

Why making promotion after a burnout is like boiling the ocean

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Recent studies have explored hiring discrimination as an obstacle to former burnout patients. A substantial share of the burned-out working population, however, returns to the same employer, where they face an even more severe aftermath of burnout syndrome: promotion discrimination. To our knowledge, we are the first to directly address this issue. More specifically, we conducted a vignette experiment with 406 managers, testing the potential of the main burnout stigma theoretically described in the literature as potential mediators of promotion discrimination. Estimates reveal that compared to employees without an employment interruption, former burnout patients are assigned a 34 per cent lower promotion propensity score. Moreover, negative perceptions are associated with a history of job burnout. Four of these perceptions, namely lower leadership capacities, stress tolerance, abilities to take on an exemplary role, and chances of finding another job explain almost half the burnout effect on promotion propensities.

Introduction

Most research on burnout syndrome is centred around its determinants and its short-term impact on both health and work-related outcomes has been well documented (Bakker and Demerouti, 2017). The longer-term effects of burnout, in contrast, have received less attention. However, the societal and individual aftermath of burnout syndrome could linger for years. This ‘burnout aftermath’ is typically initiated by a sick leave spell in which workers often take months to recover, followed by an arduous return-to-work process because of residual or returning exhaustion (Boštjančič and Koračin, 2014; Kärkkäinen *et al.*, 2017).

Another challenge workers could face in the aftermath of burnout is stigmatisation. Link and Phelan (2001, 2014) have conceptualized stigma as the result of the following components converging in a context featuring power differences: labelling (‘naming distinguishing characteristics’), stereotyping (‘associating distinguishing characteristics with negative attributes’), separation, status loss, and discrimination. Although burnout, as a ground for stigmatisation, is an innovative addition to the sociological literature, initial work already implied that in external hiring contexts,

discrimination of burned-out workers occurs (Sterkens *et al.*, 2021).¹ Now we argue that, compared to external hiring discrimination, promotion discrimination (i.e. internal hiring) could be an equally—if not more—underestimated consequence of burnout for two reasons. First, approximately two thirds of the burnout patients voluntarily returns to their prior employer after their sick leave (Rooman *et al.*, 2021) and consequently, intentionally or not, they bypass the risk of being penalized in the external job market. Moreover, interviews reveal that these employees, although temporarily spared from external hiring discrimination, report experiencing interpersonal problems at their original workplace (Boštjančič and Koračin, 2014). Second, when applying for another job, former patients could also choose to keep their history of burnout hidden to avoid external hiring discrimination. However, concealing burnout comes at the cost of transparency towards new employers. Regarding the disclosure of burnout, the opposite seems to be true concerning internal hiring. Burnout gradually develops under the watchful gaze of the current employer and the worker’s colleagues. Moreover, in the Dutch working population, for instance, Dewa *et al.* (2021) found

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that 73.2 per cent of the workers with a history of mental health problems actually disclosed their health issues to managers. Although workers are not legally obliged to reveal the exact reason for their sick leave (EEOC, 2016), knowledge of the employee's burnout is practically unavoidable because of the employer's crucial role in the return-to-work process (Rooman *et al.*, 2021). Opportunities, therefore, arise for unequal treatment, such as promotion discrimination.

To the best of our knowledge, our study is a first factorial survey experiment in which managers evaluate fictitious internal promotion candidates with and without a history of burnout. By conducting such empirical investigation of promotion propensities we will address six research questions. Our study's first research question is: 'In our study sample, what is the average treatment effect of an employment interruption due to burnout on promotion propensity scores?'. However, to tackle promotion discrimination, it is also crucial to develop insights into its driving stigma. Therefore, our second research question is 'what are the indirect associations between a promotion candidate's history of burnout and their promotion propensities via stigmatizing burnout perceptions?'. Next, we will conclude this study with an exploration of promotion discrimination's context factors. More specifically, we answer the questions: 'What are causal interaction effects between a history of burnout and candidate (research question 3) or promotion (research question 4) characteristics?' and 'What are the conditional average treatment effects of a promotion candidate's history of burnout for different job (research question 5) and manager characteristics (research question 6)?'.

In addition to capturing the occurrence (research question 1), driving perceptions (research question 2) and boundary conditions (exploratory research questions 3–6) of promotion discrimination against former burnout patients, we extend the general promotion literature by (i) broadening its scope through the investigation of health-related grounds of discrimination and (ii) experimentally exploring theoretical mechanisms. Moreover, we enhance the ecological validity of the state of the art of the vignette experimentation framework by approximating how promotion decisions are made in practice. More specifically, an internal promotion context affords participants with additional realistic information relevant to hiring decisions (e.g. performance-related data and organizational tenure) across occupations.

Theory

As introduced in the previous section, earlier research found that employees' burnout history has a negative impact on the evaluation of external job candidates

via stigmatisation (Sterkens *et al.*, 2021), burned-out workers returning to the same employer face interpersonal difficulties (Boštjančič and Koračin, 2014) and it could be particularly challenging for employees to keep their history of burnout hidden from their current employer. Consequently, we hypothesize that a history of clinical burnout has a similar negative impact on the evaluation of internal promotion candidates.

Hypothesis 1: employees' history of clinical burnout have a negative effect on the propensity to receive a promotion.

Next, from a theoretical point of view, two seminal theories are used to explain aspects of hiring discrimination, namely taste-based (Becker, 1957) and statistical (Phelps, 1972; Arrow, 1973) discrimination. However, these theories might also explain the reduced promotion propensities for burnout patients as a consequence of stigmatisation. First, taste-based discrimination focuses on an economically irrational and subjective expression of prejudiced attitudes towards certain minorities. Applied to employees with a history of clinical burnout, decision-makers may fear that their promotion could result in lower professional satisfaction on the part of themselves, their new subordinates, direct colleagues or hierarchical superiors with whom they have to interact more intensely after a promotion. When decision-makers desire to avoid this perceived disutility in collaborations, this might result in lower promotion opportunities for former burnout patients. In line with this reasoning, burnout patients experience stigmatisation (Mendel *et al.*, 2015; Brouwers *et al.*, 2020) and indeed struggle with acceptance in organizations (Boštjančič and Koračin, 2014). Based on the theory of taste-based discrimination we formulate the following hypotheses.

Hypothesis 2a: employees' history of clinical burnout have a negative effect on the employers' attitudes toward collaboration with (i) themselves, employees at the (ii) same hierarchical level, at a (iii) lower hierarchical level and with employees at the (iv) highest hierarchical level.

Hypothesis 2b: there is an indirect negative association between employees' history of clinical burnout and their propensity to receive a promotion via employers' attitudes towards collaboration.

Second, although the employer possesses information on internal candidates' productivity in their current jobs, informational frictions arise when predicting their productivity in a different job at a higher level. According to the theory of statistical discrimination,

a candidate's history of burnout, or more specifically, the employers' stereotypical, stigmatizing beliefs surrounding burnout patients as a group, are then used to evaluate the anticipated productivity in the new job (Phelps, 1972; Arrow, 1973). In particular, Mendel *et al.* (2015) have shown that managers perceive former burnout patients as being worse leaders and less stress tolerant, which might be particularly relevant in this context. In contrast to the theory of taste-based discrimination, the statistical approach to discrimination focusses on an economically rational and objective reaction to information asymmetry rather than subjective attitudes. Notably, in the face of statistical discrimination, researchers have also argued that individual candidate information countering negative stereotypes might reduce statistical discrimination (Ewens *et al.*, 2014; Lössbroek *et al.*, 2021). For instance, if individuals with a history of burnout were able to reliably signal competences such as leadership capabilities, this information would not only provide information on the actual productivity of the promotion candidate, but, at the same time—as a 'surprise signal'—directly address employers' doubts when promoting the formerly burned-out.

Third, a sociological theory that could explain promotion discrimination is status-based discrimination (Berger, Cohen and Zelditch, 1972; Correll and Bernard, 2006). Similar to the statistical theory of discrimination, status-based discrimination suggests that stereotypes surrounding a particular group's performance potential influences the expectations of such workers. Applied to the case of workers with a history of burnout ('the status characteristic'), widely shared cultural beliefs surrounding burnout would link lesser competence to workers who suffered from burnout (May *et al.*, 2020)—which would then proceed to unfold in a self-fulfilling way by being given fewer opportunities and being evaluated using a stricter standard (Correll and Bernard, 2006). Although the statistical and status-based theories both centre around stereotypical perceptions the crucial difference between both approaches, as explained by Correll and Bernard (2006), is that in the statistical theory, discrimination is driven by rational decisions under informational frictions, while in the latter it is instilled by cognitive biases. Based on the theories of statistical and status-based discrimination we formulate the following hypotheses.

Hypothesis 3a: employees' history of clinical burnout have a negative effect on employers' candidate perceptions in line with the burnout stigma.

Hypothesis 3b: there is an indirect negative association between employees' history of clinical burnout and their propensity to receive a promotion via

employers' candidate perceptions in line with the burnout stigma.

Last, a fourth theoretical mechanism that could explain promotion discrimination is the invisibility hypothesis (Milgrom and Oster, 1987; Cassidy, DeVaro and Kauhanen, 2016), which suggests that the job skills of some employees are not easily discovered by potential new employers. That is, the so-called invisible workers are less likely to 'broadcast' their productivity potential to the market and, as a result, have fewer job opportunities outside the organization. A promotion, however, would create a strong signal that enhances the promoted worker's visibility to (poaching) competitors, increasing their job opportunities. Consequently, rational employers could withhold their invisible workers from a promotion to further hide their capacities, retaining in-house talent at a relatively low cost. In line with this hypothesis, many recovering burnout patients are 'invisible workers' because the external hiring penalties former burnout patients face (Sterkens *et al.*, 2021) and their reduced sense of self-efficacy (Shoji *et al.*, 2016) could limit their connection with the external labour market, and therefore, the promotion opportunities that the market has to offer. Based on the invisibility hypothesis we formulate our hypotheses 4a and 4b.

Hypothesis 4a: an employee's history of clinical burnout has a negative effect on the employers' perceived chances the employee could find another job.

Hypothesis 4b: there is an indirect negative association between employees' history of clinical burnout and their propensity to receive a promotion via employers' perceived chances that the employee could find another job.

Experimental design

Whereas vignette experiments are primarily used to study the impact of candidate characteristics on hiring outcomes by mimicking hiring assignments, our study follows a trend towards explaining hiring decisions. Besides measuring the outcomes of employers' decisions, vignette experiments also allow for an investigation of decision grounds through mediation analyses (e.g. Van Belle *et al.*, 2018). These explorations appeal to pressing calls for research on how precisely hiring decisions are made (Bills, Di Stasio and Gërkhani, 2017; DeVaro, Kauhanen and Valmari, 2019).

Vignette design

In our experiment, managers passed a series of judgments on four fictitious candidates applying for a

promotion, with some of the candidates having a past experience with burnout. That is, our promotion candidates varied systematically in seven characteristics. The employed vignette dimensions and their corresponding levels are displayed in [Table 1](#).

A first and crucial vignette dimension was the candidate's *employment record*, and more specifically, any interruptions that took place in the past 2 years. The fictitious candidates had either no interruptions (the first control level), took parental leave (the second control level), took sick leave following an accident (the third control level) or—the experimental condition—took a stress leave due to burnout. Whereas the level 'no interruptions' allows for comparison with the typical control candidate (i.e. research question 1), the candidates who took sick leave also allow for comparisons of burnout patients with other groups that are stigmatized in labour markets. By using parental leave as a second control level, we improve the ecological validity of the experiment because not all interruptions are explained by health and we simultaneously counter social desirable responding by concealing the true purpose of the study.

The following four dimensions provided participants with additional information on the fictitious candidate's behaviours within the organization: organizational tenure, last years' performance evaluation, training investments made by the organization, and the outcome of a personality assessment. *Organizational tenure* had the following levels: 'short (less than two years)', 'average (between two and five years)' and 'long (more than five years)'. Tenure was an essential dimension to add because of its relationship with promotion decisions ([Johnston, 2002](#)).

Next, a dimension reflecting *last years' performance* within the organization clearly sets our 'promotion vignettes' apart from studies where the implementation of strong signals on candidate productivity would often be unrealistic (e.g. the external hiring context, for instance, [Van Borm and Baert, 2018](#)) or is excluded in the promotion context ([Fernandez-Lozano et al., 2020](#)). The performance levels included 'positive: average' and 'positive: above average' because candidates with a negative evaluation would never qualify for a promotion in the first place. More importantly, in the case of burnout patients, the performance dimension is a strong signal of recent productivity and, therefore, indicative of a successful return to work after their period of crisis. From the theoretical perspective on 'surprise signals' ([Ewens, Tomlin and Wang, 2014](#)), such proof of restored productivity might counter the productivity-related stigma that could explain promotion discrimination against former burnout patients.

Similar to prior performance, the dimension '*training investments by the organization*' (levels: 'none', 'job rotation', 'leadership training', and 'occupation-specific training') might be relevant to promotion decisions and serve as a potential moderator in the relationship between burnout and promotion opportunities. For instance, the skills and experience acquired in the levels of 'leadership training' and 'occupation-specific training' could, again, counter productivity-related stigmatic perceptions that burnout patients encounter, such as reduced leadership ([Mendel et al., 2015](#)) and learning ([Öhman et al., 2007](#)) capacities. In addition, training by means of job rotation (within the organization) allows workers to gain broad experience

Table 1 Vignette dimensions and levels presented in experimental materials

Vignette dimensions	Vignette levels
Sex	{Man; Woman}
Age (years)	{30 ± 3 years; 40 ± 3 years; 50 ± 3 years}
Organizational tenure	{Short (less than 2 years); Average (2 to 5 years); Long (more than 5 years)}
Employment record (interruptions in the last two years)	{No interruptions; Parental leave; Sick leave following an accident; Stress leave due to burnout}
Performance evaluation of last year	{Positive: average; Positive: above average}
Personality assessment (highest scoring trait)	{Openness (to experience); Conscientiousness; Extroversion; Agreeableness; Emotional stability}
Training invested by the organization	{None; Job rotation; Leadership training; Occupation-specific training}

Notes. As described in Section 3.1, 200 candidate profiles (i.e. efficient combinations of seven vignette dimensions) were systematically divided over 50 decks comprising four candidate profiles. The values of the age dimension were randomly adjusted ± 3 years across vignettes to realize experimental realism.

within the organization—which is another relevant factor in promotion decisions (DeVaro *et al.*, 2019). Next, the *personality assessment* of a promotion candidate is a logical fifth dimension because assessment centres are often organized to aid promotion decisions and because of personality traits' predictive value for both performance and the successful reintegration of burnout patients (Rooman *et al.*, 2021). Its five levels, namely 'openness', 'conscientiousness', 'extroversion', 'agreeableness', and 'emotional stability', were derived from the globally established 'Big Five' personality traits from the psychological literature.

The remaining two vignette dimensions are gender and age. For ecological validity, it was logical to add both elements. Furthermore, differential treatment of burnout patients might also vary by gender and age. For instance, *gender* (levels: 'male' and 'female') is a potential moderator of discrimination against burnout patients because prior research found that men with mental health problems were favoured over women with mental health problems when evaluating candidates for a leadership function (Bell and Klein, 2001), with leadership being a common element of promotions. The levels of *age* were fixed at '30', '40', and '50' (and randomly adjusted ± 3 years to, once more, establish the ecological validity of the experiment). Because of age's negative signalling effects concerning reduced health, trainability, and flexibility (Van Borm, Burn and Baert, 2021), older ages could further strengthen the negative productivity stigma surrounding burnout, hence encouraging promotion discrimination via a combination of stigmatized identities in personnel selection ('double jeopardy' see e.g. Derous, Ryan and Serlie, 2015).

The discussed selection of dimensions and levels resulted in a 2 (gender) \times 3 (age) \times 3 (organizational tenure) \times 4 (employment record) \times 2 (performance evaluation) \times 5 (personality assessment) \times 4 (training invested by the organization) design of 2,880 unique vignettes ('the vignette universe'). Participants were presented with one subset of vignettes (a 'vignette deck'). More specifically, we ran a D-efficiency algorithm (Auspurg and Hinz, 2014) that drew 50 decks of four unique vignettes from the vignette universe. This algorithm systematically selected those combinations of vignettes that yielded the most precise parameter estimates for each level with a minimal loss of efficiency compared to a fully factorial set-up. The resulting D-efficiency score (91.247/100) indicates that minimal correlations exist between vignette dimensions (Auspurg and Hinz, 2014). Because of the independent manipulations, causal interactions can be explored between burnout and the other candidate dimensions on promotion opportunities (i.e. research question 3).

Data collection

Our vignette experiment was administered online via Qualtrics to a total sample of 405 managers. American and British managers were recruited in December 2020 via the online panel platform of Prolific which yielded a total of (405 \times 4 =) 1,620 completed candidate evaluations that were analysed. Our subsequent analyses were not formally pre-registered in advance. Participants who failed the attention check (i.e. one participant), did not finish the experiment ($n = 28$) or already completed a pretest ($n = 20$) were excluded from analyses. Applying these exclusion criteria there were no missing data left.

Via Prolific, participants received an invite when passing the panel's criteria of (i) living in either the United Kingdom or the United States, (ii) having experience in a management role, and (iii) being experienced at hiring employees—thus indicating experience with personnel decisions. Upon completion, participants were compensated at a rate of £11.15/h. To hide the true purpose of the study (i.e. studying promotion discrimination against former burnout patients), the invitation did not contain any mention of either discrimination or burnout. Thus, the invitation focussed on 'requesting aid in fictitious promotion decisions'. To ensure data quality, we inserted a trap question in the post-experimental survey (see Section 3.3.4) 'This is an attention check. Please indicate "Strongly Oppose."' and conducted several robustness checks on our results.

Procedure

This subsection describes the experimental procedure for participants. Study participation took an average of 17 min and consisted of four main parts: (i) experimental context, (ii) internal vacancy, (iii) candidate evaluations, and (iv) post-experimental survey.

Experimental context

Participants provided informed consent to participate in the study and then advanced to a screen introducing the experimental context and internal vacancy.² Participants read about their fictitious role as a manager in the organization 'Isaakson Inc'. where, together with HR, they advised their superior on four internal candidates who were qualified for a promotion. Based on the earlier phases of the selection procedure and the candidate's employment history within the organization, the selection committee compiled several candidate profiles that were to be evaluated. Besides maximizing the ecological validity of the experiment, this approach offered participants an explanation for their lack of knowledge of the candidates beyond the profiles.

Table 2 Job titles and job characteristics utilized in the experiment

(Promotion) Job titles	Required quantitative workload	Required qualitative workload	Impact of error
Graphic designer	Low	Low	Low
Billing, cost, and rate clerk	High	Low	Low
Sales manager	Low	High	Low
Biomass plant technician	Low	Low	High

Internal vacancy

Participants evaluated candidates' suitability for one randomly assigned internal vacancy. To explore potential job-related moderators and test the generalisability of findings across professional contexts, we created a total of 12 fictitious vacancies that varied on three underlying job characteristics (i.e. 'required quantitative workload', 'required qualitative workload', and 'impact of error') and the nature of the promotion (i.e. occupational level, level of authority or a combination of both). Table 2 below summarizes the different jobs and their underlying characteristics used in the experiment.

The first two job characteristics—the required quantitative and qualitative job demands—were potential moderators of promotion discrimination because differences in workload between jobs could elicit varying responses from managers based on burnout patients' productivity stigma. More specifically, as burnout's main determinant, jobs with a high quantitative workload could be perceived as too demanding for ex-burnout patients because of stigmatic perceptions of reduced stress tolerance, poor health (Sterkens *et al.*, 2021), and weakness (May *et al.*, 2020). Similarly, we varied jobs based on their qualitative workload (i.e. task complexity) because of the burnout stigma of reduced intelligence (May *et al.*, 2020), which might lead to perceptions of reduced performance on complex tasks. The vacancies also varied on the impact of errors made because reintegrated ex-burnout patients are generally perceived as having higher probabilities of taking future sick leave (Mendel *et al.*, 2015) or being more error prone from the reduced health stability. This risk would, in turn, make former patients less attractive candidates for managers.

To systematically select job titles fitting our proposed manipulations, we examined the O*NET classifications per job characteristic (see e.g. Van Borm, Burn and Baert, 2021) and selected the four occupations: graphic designer, billing, cost and rate clerks, sales manager, and biomass plant technician. Our exploration of heterogeneity in burnout's effect on promotion opportunities according to job characteristics (i.e. research question 5) will not be given a causal interpretation because it rests on the assumption that the jobs

do not vary with regard to unmeasured, confounding job characteristics (e.g. the levels of job autonomy provided).

In addition to the varying job characteristics, we also captured some of the variability between real-world promotions following Baert, De Pauw and Deschacht (2016) in varying the nature of promotions applied for. Because the promotion characteristics were distributed randomly and their manipulation did not allow further confounding, causal interactions can be identified in response to research question 4. More specifically, our fictitious vacancies implied either a promotion in terms of (i) occupational level, (ii) level of authority, or (iii) a combination of both. We implemented the different promotions as follows:

- (1). Promotions in occupational level were implemented by fixing all candidates' current jobs at job titles from a lower occupational level;³
- (2). Promotions in the level of authority were implemented by fixing candidates' current jobs at the level of current vacancy but by adding '—Teamleader' to the vacancy title and mentioning an additional responsibility of directing other co-workers in the job descriptions;
- (3). Promotions in both occupational level and level of authority ('promotion size') combined manipulations (1) and (2).

Two manipulation checks were performed based on the O*NET occupation description. First, participants indicated their interpretation of the vacancy (i.e. which of the promotion types applied). Second, they assigned scores from 0 to 10 to three statements on the perceived job characteristics of the vacancy (i.e. its quantitative and qualitative workload and the impact of error).

Candidate evaluations

In the third part of the experiment, participants passed a series of judgments on four candidate vignettes using 11-point response scales. Supplementary Appendix 1 gives an overview of four vignettes and the items used for evaluations.

Two types of evaluations were made per candidate. The first evaluation was the propensity with which they would (i) include the candidate in the next stages of the promotion process and (ii) eventually select the candidate for the promotion. Next, participants also shared their candidate perceptions via 13 signalling statements derived from theory and the literature. Four of these statements measured attitudes towards collaboration (Van Borm and Baert, 2018) and stemmed from four different sources of Becker's (1957) theory of taste-based discrimination applied to the promotion context (i.e. collaboration with the manager, employees at the same hierarchical level, co-workers at a lower hierarchical level, and employees at the highest hierarchical level). We merged these statements into one indicator.

Another eight statements reflected burnout productivity stigma that could represent potential sources of statistical (Arrow, 1973) or status-based discrimination (Berger, Cohen and Zelditch, 1972; Correll and Bernard, 2006) against former burnout patients. Based on a comprehensive study of the literature, we bundled eight productivity perceptions with relevance to former burnout patients. More specifically, we asked participants whether they thought candidates had sufficient (i) leadership capacities (Mendel *et al.*, 2015), could take on an (ii) exemplary role for others (Boštjančič and Koračin, 2014), were sufficiently (iii) motivated (May *et al.*, 2020), (iv) autonomous (Sterkens *et al.*, 2021), (v) stress tolerant (Ozawa and Yaeda, 2007; Mendel *et al.*, 2015), possessed sufficient (vi) learning capacities (Öhman *et al.*, 2007; Boštjančič and Koračin, 2014; Grossi *et al.*, 2015), were (vii) currently sufficiently healthy and whether they would often (viii) take sick leave in the future (Mendel *et al.*, 2015). In line with the invisibility hypothesis (Milgrom and Oster, 1987; Cassidy, DeVaro and Kauhanen, 2016), the last statement gauged perceived candidate 'visibility', that is, whether the manager believed the candidate could easily find a similar job in another organization if denied the promotion.

In our efforts to estimate the indifferent associations of burnout, rather than causal effects, via these candidate perceptions (i.e. research question 2) we have to acknowledge the constraints and assumptions imposed by our design. First, although we are able to infer causality on both the average treatment effects of burnout on promotion chances and from the effects of burnout on candidate perceptions, the same cannot be said for the respective associations between candidate perceptions and promotion propensities. A causal interpretation of an indirect relationship would, for instance, assume that there are no additional confounders in the relationship between the surveyed perceptions and promotion propensities

('exogeneity'). Moreover, following Imai *et al.* (2011), the complete set of covariates pretreatment or post-treatment affecting the candidate perceptions and the assigned promotion ratings should also be modelled. An example of such potential covariate we controlled for could be managers' norms for employers (O'Connor and Kmec, 2020). More concretely, the norms employers wield could affect both the perceptions they have on candidates and the promotion propensities they assign them. Future research should focus on independent experimental manipulations of the proposed mediators and disentangling the potentially complex networks of interrelated stigmatizing perceptions.

Post-experimental survey

In the final part of the experiment, participants completed a post-experimental survey through which we collected participant data for sample description, explorative moderation analyses and robustness checks. However, it is important to note that effect heterogeneity identified for burnout and manager characteristics (i.e. research question 6) cannot be given a causal interpretation because there could be unmeasured manager-side confounders.

The demographic variables gender ('male', 'female') and age (in years) were tested as potential moderators in the relationship between burnout and promotion decisions. Indeed, Cole, Feild and Giles (2004) reported that male recruiters expressed stronger stigmatic perceptions when evaluating job candidates. Similarly, Ozawa and Yaeda (2007) concluded that older employers (aged over 60 years) held more negative attitudes towards workers with mental health problems.

Next, to explore the role of employer perception beyond stigmatizing beliefs, we conducted moderation analyses with two belief scales, the ideal worker norm measure from O'Connor and Kmec (2020) and the short social dominance orientation scale (SDO_{7(s)} scale) from Ho *et al.* (2015), that have been found to correlate with discrimination. First, employers who uphold an 'ideal worker norm' are convinced that the best employees are both continuously devoted to their employer and will work throughout life with minimal interruptions. An example of an item is 'the ideal employee drops everything at a moments' notice for work'. Such beliefs are at odds with burnout patients' stigmatized status of lacking motivation and having a higher likelihood of requiring sick leave. Therefore, participants' beliefs in an ideal worker norm might be associated with reduced promotion propensities assigned to former burnout patients.

Second, a social dominance orientation entails a preference for a hierarchy between societal groups and

inequality (Ho *et al.*, 2015). For instance, individuals with a high score on social dominance orientation are likely to agree with statements such as ‘Group equality should not be our primary goal’. Such patterns of beliefs are at odds with the stigma carried by burnout patients (e.g. ‘being weaker’, (May *et al.*, 2020) and expectations of unpleasant collaborations (Boštjančič and Koračin, 2014). A final characteristic that might be associated with favourable employment opportunities for burnout patients is managers’ personal experience with burnout syndrome (Sterkens *et al.*, 2021). Therefore, in the survey, we used the question ‘Do you know individuals who suffer(ed) from severe professional burnout?’ to distinguish between contact with burnout syndrome.⁴

To conduct robustness checks subsamples of managers, the post-experimental survey contained measures for participants’ frequency of involvement in promotion decisions (‘daily’, ‘weekly’, ‘monthly’, ‘once per semester’, ‘yearly’, or ‘less frequently’) and tenure at making promotion decisions (‘less than a year’, ‘one to five years’, ‘more than five years’, or ‘none, but experienced in hiring decisions’). Furthermore, we also measured social desirability tendencies (Reynolds, 1982). The 13 items from the scale measured behaviours that are socially sanctioned or approved (e.g. ‘I’m always willing to admit it when I make a mistake’), and managers indicated per item whether these applied to them (score 1, if not, score 0). Afterwards, we calculated a standardized sum of item scores.

Data description

To study our target population of American and British individuals occupying a management position, the validity and representativity of our study’s sample ideally would have achieved through randomized sampling methods. Nonetheless, our use of online panel services resulted in a sample ($n = 405$) that was (relatively) balanced in term of gender (48.4 per cent was female) and country of residence (United Kingdom 49.6 per cent, United States 50.4 per cent). Furthermore, the sample varied substantially in age (mean = 45.057 years, $SD = 13.199$), frequency of promotion decisions and tenure at making promotion decisions. With 86.2 per cent of the sample having experience at making promotion decisions and 74.1 per cent of the sample at least annually involved in promotion decisions, the panel’s participants were well-qualified for the experiment. In addition, to reduce the potential bias of participants’ inexperience (13.8 per cent), we performed an additional robustness check that excluded inexperienced participants from analyses. Moreover, only 28.9 per cent of the sample reported never having had contact with burnout syndrome. On the contrary, 32.3 per cent indicates having suffered from severe professional burnout themselves. Most likely, the substantial share

of managers expressing that they suffered from burnout can be explained by a non-clinical interpretation of the syndrome. Details on the sample composition are further presented in the [Supplementary Table 2](#). The correlations between study variables are presented in [Supplementary Table 3](#).

Results

To investigate whether (3.1), how (3.2), and when (3.3) employees’ history of burnout affects promotion opportunities, we conducted three consecutive series of linear regressions in Stata/MP. The error terms were consistently corrected for clustering of the observations (‘candidate evaluations’) at the participant (i.e. manager) level. Statistical power is only assessed indirectly through a comparison with studies reporting similar scales and effect sizes (e.g. Van Belle *et al.*, 2018).

Effect of a history of burnout on promotion chances

First, we analysed the average treatment effect of the candidate’s history of burnout on promotion outcomes. As such, [Table 3](#) below shows the results of promotion outcomes regressed on the (i) candidate, (ii) job, (iii) promotion, and (iv) participant characteristics discussed in Sections 3.1, 3.3.2, and 3.3.4. The reported regression coefficients are to be interpreted as promotion propensity scores measured on an ordinal scale ranging from 0 (Completely disagree) to 10 (Completely agree).

As theorised, promotion candidates with a history of burnout in the organization are severely disadvantaged. More specifically, when comparing the average scores on ‘the advice to advance the candidate in the process’ item for (ex-) burnout patients (4.620/10) and candidates without interruptions (7.040/10) (i.e. Model 1), we find that former burnout patients have a 34.4 per cent lower promotion propensity score. Our estimates hold when controlling for candidate, job, promotion, and participant characteristics in our regressions.⁵ As such, Models 4 and 8 of [Table 3](#) demonstrate that a past interruption in employment record due to burnout substantially reduces the promotion ratings assigned (i.e. $\beta = -2.541$, $P < 0.001$ for the advice to advance the candidate in the process and $\beta = -2.632$, $P < 0.001$ for the advice to ultimately select the candidate) when compared to the candidates without recent interruptions (i.e. our reference category). Hence, we conclude that hypothesis 1 is fully supported.

The magnitude of the burnout effect on advancement propensities is even more striking compared to the estimates from the other experimental manipulations. In particular, we observe that the average treatment effect of candidate’s past performance does not even remotely approach the burnout effect (i.e. a

Table 3 Regression results with propensity of promotion advices

	Advice to advance in the promotion procedure (0–10)				Advice to ultimately promote (0–10)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. CANDIDATE CHARACTERISTICS								
Female		0.032 (0.080)	0.030 (0.079)	0.035 (0.080)		0.085 (0.085)	0.084 (0.085)	0.093 (0.085)
Age		0.006 (0.005)	0.006 (0.005)	0.005 (0.005)		0.009 [†] (0.006)	0.009 [†] (0.006)	0.008 (0.005)
Organizational tenure (ref. short)		0.717*** (0.107)	0.713*** (0.107)	0.709*** (0.106)		0.636*** (0.112)	0.629*** (0.107)	0.626*** (0.107)
Average		1.111*** (0.109)	1.109*** (0.109)	1.111*** (0.109)		1.133*** (0.112)	1.128*** (0.111)	1.130*** (0.111)
Long								
Employment record (ref. no interruptions)								
Parental leave		-0.387*** (0.115)	-0.389*** (0.115)	-0.391*** (0.115)		-0.382** (0.126)	-0.387** (0.126)	-0.389** (0.126)
Sick leave following an accident		-0.395*** (0.108)	-0.397*** (0.108)	-0.388*** (0.108)		-0.488*** (0.116)	-0.492*** (0.116)	-0.480*** (0.116)
Burnout		-2.421*** (0.134)	-2.545*** (0.121)	-2.541*** (0.121)		-2.506*** (0.137)	-2.637*** (0.128)	-2.632*** (0.128)
Performance evaluation (ref.: average)								
Above average		1.003*** (0.085)	1.004*** (0.085)	1.009*** (0.085)		1.005*** (0.091)	1.007*** (0.091)	1.015*** (0.091)
Personality assessment (ref.: agreeableness)								
Openness		0.203 (0.125)	0.200 (0.126)	0.196 (0.125)		0.253 [†] (0.137)	0.245 [†] (0.137)	0.239 [†] (0.136)
Conscientiousness		0.315** (0.122)	0.311* (0.121)	0.315** (0.125)		0.281* (0.131)	0.279* (0.131)	0.281* (0.131)
Extroversion		0.049 (0.137)	0.043 (0.137)	0.054 (0.138)		0.079 (0.139)	0.075 (0.140)	0.084 (0.140)
Emotional stability		0.207 (0.136)	0.208 (0.136)	0.214 (0.134)		0.261 [†] (0.138)	0.265 [†] (0.138)	0.272* (0.137)
Training invested by the organization (ref.: none)								
Job rotation		0.254* (0.112)	0.255* (0.112)	0.256* (0.111)		0.176 (0.118)	0.178 (0.118)	0.182 (0.117)
Leadership training		0.917*** (0.120)	0.921*** (0.121)	0.925*** (0.121)		0.936*** (0.129)	0.940*** (0.129)	0.945*** (0.129)
Occupation-specific training		0.336** (0.115)	0.340** (0.115)	0.343** (0.116)		0.386*** (0.120)	0.391*** (0.119)	0.391*** (0.120)
B. PROMOTION CHARACTERISTICS								
Promotion type (ref.: occupational level plus level of authority)								
Occupational level			0.214 (0.146)	0.224 (0.143)			0.158 (0.160)	0.178 (0.156)
Level of authority			-0.047 (0.150)	-0.033 (0.146)			-0.037 (0.162)	-0.025 (0.154)
C. JOB CHARACTERISTICS								
Required quantitative demands			0.060 (0.045)	0.045 (0.045)			0.088 [†] (0.049)	0.059 (0.051)
Required qualitative demands			0.025 (0.036)	0.004 (0.034)			0.046 (0.042)	0.021 (0.041)
Impact of error			-0.057 (0.036)	-0.044 (0.036)			-0.072 [†] (0.038)	-0.062 (0.038)

Table 3. Continued

	Advice to advance in the promotion procedure (0–10)			Advice to ultimately promote (0–10)				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
D. PARTICIPANT CHARACTERISTICS								
Female				0.075 (0.114)				0.098 (0.128)
Age				-0.007 (0.005)				-0.007 (0.005)
Ideal worker norm				0.020 (0.067)				0.108 (0.072)
Social dominance orientation				-0.170*** (0.046)				-0.224*** (0.052)
Contact with burnout (ref.: none)								
Professional				-0.124 (0.177)				-0.107 (0.193)
Private life				0.181 (0.172)				0.236 (0.183)
Self				0.049 (0.145)				0.208 (0.170)
R ²	0.207	0.326	0.331	0.346	0.193	0.301	0.308	0.330
N	1,620							

Notes. Abbreviation used: ref. (reference category). See Section 3 for a description of the adopted variables. The presented statistics are coefficient estimates with their standard errors in parentheses. Standard errors are corrected for clustering of observations at the participant level. * (**) (***) (((10 per cent) ((5 per cent) ((1 per cent) (((10 per cent) significance level. †) indicates significance at the 0.1 per cent (1 per cent) (5 per cent) (10 per cent) significance level.

performance evaluation ‘positive: above average’, compared to on an evaluation as ‘positive: average’; $\beta = 1.009$ ($P < 0.001$). Moreover, since the effect of burnout is many times larger than that of the other gaps (e.g. sick leave following an accident: $\beta = -0.391$; $P < 0.001$) this favours an interpretation of the burnout penalty in terms of stigmatisation rather than human capital loss resulting from workplace absence.

Drivers of promotion discrimination against former burnout patients

Next, we analysed whether candidate perceptions could empirically explain promotion discrimination based on the stigmatisation literature on burnout patients, statistical and status-based discrimination, taste-based discrimination and the invisibility hypothesis (Section 3.3.3). A multiple-mediation framework (Hayes, 2017) was applied to decompose the total burnout effect discussed in Section 4.1. More specifically, we estimated 11 regressions within one simultaneous equation model. The 11th regression regresses the advancing propensity on the same variables as well as on all candidate perceptions simultaneously. By including all candidate perceptions in one regression at the same time, the indirect associations for a set of mediators reflecting one theoretical argument (e.g. taste-based discrimination) are adjusted for the set of mediators reflecting alternative theoretical arguments (e.g. statistical, status-based discrimination), allowing us to separate between the different theories.

The signalling function of a burnout history

Due to our experimental set-up, the first 10 regressions from our mediation framework estimate the average treatment effects of a candidate’s history of burnout on managers’ candidate perceptions. When compared to candidates without interruptions in their employment history within the organization, former burnout patients are perceived as having lower (i) leadership capacities ($\beta = -1.443$; $P < 0.001$), being less capable of taking on an (ii) exemplary role ($\beta = -1.855$; $P < 0.001$), (iii) less motivated ($\beta = -1.544$; $P < 0.001$), (iv) less autonomous ($\beta = -1.542$; $P < 0.001$), (v) less stress tolerant ($\beta = -3.766$; $P < 0.001$), having less (vi) learning capacities ($\beta = -1.123$; $P < 0.001$), (vii) worse current health ($\beta = -3.242$; $P < 0.001$), higher likelihood of (viii) future sick leave ($\beta = -3.680$; $P < 0.001$), (ix) collaboration with them is regarded more negatively ($\beta = -1.600$; $P < 0.001$), and they are perceived as having lower chances of (x) finding another job ($\beta = -1.874$; $P < 0.001$). The average perception scores for candidates without interruption compared to candidates with a history of burnout are visually presented in Figure 1

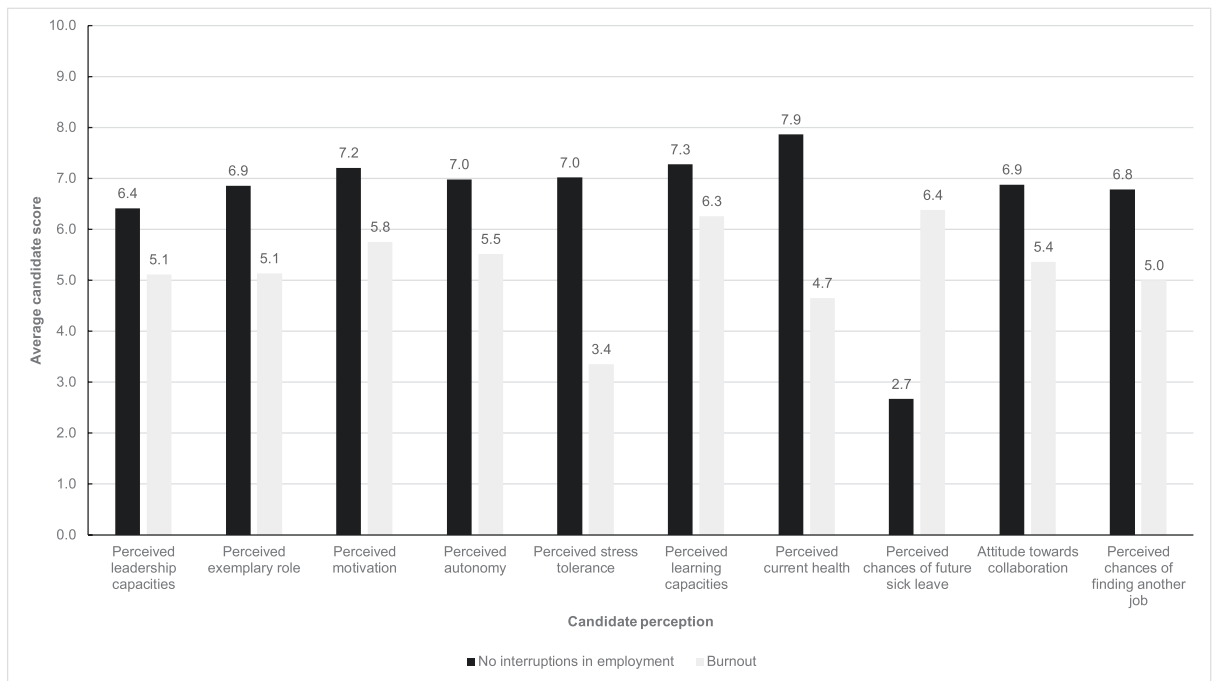


Figure 1. Average perception scores of promotion candidates. Differences are significant at the 1 per cent significance level

below and the complete mediation table is available in the [Supplementary Table 4](#).

Our findings, therefore, fully support hypotheses 2a, 3a, and 4a by providing causal evidence for all perception and attitude items that were theoretically derived from the literature. The coefficient estimates of signals reveal that compared to candidates without interruptions in employment history, a history of burnout emits particularly strong signals of reduced (v) stress tolerance (a decrease of about 38 percentage points in the perception scores) and (vii) current and (viii) future health (decreases of approximately 32 and 37 percentage points, respectively). Although the occurrences of these signalling effects are in line with the stigma derived from the literature, we find their magnitudes astounding. After all, in the experiment, each candidate with a history of burnout successfully returned to the workplace and received a non-negative performance evaluation (Section 2.1).

As illustrated by [Supplementary Table 5](#), an alternative model with separate items measuring attitudes towards collaboration did not change the results. Similarly, testing the robustness of estimates for more homogenous subsamples of participants (see Section 3.3.4), analyses of the United Kingdom and United States subsamples provide evidence for all signalling effects at the 0.1 per cent significance level. Furthermore, robustness checks on participants with (i) prior experience in making promotion decisions,

who make (ii) promotion decisions on at least a yearly basis and with (iii) low to average social desirability tendencies did not change our findings ([Supplementary Tables 5 and 6](#)).

The driving signals of promotion discrimination

Next, within our multiple-mediation framework, we calculated the indirect associations between burnout and promotion propensities by multiplying the regression estimates from burnout with the mediating candidate perceptions and from these mediators to the assigned promotion propensity scores ([Hayes, 2017](#)). The standard errors of the estimations are based on a bootstrapping procedure with 100 repetitions. [Table 4](#) below displays an overview of the percentages of the total burnout effect on promotion propensities as explained by the indirect associations.

Across the outcome variables (advancing and selection propensity), four perceptions consistently emerge as significant explanations for promotion discrimination against (ex-)burnout patients: (i) perceived leadership capacities (explaining respectively 10.0 and 12.4 per cent of the total burnout effect), (ii) perceived exemplary role (14.4 and 13.1 per cent), (iii) perceived stress tolerance (16.9 and 26.8 per cent), and (iv) perceived chances of finding another job (7.9 and 13.1 per cent). These four perceptions jointly explain

Table 4 Mediation analysis: percentages of burnout effect on promotion propensity measures explained by mediators

Mediators	% of total burnout effect on advancing propensity explained by mediator [i-value]	% of total burnout effect on selection propensity explained by mediator [p-value]
Perceived leadership capacities	10.0% [0.001]	12.4% [0.001]
Perceived exemplary role	14.4% [0.001]	13.1% [0.001]
Perceived motivation	6.3% [0.013]	1.4% [0.603]
Perceived autonomy	3.8% [0.206]	2.5% [0.386]
Perceived stress tolerance	16.9% [0.004]	26.8% [0.001]
Perceived learning capacities	1.3% [0.461]	0.1% [0.939]
Perceived current health	3.4% [0.386]	1.9% [0.595]
Perceived likelihood of future sick leave	6.8% [0.021]	2.8% [0.371]
Perceptions on collaboration ^a	4.8% [0.204]	7.4% [0.024]
Perceived chances of finding another job	7.9% [0.001]	13.1% [0.001]
N	1,620	

Notes. *P*-values are corrected for clustering of observations at participant level. Percentages related to *P*-values below 0.005 are in bold.

^aIndicates mediators with scales comprising multiple items.

approximately half (49.2 per cent) of the penalty inflicted. Interestingly, whereas perceptions of reduced stress tolerance took a central role in earlier studies (Mendel *et al.*, 2015; Sterkens *et al.*, 2021), managers from our study attached relatively less importance to perceived stress tolerance in promotion decisions—despite clearly indicating this perception (see above). The associations via the remaining mediators could not explain significant proportions of the burnout effect on promotion propensities after applying the Bonferroni correction.⁶ The proposed mediation model with 10 mediators partially mediates the effect of an employees' history of burnout on the propensity of advancing in the promotion process because the remaining direct effect of burnout is statistically significant after correcting for the associations via its mediators ($\beta = -0.624$, $P < 0.001$). Consequently, there could be additional burnout stigma or mechanisms not yet identified that could further explain the burnout effect.

To summarize, the evidence provided by the mediation analyses does not support hypothesis 2b because the indirect association via attitudes towards collaboration is insignificant after correcting for multiple hypothesis testing. Hence, we derive there is little support for a role of taste-based discrimination in explaining promotion discrimination. Conversely, we find partial evidence for hypothesis 3b. Indeed, the indirect

associations are significant for several of the stigma, namely the perceptions regarding leadership capacities, the ability to take on an exemplary role and stress tolerance. However, we find no consistent support for indirect associations via the motivation, autonomy, learning capacities, and health stigma. As predicted by the theories of statistical and status-based discrimination, our findings point in the direction that stigmatizing perceptions play a substantial role in explaining promotion discrimination of burned-out workers—albeit not every stigmatizing perception is as relevant in promotions. Hypothesis 4b is supported by our data because we consistently find significant indirect associations via the 'perceived chances of finding another job-statement' as predicted by the invisibility hypothesis. Hence, we find initial support for a potential role of employee invisibility as an explanation for promotion discrimination.

Moderators of promotion discrimination against former burnout patients

We lastly explore potential moderators (discussed in Section 3.3.4) of promotion discrimination against former burnout patients. To do so, the advancement propensities assigned by the managers are regressed on the candidate, job, promotion, and participant

characteristics together with their interaction terms with employee's history of burnout.⁷ The results of the moderation analysis are presented in [Supplementary Table 7](#).

First, the absence of significant interaction terms between employees' history of burnout and the other employee characteristics indicates that the negative effect of a history of burnout and the positive effects of past performance, tenure, training investments, and personality assessments (see Section 3.1) have an additive relationship with advancement propensities. Based on the concept of surprise signalling applied in statistical discrimination (Section 1), however, we could have predicted that a beneficial performance evaluation decreases the burnout penalty inflicted. That is, in the presence of counter-stereotypical, beneficial productivity data, rational managers would have relied less on other candidate characteristics ('burnout history') to predict performance after a promotion. Hence, these null-findings further nuance our study's theoretical implications (Section 4.2.2). More specifically, they contradict an interpretation of hypothesis 3b's findings through a lens of rational statistical discrimination, but not status-based discrimination—the latter predicting that the impact of stigmatizing beliefs operates via irrational cognitive biases.

Second, across the different types of job, promotion, and participant characteristics, we find a conditional average treatment effect between an employee's history of burnout and participant gender on promotion propensity. Compared to male colleagues, female managers inflict a higher promotion penalty on burnout patients ($\beta = -0.462$ $P = 0.032$). Although we did not expect the interaction term to have a negative sign (because male evaluators more commonly display discriminatory expressions in a selection context (Cole, Feild and Giles, 2004)), we find that by estimating conditional average treatment effects between a candidate's history of burnout and participant gender on managers' candidate perceptions, female managers indeed evaluated employees with a history of burnout more negatively. More concretely, compared to their male counterparts, female managers perceived these candidates as less capable to take on an exemplary role ($\beta = -0.447$; $P = 0.029$), more likely to take sick leave in the future ($\beta = 0.613$; $P = 0.009$) and less likely to find other employment ($\beta = -0.681$; $P < 0.001$). The effect heterogeneity with the female gender of the manager cannot be given a causal interpretation because they may correlate with unobserved participant characteristics.

Conclusion

To investigate promotion discrimination against former burnout patients and underlying stigma, we conducted a factorial survey experiment. Managers judged

fictitious internal candidates with varied employment histories inside the organization. Some candidates were said to have overcome burnout, and other promotion-relevant characteristics were manipulated, such as organizational tenure and past performance. More concretely, participants assessed the fictitious employees for diverging internal vacancies on promotion decisions as well as on statements derived from the literature's dominant theories for promotion discrimination. To the best of our knowledge, this study represents the first to directly measure this hitherto overlooked and, as our results indicate, grave consequence of burnout. Furthermore, we expand labour market studies' focus beyond gender, ethnicity, and age by analysing a mental health-related ground for promotion discrimination. Next, this study also contributes to sociology's stigmatisation literature through an evaluation of specific stigmatizing beliefs among managers that could be indicative of shared, cultural beliefs ('public conceptions')—which are at the core of the stigmatisation concept (Link and Phelan, 2001). In turn, such knowledge could be valuable for sociologists developing effective destigmatisation campaigns (Link and Phelan, 2014). In addition to measuring promotion discrimination (research question 1), we proceeded to explore the role of discrimination theories in explaining burnout penalties (research questions 2) and examined potential candidate, job, promotion, and participant-side moderators of the burnout penalty (explorative research questions 3–6). Finally, by conducting the experiment in an internal promotion setting, we optimized the ecological validity of hiring experiments because we were able to provide participants with realistic and relevant candidate information, such as performance data, to support decisions.

In general, we conclude that, notwithstanding a successful recovery, employees' history of burnout creates a severe obstacle hampering one's options for promotion. A burnout history specifically reduced candidates' promotion propensity scores by no less than 34.4 per cent compared to others without interruptions in their employment record. The magnitude of this estimate is perhaps even more striking because we also find that (i) the summed effects of both actual performance and tenure on promotion propensities cannot compare in size, and we find (ii) no significant employee-side interactions that could lessen the promotion penalty inflicted. As a result, one might say that making promotion after burnout is, indeed, like boiling the ocean. In addition, we find causal evidence for all stigmatizing perceptions identified in the literature. The four perceptions of lower leadership capacities, less ability to take on an exemplary role in the organization, a lower stress tolerance, and reduced likelihood of finding another job outside of the organization jointly

capture about half (49.2 per cent) of the total burnout effect on promotion propensity. The additional stigma of lower motivation, autonomy, learning capacities, current and future health, and negative perceptions on collaboration explained lesser proportions of the burnout effect. As predicted by both statistical (Phelps, 1972; Arrow, 1973) and status-based discrimination (Berger, Cohen and Zelditch, 1972; Correll and Bernard, 2006) theories, our findings indicate that primarily the productivity-based stigma could explain promotion discrimination. However, given that concrete productivity-related information did not moderate the assigned burnout penalties (see ‘surprise signalling’ Section 4.3), our data favours an interpretation in terms of status-based discrimination where cognitive biases, rather than rational decision-making, underly discriminatory treatment (Correll and Bernard, 2006). Furthermore, the indirect associations between burnout and promotion propensities via perceived job opportunities outside the organization provide initial, albeit moderate, support for the invisibility hypothesis (Milgrom and Oster, 1987) as an explanation for promotion discrimination against the formerly burned-out. Nevertheless, further research is required to disentangle the roles of underlying theoretical mechanisms.

These results have implications for employees with a history of burnout, their employers, and policy-makers. First, the magnitude of the burnout effect on promotion propensities implicates that numerous fully recovered former burnout patients could be inextricably stuck at their current job in an organization because they are refused access to higher-level jobs. This would not only be detrimental to their personal career advancement but also to their current employers. More specifically, when employees are fully recovered and aware of their denied or limited opportunities for upward mobility, this could create a strong incentive for them to leave the organization in exchange for a new employer. This exit presents their current employers with a loss of human capital. Interestingly, compared to former burnout patients who immediately change employers after sick leave, those who successfully return to their initial workplace can more readily hide their burnout history (i.e. once recovered, they might become less dependent on vital supervisor support, see Rooman *et al.*, 2021). Recovered employees would conceal their burnout history and avoid external hiring penalties (Brouwers *et al.*, 2020), which further incentivises them to leave in the case of promotion discrimination.

Second, by investigating effects of the ‘burnout aftermath’ on promotion opportunities, our results call for attention from policy-makers towards burnout syndrome. For one, the occurrence of promotion

discrimination against former burnout patients is, next to its health and financial costs, another argument for investment in primary prevention. It is better to prevent promotion discrimination than to cure it. Moreover, our findings argue against the implementation of labour market reintegration policies and interventions with an exclusively short-term focus, which approach return-to-work as a dichotomous variable. Clearly, burnout syndrome’s negative career impact remains a threat in the longer-term.

To conclude, one limitation of our study is inherent to the experiment’s laboratory setting. In general, knowledge of being observed could induce participants with social desirability tendencies which could cause measurement bias. Applied to the experiment, the burnout penalty we calculated would be a lower bound of the true effect. However, to limit the impact of social desirability biases, we designed the experiment in a way that mimics the complexity of a real promotion context.

Notes

- 1 We will use the term ‘former burnout patients’ to refer to workers who suffered from ‘clinically significant exhaustion and impaired performance, which motivated seeking professional help’ (Grossi *et al.*, 2015: p. 626).
- 2 The authors’ research institution did not require a formal ethical evaluation of the study because data were obtained based on informed consent, the experimental decisions were fictitious and the design applied only minor deception.
- 3 Based on the O*NET task descriptions of the four jobs withheld, the researchers agreed on the following lower-level occupations: assistant graphic designer (graphic designer), administrative assistant (billing, cost, and rate clerk), shop assistant (sales manager), and machine operator (biomass plant technicians).
- 4 When participants indicated multiple sources of contact with burnout, we recoded their response to the single category representing the closest contact. For example, indicating contact with burned-out individuals in your professional lives as well as having a history of burnout yourself were recoded to the category ‘self’.
- 5 The instability of other employment interruptions’ effects (Table 3, panels (1–2) and (5–6)) is most likely a consequence of the D-efficiency algorithm’s vignette selection that left room for a few confounding structures of high order interactions.
- 6 Applying the Bonferroni correction, the indirect associations were tested at the α/k (i.e. 0.5 per cent significance level).
- 7 Because we conducted multiple moderation analyses while exploring heterogeneity in the burnout penalty, the informativeness of P -values diminish and applying corrections for multiple testing would result in extremely conservative analyses. Therefore, because we report differences at the 5 per cent significance level, a risk of false positive results remains.

Supplementary Data

Supplementary data are available at *ESR* online.

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References

- Arrow, K. J. (1973). The theory of discrimination. In O. Ashenfelter and A. Rees (Eds.), *Discrimination in Labor Markets*. Princeton: Princeton University Press.
- Auspurg, K. and Hinz, T. (2014). *Factorial Survey Experiments*. Thousand Oaks: SAGE Publications Ltd.
- Baert, S., De Pauw, A. -S. and Deschacht, N. (2016). Do employer preferences contribute to sticky floors? *Industrial & Labor Relations Review*, **69**, 714–736.
- Bakker, A. B. and Demerouti, E. (2017). Job demands-resources theory: taking stock and looking forward. *Journal of Occupational Health Psychology*, **22**, 273–285.
- Becker, G. S. (1957). *The Economics of Discrimination*. Chicago: University of Chicago Press.
- Bell, B. S. and Klein, K. J. (2001). Effects of disability, gender, and job level on ratings of job applicants. *Rehabilitation Psychology*, **46**, 229–246.
- Berger, J., Cohen, B. and Zelditch, M., Jr. (1972). Status characteristics and social interaction. *American Sociological Review*, **37**, 241–255.
- Bills, D. B., Di Stasio, V. and Gërkhani, K. (2017). The demand side of hiring: employers in the labor market. *Annual Review of Sociology*, **43**, 291–310.
- Boštjančič, E. and Koračin, N. (2014). Returning to work after suffering from burnout syndrome: perceived changes in personality, views, values, and behaviors connected with work. *Psihologija*, **47**, 131–147.
- Brouwers, E. P. M. *et al.* (2020). To disclose or not to disclose: a multi-stakeholder focus group study on mental health issues in the work environment. *Journal of Occupational Rehabilitation*, **30**, 84–92.
- Cassidy, H., DeVaro, J. and Kauhanen, A. (2016). Promotion signaling, gender, and turnover: new theory and evidence. *Journal of Economic Behavior & Organization*, **126**, 140–166.
- Cole, M. S., Feild, H. S. and Giles, W. F. (2004). Interaction of recruiter and applicant gender in resume evaluation: a field study. *Sex Roles*, **51**, 597–608.
- Correll, S. J. and Benard, S. (2006). Biased estimators? Comparing status and statistical theories of gender discrimination. *Social Psychology of the Workplace Advances in Group Processes*, **23**, 89–116.
- Derous, E., Ryan, A. M. and Serlie, A. W. (2015). Double jeopardy upon resume screening: when Ahmed is less employable than Aisha. *Personnel Psychology*, **68**, 659–696.
- DeVaro, J., Kauhanen, A. and Valmari, N. (2019). Internal and external hiring. *ILR Review*, **72**, 981–1008.
- Dewa, C. S. *et al.* (2021). Workers' decisions to disclose a mental health issue to managers and the consequences. *Frontiers in Psychiatry*, **12**, 1–8.
- EEOC. (2016). *Depression, PTSD, & Other Mental Health Conditions in the Workplace: Your Legal Rights*. Retrieved May 10, 2021, from: <https://www.eeoc.gov/laws/guidance/depression-ptsd-other-mental-health-conditions-workplace-your-legal-rights>.
- Ewens, M., Tomlin, B. and Wang, L. C. (2014). Statistical discrimination or prejudice? A large sample field experiment. *Review of Economics and Statistics*, **96**, 119–134.
- Fernandez-Lozano, I. *et al.* (2020). The hidden cost of flexibility: a factorial survey experiment on job promotion. *European Sociological Review*, **36**, 265–283.
- Grossi, G. *et al.* (2015). Stress-related exhaustion disorder – clinical manifestation of burnout? A review of assessment methods, sleep impairments, cognitive disturbances, and neuro-biological and physiological changes in clinical burnout. *Scandinavian Journal of Psychology*, **56**, 626–636.
- Hayes, A. F. (2017). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York: Guilford Publications.
- Ho, A. K. *et al.* (2015). The nature of social dominance orientation: theorizing and measuring preferences for intergroup inequality using the new SDO₇ scale. *Journal of Personality and Social Psychology*, **109**, 1003.
- Imai, K. *et al.* (2011). Unpacking the black box of causality: learning about causal mechanisms from experimental and observational studies. *American Political Science Review*, **105**, 765–789.
- Johnston, J. (2002). Tenure, promotion and executive remuneration. *Applied Economics*, **34**, 993–997.
- Kärkkäinen, R. *et al.* (2017). Systematic review: factors associated with return to work in burnout. *Occupational Medicine*, **67**, 461–468.
- Link, B. G. and Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, **27**, 363–385.
- Link, B. G. and Phelan, J. C. (2014). Mental illness stigma and the sociology of mental health. In R. Johnson, J. Turner and B. Link (Eds.), *Sociology of Mental Health: Selected Topics from Forty Years 1970s-2010s*. Cham: Springer, pp. 75–100.
- Lössbroek, J. *et al.* (2021). Age discrimination in hiring decisions: a factorial survey among managers in nine European countries. *European Sociological Review*, **37**, 49–66.
- May, R. W. *et al.* (2020). Burnout stigma inventory: initial development and validation in industry and academia. *Frontiers in Psychology*, **11**, 391.
- Mendel, R. *et al.* (2015). Managers' reactions towards employees' disclosure of psychiatric or somatic diagnoses. *Epidemiology and Psychiatric Sciences*, **24**, 146–149.
- Milgrom, P. and Oster, S. (1987). Job discrimination, market forces, and the invisibility hypothesis. *The Quarterly Journal of Economics*, **102**, 453–476.

- Shoji, K. *et al.* (2016). Associations between job burnout and self-efficacy: a meta-analysis. *Anxiety, Stress, & Coping*, **29**, 367–386.
- O'Connor, L. T. and Kmec, J. A. (2020). Is it discrimination, or fair and deserved? How beliefs about work, family, and gender shape recognition of family responsibilities discrimination. *Social Currents*, **7**, 212–230.
- Öhman, L. *et al.* (2007). Cognitive function in outpatients with perceived chronic stress. *Scandinavian Journal of Work, Environment & Health*, **33**, 223–232.
- Ozawa, A. and Yaeda, J. (2007). Employer attitudes toward employing persons with psychiatric disability in Japan. *Journal of Vocational Rehabilitation*, **26**, 105–113.
- Phelps, E. S. (1972). The statistical theory of racism and sexism. *American Economic Review*, **62**, 659–661.
- Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe–Crowne Social Desirability Scale. *Journal of Clinical Psychology*, **38**, 119–125.
- Rooman, C. *et al.* (2021). 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*, 1–10.
- Sterkens, P. *et al.* (2021). As if it weren't hard enough already: breaking down hiring discrimination following burnout. *Economics & Human Biology*, **43**, 101050.
- Van Belle, E. *et al.* (2018). Why are employers put off by long spells of unemployment? *European Sociological Review*, **34**, 694–710.
- Van Borm, H. and Baert, S. (2018). What drives hiring discrimination against transgenders? *International Journal of Manpower*, **39**, 581–599.
- Van Borm, H., Burn, I. and Baert, S. (2021). What does a job candidate's age signal to employers? *Labour Economics*, **71**, 102003.