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Successful return to work after burnout : an evaluation of job, person- and private-related burnout determinants as determinants of return-to-work quality after sick leave for burnout

**Reference:**

Rooman Claudia, Sterkens Philippe, Schelfhout Stijn, Van Royen Annelies, Baert Stijn, Deros Eva.- Successful return to work after burnout : an evaluation of job, person- and private-related burnout determinants as determinants of return-to-work quality after sick leave for burnout  
Disability and rehabilitation - ISSN 1464-5165 - Abingdon, Taylor & francis ltd, 44:23(2022), p. 7106-7115  
Full text (Publisher's DOI): <https://doi.org/10.1080/09638288.2021.1982025>  
To cite this reference: <https://hdl.handle.net/10067/1824730151162165141>

**Title:**

Successful return to work after burnout: An evaluation of job, person- and private-related burnout determinants as determinants of return-to-work quality after sick leave for burnout

**Running head:**

Successful return to work after burnout

**Abstract:**

**Purpose:** Burnout literature has primarily studied determinants and rehabilitation. Remarkably, ways to enable qualitative return to work after burnout are considered considerably less and were studied here. Specifically, building on the Job Demands-Resources model and Effort-Recovery model, this study investigated determinants of the quality of return to work.

**Material and Methods:** Hierarchical regression analyses were conducted to evaluate the quality of reintegration among 786 workers who were surveyed about their return to work after a burnout episode.

**Results:** Restarting work at a new employer and especially getting supervisor support appeared beneficial, whereas remaining burnout symptoms, stressors in one's private environment and –mostly– neuroticism hampered the quality of return to work.

**Conclusion:** Given the high prevalence and important costs burnout entails, primary prevention alone proves insufficient. Current study findings inform on how to optimize the quality of reintegration in the workplace after a burnout episode, demonstrating that supportive managers and inclusive workplaces (i.e., open to hire applicants with a burnout history) are important levers for qualitative return to work, next to ensuring workers are not (so much) impaired by their burnout rest symptoms.

**Keywords:**

health, occupational; burnout, psychological; return to work; rehabilitation; recovery, mental health

## **Introduction**

Burnout has become an important public health issue, for which some studies even reported prevalence rates up to 69% in certain occupation groups [1]. Rather than an illness, the World Health Organization (WHO) describes burnout as an “occupational phenomenon” [2, 3] characterized by a state of exhaustion, mental distance, and cognitive and emotional loss of control, leading to reduced professional activity [4] and absenteeism at work [5]. Typically, research on burnout tends to focus on its definition and constituent components (i.e., What is burnout? [1]) as well as determinants (i.e., What causes burnout? [6]). Recently, more attention went to interventions that might reduce burnout symptoms during rehabilitation as well [7]. However, factors that facilitate or hamper a qualitative return to work after burnout rehabilitation have been considered to a much lesser extent [8], which is remarkable given that the ultimate goal of many rehabilitation programs is to enable people to get back to work after a burnout episode [7]. As such, it remains largely unexplored how workplaces might affect qualitative return to work after a burnout episode and what the impact is of person- and private-related factors. Building on the Job Demands-Resources model (considering the role of workplaces [6]) and the Effort-Recovery model (considering the role of personal stressors [9, 10]), the goal of the present paper was to investigate factors that might affect the quality of return to work after rehabilitation from burnout.

### ***Quality of return to work after burnout***

Burnout can initiate sick leave that ultimately results in a return to work for the majority [11]. Return to work is described as a process in which workers return to the same or another work environment after a period of absence due to work disability (like burnout) [8]. Although return to work after work disability gained great attention [11], rehabilitation literature mostly considered work disability characteristics (like time-off [12]). The duration of sick leave is important to consider as long-term sick leave has important economic, social

and psychological consequences for individuals that are negative in nature (like reduced income, dismissal, social isolation and an aggravation of mental problems) which further endanger successful return to work [13, 14]. For instance, Hultin and colleagues [15] found that long-term sick leave increases the risk of disability pension and unemployment even when taking one's health status into account, indicating that long-during absence from work contributes to marginalization from the labor market. Moreover, it gets increasingly difficult to return to work after burnout the longer one is absent [20], especially when feeling unable to cope with work [16, 17].

Yet, the perceived quality of the return-to-work process should be considered as well to sustainably restore the worker's well-being at work after a burnout episode [18]. Still, how one perceives the quality of their work resumption after sick leave due to burnout has only been investigated to a limited extent. For the present study, 'quality of return to work' is defined as the subjective quality of the work resumption process that reintegrated workers with a burnout history experience. The focus is on one's own subjective experience, like whether one felt sufficiently recovered and could resume work easily or –to the contrary– felt difficulties with working.

Moreover, not only the perceived quality of return to work but also people's assumptions on what facilitates/inhibits the success of reintegration after burnout are scarcely considered. For instance, Ahola and colleagues [7] concluded that psychological counseling (like cognitive-behavioral therapy) may not facilitate burnout rehabilitation and –hence– successful return to work, but they remained silent on determinants that might do so.

The studies that did consider determinants of qualitative return to work after burnout are mainly a-theoretical in nature [19, 20]. This is remarkable as many determinants that trigger burnout may also affect return to work after burnout. For instance, Boštjančič and Koračin [19] identified a lack of supervisor support as an obstacle in return to work in line

with earlier studies that found supervisor support to be negatively associated with burnout [21]. To address this literature gap, the present study builds on the Job Demands-Resources model [6, 22, 23] and the Effort-Recovery model [9, 10] to explore and test possible determinants of the quality of return to work. The Job Demands-Resources model [6, 22] is one of the most cited models on burnout determinants and was, therefore, an important inspiration for our selection of determinants. According to this model, job resources (like supervisor support) launch a motivational process promoting engagement whereas job demands (like workload) instigate an exhaustion process decreasing engagement. Burnout is therefore considered as the result of an imbalance between job demands and job resources. Indeed, high job demands lead to exhaustion whereas low job resources may not compensate the energy-depleting effect of job demands anymore [22]. Hence, job resources like supervisor support may not only protect against burnout but also promote a qualitative return to work [19, 24]. The Effort-Recovery model [9, 10] states that workers need to recover after having invested time, energy and effort into work, which seems particularly relevant for those diagnosed with burnout [25]. Moreover, returning to work requires a hefty investment of effort and energy to reach work-related goals again, which may be exhausting for individuals recovering from burnout. Fatigue normally decreases after recovery but may evolve towards chronic health problems (i.e., prolonged fatigue, sleep deprivation) and jeopardize one's work performance when recovery is insufficient or inadequate. Therefore, recovery can prove crucial in both burnout prevention and quality of return to work after burnout [10].

### ***Determinants of the quality of return to work***

#### ***Burnout Severity***

Burnout symptom severity has mostly been studied as an outcome variable [22, 26]. However, burnout severity can also be expected to influence later career outcomes (i.e., quality of return to work) given that the recovery process from burnout is typically rather

slow [25]. Burnout symptoms can persist over years, even when workers get psychological support or treatment [19, 25]. Yet, Boštjančič and Koračin [19] reported a mean duration of sick leave for burnout of only two to three months, which implies that people may still experience burnout symptoms (e.g., exhaustion) when they return to work [27]. Still experiencing burnout symptoms when back at work may hamper both workers' psychological well-being and productivity [19, 28]. Boštjančič and Koračin [19] also found that ex-burnout patients who resume work often still experience psychological problems, and can therefore feel ineffective at work. The systematic literature review of Dewa and colleagues [28] can support this perception, stating that burnout symptoms are effectively associated with decreased productivity among physicians.

Continuing on the evidence described above, one's recovery may be directly and positively related to the quality of return to work. This assumption is in line with the idea of medical determinism, which was dominant in the early studies on return to work [8, 12]. However, previous studies mostly focused on predicting chances of return to work versus sick leave rather than the quality of return to work [29, 30]. For instance, Ekstedt and colleagues [29] found that fatigue reduction was positively associated with chances of returning to work. Fatigue reduction reflects recovery from burnout symptoms, as extreme fatigue is one of the core components of burnout [31]. Given the existing evidence on the importance of burnout symptom severity for both return to work and productivity [19, 28, 29], we also expected burnout symptom severity to influence the experienced quality of return to work after burnout:

Hypothesis 1: Burnout severity is negatively related to the quality of return to work after burnout.

#### *Work-related Factors and Return to Work*

Although previous findings support the importance of burnout rehabilitation in return

to work [19, 28], burnout symptom improvement may be necessary but insufficient for a qualitative return to work [32]. Following work resumption, the overall quality of return to work that one experiences could also depend on work-related factors [7, 32, 33], as many causes for burnout emergence are found to be situated in the workplace to begin with (Job Demands-Resources model [6, 22]). Specifically, as the demands-resources balance affects the required energy investment at work, one must avoid the energy-depleting combination of high demands and low resources. This is particularly crucial for people recovering from burnout as they might still experience some exhaustion when they return to work [19, 22, 25]. Additional job resources such as social support at work could therefore contribute to the quality of reintegration after burnout [34]. Below, we discuss two work-related factors that might facilitate qualitative return to work after burnout, namely external mobility and supervisor support.

First, return to work could run more smoothly in a new work environment. Return to work after changing employers (i.e., external mobility) might divert attention from one's burnout, enabling the worker to start over with a clean sheet. Many people who resume work after suffering from burnout may develop new work habits to minimize exhaustion [19]. For instance, they may lower job demands (e.g., amount and/or hours of work) to better monitor their demands-resources balance [6, 22]. Adopting and maintaining such habits might be easier when employers cannot compare one's work performance before and after burnout. Accordingly, Liljegren and Ekberg [35] found external mobility to be an important health-promoting factor among Swedish civil servants, associated with lower burnout levels, whereas internal mobility only had negligible effects. Therefore, we hypothesized the following:

Hypothesis 2a: External mobility (i.e., starting to work at another employer) is related to higher quality of return to work than returning to work at the same employer.

Second, research has shown that social support at work provides psychological energy and prevents depletion [22]. This finding is also supported by previous studies in which organizational support was negatively related to exhaustion [36] and burnout [23]. Social support at work can reduce occupational stress as it prevents daily stress from becoming chronic [37], and therefore inhibits burnout emergence. Secker and Membrey [38] further showed positive relations between supportive interpersonal relations at work and employee retention. Following Leader-Member Exchange Theory [39], the relationship with the supervisor is generally seen as the most important and/or frequent work-related relationship. Negrini and colleagues [40] also found that supervisors regularly implement various forms of support in order to enhance return to work after absence for depression. Because various studies showed support from supervisors to be negatively associated to burnout [21, 41], we expected that:

Hypothesis 2b: Supervisor support is positively related to the quality of return to work after burnout.

*Person- and private-related factors and return to work*

Aside from work-related factors, employees' personality and private situation might also affect successful reintegration [19, 42]. Personal factors already proved their importance in burnout emergence [43], but are –again– studied less in the context of rehabilitation and return to work. This is remarkable as according to the Effort-Recovery model [9, 10], personal experiences during off-job time may affect recovery [44] and thus also the quality of return to work [19, 42]. Therefore, as further explained below, we investigated the role of personality (i.e., optimism; neuroticism) and private stressors.

First, one's personality represents personal resources that affect how one experiences their job environment [45]. Optimism is of particular interest as Williams and colleagues [46] identified optimism as part of a 'positive personality' and overall determinant of

personal well-being (i.e., happiness, positive affect and life satisfaction). Indeed, optimists appear more resistant to burnout [47] and also seem to experience a better rehabilitation afterwards [19, 48]. We therefore argue optimism can also enhance the quality of return to work after burnout. As a negative counterpart, neuroticism seems of particular interest. Neurotic individuals are characterized as being unstable and easily affected by what happens around them, which can make these people temperamental or cause feelings of sadness and worry [49]. A neurotic person would typically experience the world as threatening or beyond their own control [50]. In general, individuals high on neuroticism tend to experience higher burnout levels [26], whereas their emotionally stable counterparts tend to be happier altogether [49, 51]. Moreover, Ghorpade and colleagues [49] found that emotional stability is negatively related to the core burnout components of exhaustion, depersonalization, and diminished personal accomplishment. These results indicate that neurotic individuals are more prone to suffering from burnout. Taken together, we thus made the following hypothesis:

Hypothesis 3a: Optimism is positively related and neuroticism is negatively related to the quality of return to work after burnout.

Finally, also one's private life may be important to enable recovery during off-job time in order to prevent burnout and possibly to enable better return to work after burnout [10, 52]. Multiple studies already found, in line with this assumption, that a lack of family support is associated with higher levels of burnout [21, 41]. Yet, one's private situation may not only provide (too little) support but can also contain additional stressors, for instance when impactful changes happen (e.g., divorce or sickness of a family member). Private stressors could hamper recovery during off-job time [10], and might therefore hinder a qualitative return to work after burnout [53]. So far, only a few qualitative studies considered the private environment in return to work after burnout [19]. Boštjančič and Koračin [19],

however, did so and found that over one third of the participants mentioned that their non-work social environment (i.e., family, friends, and wider social network) contributed to their burnout rehabilitation and return to work. Because these studies indicate that the quality of return to work may also depend on one's entourage outside of work, we hypothesized that:

Hypothesis 3b: Private stressors are negatively related to the quality of return to work after burnout.

## **Method**

### ***Sample and procedure***

Data were collected in April 2019 in a Western-European country. For recruitment purposes, we launched a large-scale call in a well-known, nation-wide newspaper to which 1153 individuals with an official diagnosis of burnout by a physician or psychologist in the past reacted. Only those who had already returned to work ( $N = 818$ ) were eligible for inclusion. There were no other specific exclusion criteria applicable.

After listwise deletion, the final sample consisted of  $N = 786$  people, of which 411 had a rather low quality of return to work (i.e., below the mean) and 375 had a rather good quality of return to work (i.e., above the mean). 79.8% of these participants reintegrated in the past five years (April 2014-April 2019), while 27.7% reintegrated the last year (April 2018-April 2019). On average, participants were back at work for three and a half years ( $M = 42.50$  months,  $SD = 52.31$ ) with a median of 27 months. The median duration of sick leave for burnout was six months ( $M = 7.53$ ,  $SD = 8.41$ ). The mean age was 43.24 years, with 66.4% women, 97.8% ethnic majorities, 68.4% living together with a partner, and 53.3% having children living at home. The majority was highly educated (37.6% bachelor; 49.5% master or higher degree). The sample of 786 allowed for rather small effects ( $f^2 = .05$ ) to be detected with 99.3% Power with  $\alpha = .05$ . Participants provided informed consent and then self-reported on their quality of return to work after burnout and several determinants through

an electronic survey.

### *Measurement instruments*

Unless noted otherwise, items were scored on Likert-type scales ranging from 1 (completely disagree) to 5 or 11 (completely agree) (see table 1). Quality of return to work was assessed with four items, adapted from the Questionnaire Return to Work [53]. Example items are “After my burnout I could resume work quite easily” and “After my burnout I had difficulty with working” (recoded item). The scale was marked by a Cronbach’s  $\alpha$  of .82 (see table 1). Burnout severity was measured with three items based on the ‘Complaints Interference’ scale of the Questionnaire Return to Work [53]. Example items are “I suffered a lot from my burnout complaints” and “I was severely hampered in my daily functioning by my burnout complaints”. Internal consistency was Cronbach’s  $\alpha = .85$ .

External mobility was measured with a single-item measure with three options (1 = Return to work at the same employer; 2 = Return to work at a new employer; 3 = Self-employed during burnout emergence). Supervisor support was measured with three items from the ‘Low job satisfaction’ scale of the Questionnaire Return to Work [53]. Example items are “During return to work, my supervisor showed understanding for my situation” and “During return to work, I felt appreciated by my supervisor”. Cronbach’s  $\alpha$  was .92.

Optimism was measured with four items from the Life Orientation Test-Revised (LOT-R) [54]. An example item is “In general, I expect more good things to happen to me than bad things” (Cronbach’s  $\alpha = .79$ ). Neuroticism was adapted from the International Personality Item Pool (IPIP) [55] and also measured with four items. An exemplary item is “I regularly have mood swings” (Cronbach’s  $\alpha = .74$ ). Private Stressors were measured with the ‘Stressful Home Situation’ scale of the Questionnaire Return to Work [53], which consisted of seven items. Example items are “During return to work, I

have had a lot of personal setbacks” and “During return to work, problems at home swallowed me up completely” (Cronbach’s  $\alpha = .85$ ).

Furthermore, for a more in-depth interpretation of answers, we also asked respondents to mention the most important factor(s) that complicated their reintegration with one open-ended question (i.e., Which was (were) the most important factor(s) that complicated your reintegration, meaning how well and easily you could resume work after your absence related to burnout?”).

Finally, socio-demographic variables were assessed using single-item measures: sex (1 = Men, 2 = Women), age (i.e., continuous, in years), relationship status (1 = Relationship without cohabitation; 2 = Relationship with cohabitation; 3 = Single), children living at home (1 = No, 2 = Yes), level of education (1 = Secondary or lower; 2 = Higher education), and ethnic-cultural group (1 = Ethnic minority, 2 = Ethnic majority, being Caucasian/White). Moreover, in line with Kant and colleagues [56], we also measured the duration of return to work (i.e., the number of months one is working again) and the duration of burnout-related absence prior to return to work (i.e., the numbers of months one was on sick leave due to burnout).

### ***Analyses***

To check the factorial structure of scales and general stability of the joint scales, we first conducted Confirmatory Factor Analysis (CFA) in R using lavaan v. 0.6-4 [57]. Subsequently, we investigated descriptives, internal consistencies, and correlations of the study variables using SPSS Statistics v26 followed by a series of one-way ANOVA. Finally, a series of hierarchical regression analyses were conducted to test Hypotheses 1-3.

### **Results**

Before the main analyses (i.e., hypothesis testing), a series of preliminary analyses were conducted to evaluate the overall structure and quality of the data.

### *Preliminary analyses*

First, CFA using the Maximum Likelihood estimation method indicated acceptable fit for a six-factorial model, with each factor representing one of the six scales (CFI = .936, TLI = .926, RMSEA = .052; SRMR = .051; see table 1 for factor loadings per scale) [*Table 1 near here*].

All significant correlations were as expected (see table 2). For instance, both burnout severity ( $r = -.17$ ) and private stressors ( $r = -.22$ ) correlated negatively with the quality of return to work, whereas supervisor support correlated positively with the quality of return to work ( $r = .26$ ). Age, duration of burnout-related absence and duration of return to work were not significantly related to the quality of return to work. A series of one-way ANOVA's showed no significant differences in successful return to work for sex,  $F(1, 784) = 2.71, p = .100$ , children at home,  $F(1, 784) = 2.40, p = .122$ , level of education,  $F(1, 784) = 1.25, p = .264$ , relationship status:  $F(2, 783) = .60, p = .547$ , and ethnic-cultural group,  $F(1, 784) = .05, p = .831$  either. Therefore, and following suggestions of Bernerth and Aguinis [58], it was not required to control for these background characteristics in our main analyses [*Table 2 near here*].

### *Hypothesis testing*

This section reports on the final results of the last step of the hierarchical regression analyses (Step 3b). The results of the previous steps can be found in detail in table 3. In support of Hypothesis 1, burnout severity related negatively to the quality of return to work (Step 3b:  $\beta = -.16, p \leq .001$ ). Regarding the work-related determinants, in support of Hypothesis 2a, external mobility (i.e., starting to work at a new employer) proved its importance for the quality of return to work (Step 3b:  $\beta = .13, p \leq .001$ ). Next, supporting Hypothesis 2b, supervisor support explained additional variance in the quality of return to work (Step 3b:  $\beta = .24, p \leq .001$ ). Next, personality factors further improved the model

above and beyond burnout severity and work-related variables. Yet, this improvement was not affected by optimism ( $\beta = .03, p = .774$ ) but by neuroticism ( $\beta = -.20, p \leq .001$ ) only. Therefore, Hypothesis 3a was only partially supported. Optimism was positively related to the quality of return to work though ( $r = .20$ ). However, optimism and neuroticism were highly negatively correlated ( $r = -.58$ ), and had largely shared explained variance, like in Sharpe and colleagues [59], which made optimism appear important only until neuroticism was taken into account. Finally, in support of Hypothesis 3b, private stressors were negatively related to the quality of return to work (Step 3b:  $\beta = -.12, p = .001; \Delta R^2 = .013$ ) [*Table 3 near here*].

## **Discussion**

Despite growing attention for burnout, reintegration has been considered but little. This study evaluated possible determinants of qualitative return to work from a threefold perspective, integrating work-related determinants (inspired by the Job Demands-Resources model [6]) with person- and private-related determinants (personality [55] and private stressors, inspired by the Effort-Recovery model [9, 10]). One's burnout history, work-related situation, personality and private environment [10, 19, 26] all affected the perceived quality of return to work after burnout.

## ***Main findings***

First and in line with Boštjančič and Koračin [19], remaining burnout severity appeared a hampering factor in line with the tradition of medical determinism. It could be relevant to further consider whether the hampering effect of remaining burnout severity applies more to certain categories of ex-burnout patients, e.g., who started to resume work only recently and often still have more severe remaining symptoms [14].

Next, restarting work at a new employer was a promoting factor. Mobility may help workers to start all over, and learn healthier work habits as new employers cannot

compare work performances before and after burnout [19]. Also, ex-burnout patients may consciously seek employers who offer a better demands-resources balance [22, 23]. Further, the effect might have been explained by different negative feelings ex-burnout patients experienced against their former employer (i.e., guilt towards colleagues, feeling unable to resume the same work, fear and/or expectations of rising workload combined with feelings of reduced productivity, and fear of relapse into burnout).

Supervisor support appeared to be the strongest determinant in our model (6.4% additional variance explained; see table 3), consistent with LMX-literature stressing the importance of the supervisor in supporting employees who resume work after burnout [39]. Our finding also adds to Halbesleben [36] who found that social support can protect against burnout. Supervisor support can create a gain spiral by facilitating goal attainment which, in return, may lead to the satisfaction of basic psychological needs (e.g., need for competence [21]), hence enabling more well-being [22].

Furthermore, neuroticism was another hampering factor, is in line with previous studies stating the importance of personality in burnout emergence [49] and rehabilitation from burnout [48]. An explanation may be that neuroticism markers are highly aligned with primary burnout symptoms [26], which hamper successful return to work after burnout. Moreover, high neuroticism colors one's perception and memory with a focus on negative situational aspects, which also jeopardizes successful reintegration [26].

Finally, private stressors were negatively related to the quality of return to work after burnout, which corroborates with recent studies that found negative occurrences at home hamper recovery and decrease energy resources [10, 53]. Return to work can already be exhausting on its own. Therefore, the absence of stressors in private life might be important to facilitate reintegration at work [10, 19, 27]. Moreover, additional support at home might be helpful, especially for workers who lack meaningful social interactions at work (e.g., lack

of supervisor support) [10].

### ***Strengths, limitations, and research opportunities***

Studies on workplace reintegration after burnout are scarce, especially in comparison to the abundance of literature on burnout determinants [1]. The present study aimed to fill this void. This study aimed to shed light on how both work- and non-work factors contribute to qualitative return to work after burnout. The high prevalence of burnout today induces significant costs on individuals, employers, the government, and healthcare system [1, 4], which could be importantly reduced through a better understanding of successful return to work after burnout. Hence, studying ex-burnout patients who returned to work is a second and related strength in contrast to most earlier studies that focused on workers at risk of burnout or on sick leave for burnout [10, 22]. Furthermore, those previous studies that considered return to work after burnout were rather a-theoretical in nature and qualitatively described return to work-practices [19, 27]. We add to this literature by building on clear theoretical foundations, as expressed by the Job Demands-Resources model [6, 23] and the Effort-Recovery model [9, 10], to investigate several work-, person- and private-related determinants of a qualitative return to work after burnout, using a conceptually-based approach like Stetler and colleagues [60]. The latter allows to specify research-based guidelines which are highly sought after and essential to improve chances of success in reintegration after burnout [24].

However, as with any study, some limitations need to be acknowledged. We investigated ex-burnout patients' subjective experiences on reintegration, which was largely overlooked up until now. Subjective experiences might be criticized but are exactly what makes up one's momentary mindset and mental health and hence important to consider. Future research could, nevertheless, go one step further and also consider the more dynamic and longitudinal interplay of several determinants of a qualitative return to work as qualitative

return to work might also set in motion a gain spiral, like resources do [22], that could promote several well-being enhancing factors. For instance, a high quality of return to work could also stimulate one to seek, perceive and/or generate more supervisor support [22].

Second, a large group of ex-burnout patients was reached through convenience sampling, which has typically been criticized in the literature. Yet, external validity depends on the particular research topic, characteristics of the sample, characteristics of the setting, and research procedures [61]. Stratified random sampling would have seemed more ideal, but would have led to large-scale exclusion as the majority of the general population did not suffer burnout [62]. Additionally, the gender distribution of our burnout sample (66% women) is similar to the gender distribution in the population and is therefore representative for the particular target group [63].

Note that only respondents with a diagnosis of burnout in the past, made by a (general or occupational) physician or psychologist, could participate in our study. To recruit ex-burnout patients, further research might also consider approaching healthcare workers in a more direct way, using more sophisticated sampling methods. The latter could also help to explicit the criteria health professionals used to diagnose burnout.

### ***Practical relevance and implications***

Study results suggest that employers carry a considerable responsibility to create –to the extent possible– an inclusive workplace that helps ex-burnout patients to tackle the barriers they might face at work and especially during return to work. The decision of return to work should rely on an integrated risk assessment based on workers' medical/psychological state (i.e., through a reliable and valid assessment of burnout symptoms [24]), their personality, their private situation, and their perception of work-related aspects (like supervisor support [19, 21, 40]) to optimize return to work after burnout.

At the same time, many workers resume work prior to being fully symptom-free [19]

because there are also hazards in waiting for full recovery prior to return to work. First, awaiting full recovery increases sick leave duration which has several negative consequences (e.g., social isolation) [13–15]. Second, work anxiety is a common issue among people absent for mental health problems, like burnout [17]. Stepwise exposure through return to work can diminish work anxiety whereas long-term absence may reinforce avoidance behavior and aggravate job-related anxiety [16]. Rehabilitation professionals should therefore ensure clients prepare return to work early, i.e. in parallel to recovery from burnout. Thus, clients are not (so much) impaired in quality of return to work by their burnout rest symptoms, but they also return timely and do not increase work-anxiety and avoidance [16, 17].

In the same vein, and although restarting at a new employer appeared beneficial, there is no need to discourage people from returning to work at their current employer. The reasoning behind this is twofold. First, similar problems may reoccur in a new workplace when non-work factors (i.e., private stressors, neuroticism) still hamper successful return to work. Second, changing employers might be complicated because of the stigma/taboo around burnout which could lead to hiring discrimination in some cases [64]. To conclude, rehabilitation professionals should support return to work to an existing workplace in the first place. They should propose reorientation towards a new employer only in case of irreversible work ability problems at the existing workplace.

Advice from an employment agent or external psychosocial prevention advisor could be helpful in order to return to and remain at work after burnout [11], as the consequences of long-term work disability (e.g., social isolation, reduced income, dismissal and aggravated mental health problems) can further complicate return to work [13]. Moreover, mental health problems, like burnout, are often accompanied by problems in other life domains (such as relationship problems) [14, 27], which need to be addressed too.

Next, the importance of supervisor support demonstrated that supervisors need to

show empathy, concern and fairness towards returning workers [65]. Specific training for supervisors could be valuable to develop the required competencies [40], such as knowledge of procedures (e.g., confidentiality), effective communication, and taking into account the workers' personal situation while monitoring their return to work plan (e.g., considering one's burnout history when delineating workload) [65, 66].

A final and interesting finding was that neuroticism also hampered the quality of return to work. The malleability of neuroticism is somewhat limited [67], but coaching might facilitate return to work after burnout for those high on neuroticism. Indeed, Gazelle and colleagues [68] suggested that coaching may be promising to tackle burnout. Coaching teaches strategies to improve professional functioning and enhance feelings of competence [68, 69], which might be beneficial for ex-burnout patients who often feel ineffective at work [19] due to their burnout-induced productivity drop [25]. Highly neurotic individuals are, on top of that, predisposed to focus on negative situational aspects –like their lower productivity– and could therefore experience a lower quality of return to work [26]. Finally, 'intrapreneurial self-capital' (i.e., containing dimensions of core self-evaluation, self-efficacy, and resilience) [70, 71] may mediate the relationship between neuroticism and flourishing at work [72] following work resumption. Coaching could act upon this 'intrapreneurial self-capital', as some of its aspects (e.g., self-efficacy) already appeared important in return to work [62, 73].

## **Conclusions**

Remaining burnout severity, neuroticism, and private stressors hampered qualitative return to work after burnout whereas external mobility and supervisor support could promote it. Among the strongest determinants were neuroticism and supervisor support. Given the high prevalence of burnout, rehabilitation and conditions to support return to work after a burnout episode seem as important as prevention. Still, reintegration and what promotes

successful work resumption remain largely unexplored. With our study, we are among the first who considered this important area of research and in doing so, we hope to inspire further research on determinants of successful return to work after burnout. In the end, prevention of burnout relapse can sharpen insights on potential pathogenic factors in the work environment and, in this way, also contribute to successful burnout prevention [24].

**Acknowledgement**

The authors like to thank Eline Moens for having facilitated the data collection.

**Declaration of Interest**

The authors have no conflicts of interest to declare.

**Data Availability Statement**

The anonymized data are stored in an online data repository. Access to the data can be given upon request.

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Table 1.

Overview of scales with summarized factor loadings based on Confirmatory Factor Analysis.

<i>Variable</i>	<i>Minimum Loading</i>	<i>Maximum Loading</i>	<i>Average Loading</i>	<i>Scale</i>
Quality of return to work	.58	-.87	.73	1-11
Burnout severity	.72	.93	.81	1-11
Supervisor support	.84	.92	.89	1-11
Optimism	.60	-.78	.74	1-5
Neuroticism	-.61	.69	.65	1-5
Private stressors	.41	.84	.67	1-11

*Note.* Average loadings are calculated based on factor loadings regardless of their direction (- vs. +). Scale = scale range (with 1 being the lowest value and 5 or 11 being the highest value).

Table 2.

Means, Standard Deviations, and Correlations among Study Variables.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Quality of return to work	23.43	8.47	(.82)	-	-	-	-	-
2. Duration of return to work	42.50	52.31	.03	--	-	-	-	-
3. Duration of absence	7.53	8.41	-.04	.01	--	-	-	-
4. Burnout severity	28.59	3.88	-.17**	.10*	.27**	(.85)	-	-
5. Supervisor support	18.11	9.38	.26**	-.07*	.10**	.03	(.92)	-
6. Optimism	26.18	3.50	.20**	.03	.07*	-.01	.08*	(.79)
7. Neuroticism	24.32	3.42	-.27**	-.14**	-.06	.03	-.05	-.58**
8. Private stressors	32.88	16.58	-.22**	-.01	.08*	.11**	-.05	-.25**
9. Age	43.24	9.69	.03	.43**	.16**	.11**	-.04	.13**
10. Sex <sup>a</sup>	--	--	-.06	-.07	.06	.01	-.02	.08*
11. Children at home <sup>b</sup>	--	--	.06	-.02	.01	-.04	.01	.12**
12. Level of education <sup>c</sup>	--	--	.04	.03	-.05	-.06	.05	.07*
13. Ethnic-cultural group <sup>d</sup>	--	--	.01	.06	.03	-.02	.02	-.06
14. Relationship status <sup>e</sup>	--	--	-.03	-.02	.03	.05	-.03	-.07
15. Employer <sup>f</sup>	--	--	.14**	.05	.12**	.05	.07	-.06

Table 2 (continued).

Means, Standard Deviations, and Correlations among Study Variables.

	7	8	9	10	11	12	13	14
1. Quality of return to work	-	-	-	-	-	-	-	-
2. Duration of return to work	-	-	-	-	-	-	-	-
3. Duration of absence	-	-	-	-	-	-	-	-
4. Burnout severity	-	-	-	-	-	-	-	-
5. Supervisor support	-	-	-	-	-	-	-	-
6. Optimism	-	-	-	-	-	-	-	-
7. Neuroticism	(.74)	-	-	-	-	-	-	-
8. Private stressors	.27**	(.85)	-	-	-	-	-	-
9. Age	-.27**	-.03	--	-	-	-	-	-
10. Sex <sup>a</sup>	.03	.02	-.19**	--	-	-	-	-
11. Children at home <sup>b</sup>	.01	.02	.02	.04	--	-	-	-
12. Level of education <sup>c</sup>	-.07*	-.13**	-.06	.11**	.01	--	-	-
13. Ethnic-cultural group <sup>d</sup>	.05	-.05	.05	-.09*	.01	-.03	--	-
14. Relationship status <sup>e</sup>	.00	.08*	.02	.06	-.12**	-.02	-.01	--
15. Employer <sup>f</sup>	.00	-.04	-.12**	.09*	-.06	-.03	.02	.01

*Note.*  $N = 786$ .  $*p \leq .05$ ;  $**p \leq .01$ . Internal consistencies are between parentheses. Continuous variables (nr. 1-9) are correlated to dichotomous variables (nr. 10-13) using point biserial correlations and to polychotomous variables (nr. 14-15) using Spearman's  $\rho$ .

<sup>a</sup>Sex: 1 = Men; 2 = Women. <sup>b</sup>Children at Home: 1 = No; 2 = Yes. <sup>c</sup>Level of Education: 1 = Secondary or lower; 2 = Higher education.

<sup>d</sup>Ethnic-cultural Group: 1 = Ethnic minority; 2 = Ethnic majority. <sup>e</sup>Relationship Status: 1 = Relationship without cohabitation; 2 = Relationship with cohabitation; <sup>f</sup>Employer: 1 = No external mobility; 2 = External mobility; 3 = Self-employed during burnout emergence.

Table 3.

Stepwise Hierarchical Regression for Quality of Return to Work (Hypothesis 1-3).

Variable	Step 1	Step 2a	Step 2b	Step 3a	Step 3b
Burnout Severity (Step 1)	B = $-.37^{**}$ $\beta = -.17^{**}$ CI = $[-.52; -.21]$	B = $-.38^{**}$ $\beta = -.18^{**}$ CI = $[-.53; -.23]$	B = $-.40^{**}$ $\beta = -.18^{**}$ CI = $[-.54; -.25]$	B = $-.38^{**}$ $\beta = -.18^{**}$ CI = $[-.52; -.24]$	B = $-.35^{**}$ $\beta = -.16^{**}$ CI = $[-.49; -.21]$
Work-related Factors (Step 2)					
-Employer <sup>a</sup> (Step 2a)					
No External Mobility	-	-	-	-	-
External Mobility		B = $2.81^{**}$ $\beta = .15^{**}$ CI = $[1.53; 4.09]$	B = $2.46^{**}$ $\beta = .13^{**}$ CI = $[1.22; 3.70]$	B = $2.46^{**}$ $\beta = .13^{**}$ CI = $[1.26; 3.65]$	B = $2.32^{**}$ $\beta = .13^{**}$ CI = $[1.13; 3.51]$
Self-employed		B = $.81$ $\beta = .01$ CI = $[-3.31; 4.93]$	B = $1.04$ $\beta = .02$ CI = $[-2.94; 5.02]$	B = $1.46$ $\beta = .02$ CI = $[-2.38; 5.30]$	B = $1.84$ $\beta = .03$ CI = $[-1.97; 5.66]$
-Supervisor Support (Step 2b)			B = $.23^{**}$ $\beta = .26^{**}$ CI = $ [.17; .29]$	B = $.22^{**}$ $\beta = .24^{**}$ CI = $ [.16; .27]$	B = $.21^{**}$ $\beta = .24^{**}$ CI = $ [.16; .27]$

Table 3 (continued).

Stepwise Hierarchical Regression for Quality of Return to Work (Hypothesis 1-3).

Variable	Step 1	Step 2a	Step 2b	Step 3a	Step 3b
Person-related Factors (Step 3)					
-Personality (Step 3a):					
Optimism				B = .12 $\beta$ = .05 CI = [-.07; .31]	B = .08 $\beta$ = .03 CI = [-.12; .27]
Neuroticism				B = -.56** $\beta$ = -.23** CI = [-.75; -.36]	B = -.50** $\beta$ = -.20** CI = [-.70; -.31]
-Private Stressors (Step 3b)					
					B = -.06* $\beta$ = -.12* CI = [-.10; -.03]
R <sup>2</sup>	.028**	.050**	.115**	.180**	.193**
Adjusted R <sup>2</sup>	.027**	.047**	.110**	.174**	.185**
$\Delta$ R <sup>2</sup>	.028**	.023**	.064**	.065**	.013**
F	22.55**	13.86**	25.36**	28.51**	26.54**
df	1,784	3,782	4,781	6,779	7,778

Note.  $N = 786$ . \* $p \leq .05$ ; \*\* $p \leq .01$ . Both unstandardized (B) and standardized ( $\beta$ ) regression weights are reported in the table, and the 95% confidence intervals [low, high] for B. For categorical variables, the first category is the reference category. <sup>a</sup>Employer: 1 = No external mobility; 2 = External mobility; 3 = Self-employed during burnout emergence.