and SCS ($\beta = -.11$, bootstrapSE = .03, 95% bootstrapCI = [−.17, −.07]), and between emotional exhaustion and SCS ($\beta = -.15$, bootstrapSE = .05, 95% bootstrapCI = [−.12, −.08.]) was significant.

DISCUSSION

Theoretical implications

The purpose of the present study was to investigate the role of burnout as an obstacle to the subjective evaluation of career success. To our knowledge, this was the first study to apply a cross-lagged design to examine the relationship between burnout and SCS over time. Based on COR theory, burnout was predicted to reduce an individual's ability to obtain personally meaningful career outcomes through career insecurity. In line with our theorizing, the findings demonstrated that disengagement had a negative cross-lagged relationship with SCS. Accordingly, when individuals experience distance from their work and have negative attitudes towards their work because of prolonged stress (disengagement), their

subjective evaluation of career success is reduced. We also found support for the reverse causal path, indicating that the nature of the relationship is reciprocal. Such findings align well with the loss cycles proposed by COR theory (Hobfoll & Freedy, 2017). Loss cycles refer to the process by which individuals who lack resources (e.g., experience disengagement) are more likely to experience increased resource loss as demands grow (Schaufeli et al., 2009; ten Brummelhuis et al., 2011). For example, the resource draining process related to disengagement (Wright & Hobfoll, 2004) induces cycles of resource loss (ten Brummelhuis et al., 2011) and decreases an individual's ability and motivation to work on achieving their personal career goals. This state of experiencing a lack of resources and more negative SCS may, in turn, accelerate disengagement even further.

Despite the expectation that emotional exhaustion would reduce subjective SCS over time, the results from the cross-lagged analysis did not support these predictions. Our findings indicated that in the context of career success, being disengaged from one's work reduces an individual's ability to perceive career success over time, however, emotional exhaustion does not reduce the ability to perceive career success over time.

One possible explanation for this finding is that disengagement involves work withdrawal and exit seeking behaviour (Travis et al., 2016). Such withdrawal behaviour may include a lack of engagement with or effort in work tasks and avoiding developmental activities important for career success. Indeed, withdrawal behaviour has been found to be important for career advancement (Carmeli et al., 2007). Longitudinal studies have also demonstrated that emotional exhaustion is a precursor of disengagement (Taris et al., 2005). For example, Rogala et al. (2016) found that emotional exhaustion predicted disengagement over time through the loss of personal resources. It may therefore take longer for emotional exhaustion to induce loss of resources and negatively impact SCS. The relationship between emotional exhaustion and SCS may also be more complex, depending on individual differences and contextual factors, as our findings indicate.

As hypothesized, the findings showed that career insecurity mediated the negative cross-lagged relationship between both dimensions of burnout and SCS. These results imply that when individuals feel emotionally drained and disengaged from their work, they experience feelings of helplessness and a negative outlook regarding the achievement of career goals now and in the future. In turn, individuals who experience such insecurity about their career may be less able to develop the appropriate strategies and personal resources necessary for succeeding in their careers (Colakoglu, 2011). Although a few studies have examined the relationship between burnout and SCS (e.g., Barthauer et al., 2020; Busis et al., 2017; Keeton et al., 2007), the current study extends this research by introducing career insecurity as an explanatory mechanism to further our understanding of how burnout may decrease SCS over time.

The findings from the current study advance prior research based on COR theory by demonstrating the importance of perceptions of remaining time and remaining opportunities in the context of burnout and SCS (Hobfoll et al., 2018; Spurk et al., 2019). In alignment with COR theory, OFTP was proposed as a personal resource that facilitates an individual's ability to cope with obstacles in their career and buffers the negative relationship between burnout and subjective evaluation of career success. The results partially supported these predictions. We found that disengagement was more negatively related to SCS among individuals who perceived they had few opportunities awaiting in their occupational future. This implies that these individuals were less able to cope with the resource loss resulting from the withdrawal behaviour associated with disengagement (Ho & Yeung, 2016). Remaining time, however, did not significantly moderate the relationship between disengagement and SCS. One reason that this was observed only for the remaining opportunities subdimension is that disengagement involves a motivational process, while emotional exhaustion involves a health process (Collie et al., 2018), and perceptions of remaining opportunities might be more important to cope with the disengagement dimension of burnout. Zacher and Frese (2009) found that age was less strongly related to remaining opportunities than to remaining time, which our findings also supported. This dimension of OFTP is therefore also influenced by other factors than age, such as contextual and individual resources. Individuals who perceive few opportunities left in their occupational life may thus have fewer resources to cope with the motivational hurdles related to disengagement. Future studies should therefore examine how contextual

resources, such as perceived organizational and supervisor support (Eisenberger et al., 2002), influence remaining opportunities.

The findings of our study revealed that emotional exhaustion was more strongly negatively related to SCS for individuals with more constrained perceptions of time left in their occupational future. This indicates that feeling emotionally drained and weary is a stronger career hurdle for those individuals. Although the SST posits that a limited time horizon motivates older individuals to maximize emotional wellbeing (Carstensen et al., 2003), recent research has found that a constrained time perspective is related to more maladaptive emotional responses, such as preoccupation with negative events, increased depressive symptoms, and lower levels of positive affect (e.g., Grühn et al., 2016; Strough et al., 2016). Grühn et al. (2016) argued that a limited future time perspective is related to health impairments. Accordingly, lower health among individuals with a limited OFTP might explain why they are more negatively impacted by emotional exhaustion in relation to their SCS.

Although OFTP moderated the direct relationship between burnout and SCS, we did not find support for OFTP as a moderator for the indirect relationship through career insecurity. This might be because there are other explanatory mechanisms for the negative relationship between burnout and SCS which may relate more strongly to lifespan development. For example, burnout could negatively relate to SCS through reduced proactive career behaviour (Smale et al., 2019), where individuals may engage less in career planning and skill development due to the resource draining process of burnout (Bakker et al., 2022). Indeed, lifespan developmental theories suggest that age-related changes in gains and losses throughout the lifespan can initiate proactive career behaviour (Kooij, 2015). The identification of moderated mediation effects also requires more statistical power than direct moderation effects (Hayes, 2017).

Practical implications

The findings of the study indicate the importance of the OFTP as a personal resource that facilitates an employee's ability to cope with burnout in relation to their ability to obtain personally meaningful career outcomes. Such findings are important given the increasingly ageing workforce and the need to improve older employees' working life (Zacher et al., 2018). Research shows that older individuals are more likely to have a constrained OFTP (Zacher & Frese, 2009), which indicates that experiencing burnout later in one's career has severe consequences because the time and opportunities to take action to restore SCS are more limited.

First, organizations can positively influence employees' perceptions of OFTP through human resource (HR) practices. Research shows that HR practices can influence the future time perspective because they provide individuals with socioemotional resources such as status, information and affiliation (Korff et al., 2017). Also, through their HR practices, organizations may strengthen perceptions of remaining opportunities by providing training, opportunities for promotion, and performance appraisal for employees. Research shows that older employees experience a lack of developmental opportunities at work (Maurer et al., 2003), which may affect their perception of remaining opportunities. It is therefore important that HR practices not only target younger and middle-aged employees, but also older employees. Oliveira (2021) found that age inclusive HR practices—that is, HR practices available to employees irrespective of their age—facilitated perceptions of remaining time and remaining opportunities.

Second, organizations can promote OFTP by influencing employees' mindset about ageing. Weiss et al. (2022) found that individuals who believed that ageing was a fixed rather than a modifiable process had more constrained OFTP. Furthermore, in their experimental study, the results demonstrated that a relatively simple intervention (i.e., manipulating essential beliefs about ageing using a newspaper article) can change such a mindset. Therefore, organizations should focus on fostering the view that ageing is a modifiable process rather than set in stone. Organizations can highlight the benefits of remaining in employment longer, such as having social contact with colleagues and staying active, and emphasize the value of older employees' contribution.

Finally, research shows that job autonomy positively relates to OFTP (Rudolph et al., 2018). Accordingly, leaders and organizations should take actions to promote job autonomy, such as encouraging self-initiation and acknowledging employees' perspective (Slemp et al., 2018).

Limitations and future research directions

Despite the significance of the findings, the study has several limitations that need to be addressed. First, the data were collected from a convenience sample of individuals within various occupations. Although this may facilitate the generalizability of the findings, it limits the contextual understanding of the results. For example, research has shown that human service providers may be more likely to suffer from burnout (Johnson et al., 2005). Future research could thus examine the relationship between burnout and SCS in certain occupations (e.g., healthcare professionals) and in less educated workers. Another interesting avenue for future research could be to examine whether men and women are differentially affected by burnout in relation to their career development. Research has showed that women experience more burnout than men (Purvanova & Muros, 2010), and that middle-aged women are more at risk (Converso et al., 2019).

The data were collected through self-report measures, which raises concerns about common method bias. Common method bias can be minimized through the study design, however, such as including a time lag between the independent and the dependent variables (Podsakoff et al., 2003), which was applied in the current study. Because the constructs in the study are measured as self-perceptions, it would also not be appropriate to measure them from another source, such as from leaders. Additionally, we measured SCS using a unidimensional measure. Although career satisfaction is an important component of SCS, it is not sufficient to capture the multidimensional nature of SCS (Briscoe et al., 2021; Shockley et al., 2016). An interesting opportunity for future research is therefore to examine how disengagement and emotional exhaustion influence different components of SCS.

We did not examine any changes between T1 and T2 regarding factors that might have influenced SCS between the two waves, such as job and career changes, sick leave, or change of supervisor. For example, individuals high on burnout at T1 might be on sick leave at T2. However, the results from the attrition analysis showed that those who remained and those who dropped out showed no systematic differences in levels of burnout. In addition, we did not control for race or ethnicity, which might have impacted perceptions of SCS (Ng et al., 2005). We encourage future research to control for these aspects.

Although a cross-lagged analysis was conducted to examine the relationship between burnout and SCS, the mediation analysis was not cross-lagged. Ideally, a three-wave design should be implemented to estimate cross-lagged mediation relationships, and mediating relationships can only be tentatively investigated in a two-wave design (Selig & Little, 2012). A limitation of such a design is that the initial level of the mediator is not controlled for, which can lead to biased estimation (Cole & Maxwell, 2003). Moreover, the cross-lagged model has received criticism because it fails to account for certain person-level associations (Lucas, 2023). Future studies should therefore examine reciprocal relationships with at least three waves of data and apply more stringent analytical strategies, such as the latent change score model (Li et al., 2014) or the random-intercept cross-lagged models (Hamaker et al., 2015). The latent change score approach may be particularly relevant for research on lifespan development, since it is dynamic for analysing processes that unfold over time (Cáncer et al., 2021; Li et al., 2014). In addition, although the study provides insights into how individuals with different perceptions of OFTP respond to burnout, future research is needed to examine patterns of change throughout the whole working life to understand more fully the impact of burnout on SCS from a lifespan perspective.

CONCLUSION

In summary, the findings of the study provide partial support for the negative cross-lagged relationship between burnout and SCS. The results indicate that the relationship between disengagement and SCS is

reciprocal. Contrary to expectations, emotional exhaustion was not found to be significantly related to individuals' SCS over time. By adopting COR theory, the study extends the literature on career success by explaining the resource draining process of burnout in relation to SCS through career insecurity. The findings highlight the importance of OFTP as a resource to cope with career-related obstacles. In the context of SCS, perceiving one's occupational future as full of opportunities may reduce the resource draining process of disengagement, while open-ended occupational future time perceptions may help individuals to handle the negative impact of emotional exhaustion. Organizations and leaders could use these insights to promote an individual's perceptions of their remaining time and opportunities in employment so as to cope with the resource draining process associated with burnout for an individual's career development.

AUTHOR CONTRIBUTIONS

Bryndís D. Steindórsdóttir: Conceptualization; Data curation; Formal analysis; Methodology; Writing – original draft preparation. **Karin Sanders:** Writing – review and editing; supervision. **Morten Nordmo:** Formal analysis; writing – original draft preparation. **Anders Dysvik:** Writing – review and editing; supervision.

CONFLICT OF INTEREST STATEMENT

All authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that supports the findings of the study are available upon reasonable request.

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