



**In search of protective factors against burnout:
the role of psychological empowerment and perceived team empowerment**

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Abstract

The central aim of our study was to broaden knowledge on the variables that may help to reduce burnout. To this end, we investigated whether the association between three job demands (i.e. role conflict, emotional demands and cognitive demands) and burnout was moderated by psychological empowerment and perceived team empowerment. Participants were 1268 employees from two organisations (government employees = 287, hospital staff = 981). Latent moderated structural equations revealed different patterns of moderation in the samples. Psychological empowerment offset the influence of the three job demands on burnout in the hospital sample, whereas in the government organisation only emotional demands were buffered. Perceived team empowerment ameliorated the effect of emotional and cognitive demands on burnout in the government sample whereas in the hospital only emotional demands were moderated. Interestingly, both kinds of empowerment were significant moderators of emotional demands in the two samples. Overall, our results support the notion that psychological and perceived team empowerment can be relevant health-promoting factors that help to deal with high job demands and reduce burnout.

Key words: psychological empowerment, perceived team empowerment, burnout, personal resources, individual wellbeing.

Burnout is defined as a psychological reaction to chronic job stress (Maslach, Schaufeli, & Leiter, 2001). Though burnout has a long tradition of research, scholars and practitioners continue interested in this phenomenon (Bakker, Demerouti, & Sanz-Vergel, 2014) because its serious repercussions for individuals (Hakanen & Schaufeli, 2012), organisations (Bakker et al., 2014; Maslach et al., 2001) and societies (Ahola et al., 2009).

Accordingly, an important area of burnout research has been devoted to the identification of its precursors. Particularly, job demands - work factors that required efforts and have associated costs (Bakker et al., 2014)- have been found as the main precursors of burnout. Therefore, efforts to promote wellbeing at work have focused on eliminating or diminishing job demands. However, as removing job demands is not applicable in all the cases (i.e. emotional demands in health care occupations), variables that moderate the association between job demands and burnout become relevant.

In line with this argument, the central aim of the present study was to gain insight on the variables that moderate the path between job demands and burnout. In doing so, we analysed two variables that have shown to act as health-promoting factors: psychological empowerment and perceived team empowerment (Maynard, Mathieu, Gilson, O'Boyle, & Cigularov, 2012; Seibert, Wang, & Courtright, 2011).

From a motivation perspective psychological empowerment is the perception that individuals have about their own empowerment (Spreitzer, 2008), whereas perceived team empowerment is defined as individual perceptions about the empowerment in their team (Kirkman & Rosen, 1999).

On the basis of the Job demands-resources model (JD-R) (Bakker & Demerouti, 2007) and Conservation of resources theory (Hobfoll, 1989) we frame psychological and

perceived team empowerment as psychological resources that benefit workers by exerting a positive influence in the way workers perceived job demands and their ability to cope with them, reducing therefore the experience of burnout.

Accordingly, we explore whether workers with high psychological and perceived team empowerment experience less burnout when facing job demands compared to those with low psychological empowerment and perceived team empowerment

By examining the buffer effect that psychological and perceived team empowerment may have on the association between job demands and burnout our study makes several contributions. First, our study expands the literature on health-promoting factors by suggesting that both psychological and perceived team empowerment might be used to modify the strong association between some job demands and burnout. Extending, therefore, knowledge on promotion and prevention of burnout.

Second, drawing on previous work on empowerment we develop a model to increase wellbeing, which focuses on how individuals perceived themselves and their team. We hypothesize that these individual perceptions become relevant resources (personal and collective) that play a role at work because they: Assist workers to deal with job demands, minimizing their effect and increasing wellbeing. Our approach represents a theoretical contribution, since most of the current studies on empowerment and burnout adopt a multi-level perspective to integrate collective variables (Maynard et al., 2012).

Third, our study analyses job demands that are (1) highly prevalent in several occupations, (2) difficult to eliminate and (3) are important precursor of burnout (Maslach et al., 2001). Therefore, they represent an important challenge for practitioners and human resources managers. In this context, our study makes a valuable practical contribution since

we use available resources but rather unexplored resources (i.e. perceived team empowerment) to increase wellbeing at work.

Burnout

Burnout is a stress phenomenon originally characterized by emotional exhaustion- the experience of overextension and lack of emotional resources-, depersonalization- detached and callous attitudes towards the work, its outcomes and people related to the job - and reduced professional efficacy - negative self-evaluations towards the ability to perform the job (Maslach et al., 2001).

This tri-factor dimension has been questioned by several studies, which suggest that emotional exhaustion and depersonalization represent the core dimensions of burnout: energy and identification (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Workers who are emotionally exhausted feel drained and without energy to carry out their tasks whereas depersonalized workers are disconnected from their jobs. The perception of not being able to perform one's job - reduced efficacy – represents a consequence of the lack of energy and detachment (Schaufeli et al., 2002). Following this perspective, our study focuses on the abovementioned core dimensions: emotional exhaustion and depersonalization.

Because burnout represents an increasing problem for organisations, one of the key areas of research is the identification of its antecedents. Studies have explored different factors ranging from job-related and organisational to individual, family and societal aspects (Maslach et al., 2001). Although these studies have revealed that burnout is multi-

caused, meta-analytic evidence supports job demands as its main antecedents (Bakker et al., 2014; Maslach et al., 2001).

However, not all job demands are equally related to burnout. Research has shown that variables such as role conflict, role ambiguity, emotional demands and workload may be considered the most relevant predictors of burnout (Maslach et al., 2001; Zapf, Seifert, Schmutte, Mertini, & Holz, 2001). Based on these findings our study explores the relationship of role conflict, emotional demands and cognitive demands with burnout in two organisational contexts: a hospital and an administrative organisation.

Burnout as an energy-driven process

The Job demands-resources model proposes that the relationship between job demands and burnout can be explained via an energetic process (Bakker et al., 2014). Because of job demands are inherently taxing and require workers to invest energy and efforts, they cannot be met for long periods. When confronted with job demands for extensive periods without time to recover, workers undergo a progressive diminishing of their resources, and start taking distance from their jobs. In other words, they burn out. According to the JD-R model, the process leading to burnout corresponds to the health impairment process (Bakker, Demerouti, & Verbeke, 2004). This process however, does not end with the development of burnout. Instead, via burnout others negative outcomes may emerge, such as turnover intentions and absenteeism (Bakker et al., 2014).

Several studies lend support to the development of burnout originated by excessive job demands (Bakker et al., 2004; Maslach et al., 2001). For instance, Hakanen, Bakker, and Schaufeli (2006) found that pupil misbehaviour, workload and poor physical environment

increased burnout, which negatively affected perceived health and the ability to work in teachers. In the same vein, Bakker and colleagues (2004) found that emotional demands and work pressure significantly related to emotional exhaustion which then influenced in-role performance.

Besides the main effects of job demands, the JD-R model assumes that resources (i.e. from work, home or personal) may also participate in the health impairment process (Bakker et al., 2014). Drawing upon COR theory, the JD-R model originally proposed that job resources buffer the negative effects of job demands on wellbeing. Later on, the model extended this hypothesis to personal resources (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

However, most of the studies on job and personal resources have focused on their moderating effect on positive outcomes (i.e. work engagement) (Schaufeli & Taris, 2014). Specifically, these studies investigate how high job demands amplify the effect of job and personal resources on work engagement (Bakker et al., 2014). Although we acknowledge the contribution of this line of research, we think that the buffer role of resources in the health impairment process has been neglected. This argument is in line with Schaufeli and Taris (2014), who in their review of the JD-R model highlight the need for further investigation on the buffer role of personal resources in the association between job demands and burnout.

Our study seeks to increase knowledge on the protective role of resources in the health impairment process by analysing two kinds of resources: psychological and perceived team empowerment (Kirkman & Rosen, 1999; Spreitzer, 2008).

The protective role of resources

COR theory defines resources as entities (i.e. conditions, objects, etc.) with instrumental or intrinsic value (Gorgievski & Hobfoll, 2008). This definition encompasses personal resources, e.g. positive evaluations about one's self (i.e. self-esteem) or the environment (i.e. hope) (van den Heuvel, Demerouti, Bakker, & Schaufeli, 2010). These positive beliefs play an important role in the adaptation to the environment because they prompt personal development, support the accomplishment of goals and help to deal with difficult situations (van den Heuvel et al., 2010).

Personal resources are hypothesized to function as moderators between the individual and the environment in two ways: (1) by enhancing the effect of job resources on work engagement under difficult conditions and (2) by buffering the effect of job demands on burnout (Schaufeli & Taris, 2014). Our study focuses on the second assumption, namely how personal resources may buffer the negative influence of job demands on burnout.

When confronted with adversity or challenges, such as job demands, people rely on their reservoir of resources to offset the adverse effects on health (Gorgievski & Hobfoll, 2008). In the work context, personal resources represent an important psychological asset because they influence the way workers perceive job demands in relation to wellbeing. Workers high in personal resources are expected to experience less stress associated with job demands than those low in personal resources (van den Heuvel et al., 2010).

The few studies analysing personal resources in relation to negative outcomes (i.e. burnout) show mixed results (Bakker et al., 2014). For instance, the seminal study of Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) on personal resources did not find

evidence for the buffer effect of optimism, self-efficacy and organizational-based self-esteem on the relationship between job demands and exhaustion.

These results differed from more recent studies, which have shown that others personal resources moderate the associations between job demands and negative outcomes. For example, Onwezen, van Veldhoven and Biron (2014) found that psychological flexibility offset the impact of emotional demands on burnout and performance. In the same vein, Moreno-Jiménez, Garrosa, Corso, Boada and Rodríguez-Carvajal (2012) provided evidence for the buffer effect of psychological capital (optimism) and hardly personality (commitment and control) on the influence of role stress on exhaustion.

These inconclusive results suggest that more research is needed in order to clarify the potential effect that personal resources may have on the path job demands-burnout (Schaufeli & Taris, 2014). Accordingly, our study seeks to contribute to the literature on personal resources by analysing psychological empowerment.

Psychological empowerment in the JD-R model

In the literature on empowerment at work two main trends have been developed: the structural approach and the motivational approach (Spreitzer, 2008). While the structural approach defines empowerment as the social structures at work that promote the transference of power, the motivational approach focuses on workers' experience of empowerment (Spreitzer, 2008).

Because we are interested in the individuals' perception of empowerment, we adopt the motivational approach. This line of research proposes the concept of psychological empowerment, which consists of four positive self-evaluations: meaning, self-

determination, competence and impact (Spreitzer, 1995, 2008). Meaning constitutes the value that workers assign to their jobs in relation to their beliefs and standards. Self-determination involves workers' beliefs in their capability to initiate, regulate and continue their job. Competence reflects workers' beliefs in their abilities and skills to carry out their jobs with success. Impact is the degree to which workers think they can make changes in their organisation through their jobs. This definition assumes that workers feel psychologically empowered only if the four dimensions are experienced (Spreitzer, 2008).

As psychological empowerment reflects positive beliefs about one's self in the work context, we propose to frame it as a personal resource. According to this, psychological empowerment would represent a source of strength that fosters wellbeing and helps workers to face job demands (Gorgievski & Hobfoll, 2008; van den Heuvel et al., 2010).

Several studies support the positive influence that psychological empowerment exerts on workers' health. For instance, a review of 20 years of empowerment research shows that psychological empowerment has been associated with high job satisfaction, work commitment and better work performance (i.e. employee productivity, managerial effectiveness) and low strain and turnover (Spreitzer, 2008). These results align with a meta-analysis of 142 studies which found that psychological empowerment was positively related to work commitment and job satisfaction and negatively associated with turnover intentions and strain (Seibert et al., 2011).

Although the buffer effect of psychological empowerment has been less investigated, studies generally support its moderating role in the association between job demands and health outcomes (Spreitzer, 2008). For example, Erdogan and Bauer, (2009) found that psychological empowerment attenuated the negative effect of perceived overqualification

on voluntary turnover, intention to remain and job satisfaction. In the same vein, Hochwalder (2007) reported that workers with high psychological empowerment exhibited less exhaustion compared to those with low psychological empowerment.

Despite these findings, few researchers have explored the buffer hypothesis of psychological empowerment (Maynard et al., 2012). Therefore, there is a need for further development of the potential moderating role that psychological empowerment plays in the association between job demands and wellbeing. In particular, we think that the protective influence of psychological empowerment could add to the literature on burnout prevention and work design. With this in mind, our study analyse whether psychological empowerment moderates the influence of three relevant job demands (emotional demands, role conflict and cognitive demands) on burnout.

We advance that in the health impairment process psychological empowerment not only influences burnout, but also its association with job demands (Boudrias et al., 2011). Workers who evaluate themselves as competent, able to regulate their job-activities, find their jobs meaningful and having positive consequences for their organisation are expected to perceive role conflict, emotional demands and cognitive demands as less detrimental for their wellbeing. This is because psychological empowerment adds to the reservoir of resources that workers may use to cope with difficult situations, such as demands at work. Based on this reasoning we hypothesize that psychological empowerment buffers the effects of job demands on burnout (Hypothesis 1).

Perceived team empowerment

Based on the seminal work of Spreitzer (1995) on psychological empowerment, Kirkman and Rosen (1999) extended empowerment research by including teams. These authors developed the concept of team empowerment, which involves shared team members' perceptions of the level of empowerment in their team.

Recent literature reviews (Spreitzer, 2008) and meta-analyses (Maynard et al., 2012; Seibert et al., 2011) have revealed the benefits that team empowerment has in work teams. For instance, team empowerment has been related to better team morale, team satisfaction, team commitment and team performance (i.e. team productivity) (Maynard et al., 2012).

However, research on empowerment in groups has restricted its scope to the team level of analysis, disregarding the contribution of individual level processes (Walter & van der Vegt, 2013). We argue that collective variables, such as team empowerment, can also be analysed from the individual perspective. This means that instead of focusing on the shared aspects within teams, we are interested in the particular perception that team members have with respect to some team phenomena. We suggest that the inclusion of the individual's view of collective phenomena could enrich research and practice on the benefits of collective aspects.

Accordingly, we propose the concept of perceived team empowerment. Based on Kirkman and Rosen (1999), we define perceived team empowerment as individual members' perception regarding the empowerment in their group.

Paralleling psychological empowerment, perceived team empowerment is composed of four dimensions: meaningfulness, potency, autonomy and consequences (Kirkman & Rosen, 1999). Meaningfulness, similar to meaning, refers to the extent to which team

members consider the work the team does as valuable and with purpose (Thomas & Velthouse, 1990, in Spreitzer, 2008). Potency is analogous to competence and involves team members' perceptions whether the job their team does is effective and is well performed. Autonomy aligns with self-determination and refers to the extent to which team members perceive the group has independence and discretion to perform their tasks. Consequences, which parallels impact, is defined as members' perceptions whether the job their team performs make changes in their organisation. Perceived team empowerment is experienced when the four dimensions are included (Kirkman & Rosen, 1999; Maynard et al., 2012; Seibert et al., 2011).

We argue that as psychological empowerment, perceived team empowerment could be framed as a resource that contributes not only to collective aspects of the team but also it influences individual processes of team members, such as individual wellbeing. To explain the effects of perceived team empowerment on individual outcomes we draw on COR theory (Hobfoll, 1988) and Broaden and build theory (Fredrickson, 2001). COR theory assumes that the possession of resources protects individuals against resources loss, such as those experienced in work-related stressful situations (i.e. emotional demands and role conflict). In the same vein, one of the assumptions of Broaden and build theory is that reservoirs of resources provide the opportunity to develop repertoires to face difficult situations and their consequences. Then, the individual perception of a collective aspect, such as team empowerment, could positively influence the way individual undergoes to stress by either changing the individual strategies to deal with stressors and their effects or by modifying the perception of how stressors affect wellbeing. Resulting in weaker associations between stressors and their negative consequences.

Based on these arguments, we propose that perceived team empowerment participates in the health impairment process moderating the influence of individual job demands on burnout. When workers feel they work in an autonomous and skilful team, whose work is valuable and influences their organisation, they are likely to experience less burnout even when facing high job demands (i.e. role conflict, emotional demands and cognitive demands). Accordingly, perceived team empowerment will buffer the effect of individual job demands on individual burnout (Hypothesis 2).

Methods

Procedure and participants

Data for our study were collected in two samples: among government employees of an administrative institution and among workers in a public hospital. Both organisations were contacted to participate in a larger project aimed to promote wellbeing at work. First, informative meetings were arranged with the managers to explain the nature of the project. Then, the research group in collaboration with the human resources departments informed workers about the purpose and conditions of the research project. The participation in the study was voluntary and confidential.

Data were collected using paper and pencil questionnaires. In addition to the questionnaires, all the workers received a letter explaining the study, the confidentiality of the data and the research group in charge of the study. Because the samples were relatively diverse (i.e. blue collar and white collar workers) the data collection procedure was adapted to the working hours of the sample.

Sample 1: Government employees

Data for sample 1 consisted of 287 workers from a Chilean government institution in the administrative area (56% response rate). The questionnaires were distributed by the human resources department along with locked boxes in every work-unit, were the questionnaires were deposited and gathered after three weeks.

The sample included 56% females and 44% males. Less than of one percent of the participants was under 25 years old, whereas 28% was between 26 and 40 years old. The modal age was 41-60 years (65 %) and only 7% was older than 60 years old. Eight percent completed primary education, 25% finished secondary school, 59% had university studies of which 43% obtained a bachelor degree and 8% pursued a post graduate diploma (i.e. master or PhD). Of the participants, 83 % were white collar workers (i.e. secretaries, economists, engineers) whereas 17% were blue collar workers (i.e. electricians, technicians). Organisational tenure ranged from less than 6 months to more than 10 years (83% was more than 10 years in the organisation).

Sample 2: Hospital staff

The sample 2 consisted of 981 workers from a Chilean hospital (56% response rate). The questionnaires were delivered by the research group in collaboration with the human resources department. Respondents filled out the questionnaires during working hours. Then, questionnaires were returned in closed envelopes and sent back to the human resources department.

Of the participants 72% were female and 28% were male. About 10% were under 25 years old, whereas 40% ranged between 26 and 40 years old. The modal age was between 41 and 60 years (47) and only 4% were over 60 years old. Of the respondents 2% completed primary school, 31% completed their secondary school, and 49% had university

studies of which 41% obtained a bachelor degree, whereas 19% had a postgraduate diploma. About 21% had less than 2 years of organisational tenure, 17% reported between 2 and 5 years in the organisation, 16% had worked between 5 and 10 years, whereas almost half of the sample had more than 10 years of tenure (46%).

Measures

Job demands. Cognitive demands were measured using the four-item scale of cognitive demands of the Chilean version (SUSESO-ISTAS) of the Copenhagen Psychosocial Questionnaire (Gobierno de Chile. Superintendencia de Seguridad Social, 2009). An example item is “Does your work require you to make difficult decisions?”. All items were rated on a five-point Likert scale ranging from 1 (*never*) to 5 (*always*). Emotional demands were assessed using the 3-item scale of emotional demands from the SUSESO-ISTAS (Gobierno de Chile. Superintendencia de Seguridad Social., 2009). A sample item is “Does your work put you in emotionally disturbing situations?”. Each item was rated on a five-point scale ranging from 1 (*never*) to 5 (*always*). Role conflict was measured via three items based on the role conflict scale of SUSESO-ISTAS (Gobierno de Chile. Superintendencia de Seguridad Social., 2009). One example item is “Do you do things at work, which are accepted by some people but not by others?”. Responses were rated on a five-point scale ranging from 1 (*never*) to 5 (*always*).

Moderators. Psychological empowerment was assessed with the Empowerment Scale developed by Spreitzer (1995) and translated to Spanish using Brisling’s method (1986). This scale included four dimensions with three items each: meaning (i.e. “The work I do is meaningful to me”), competence (i.e. “I am confident about my ability to do my job”), self-

determination (i.e. “I can decide on my own how to go about doing my work”) and impact (i.e. “I have significant influence over what happens in my department”). Responses were rated on a four-point scale ranging from 1 (*disagree*) to 4 (*agree*). Based on Principal Component Analyses (PCA) and Confirmatory Factor Analyses (CFA), the scales were collapsed in one measure.

Perceived team empowerment was measured with the twelve-item scale developed by Kirkman and Rosen (1999). Following Brisling (1986) all the items were translated to Spanish. The scale is composed of four dimensions: meaningfulness (i.e. “My team/section feels that its tasks are worthwhile”), potency (i.e. “My team/section believes that it can be very productive”), autonomy (i.e. “My team determines as a team how things are done in the team”) and consequences (i.e. “My team/section performs tasks that matter to this company”). PCA and CFA analyses showed that all the items loaded on the same factor, therefore, composite scores were used.

Outcomes. Burnout was measured using the scales of emotional exhaustion and depersonalization of the Spanish version of Maslach burnout inventory-general survey (Salanova, Schaufeli, Llorens, Peiró, & Grau, 2000). We assessed emotional exhaustion and depersonalization with five items each (Schaufeli et al., 2002). Example items are “I feel emotionally drain from my work” and “I have become less enthusiastic about my work”, respectively. The items were coded on a five-point scale. Similar to psychological and team empowerment, PCA and CFA lent support to the one-factor structure of burnout. Accordingly, a composite score of burnout was used.

Analyses

Preliminary analyses. Following Weston and Gore (2006), data were inspected for outliers, non-normality and multicollinearity. The data showed that only three items of psychological empowerment exhibited non-normal distributions, whereas the rest of the variables were normally distributed. Finally, correlations showed no multicollinearity issues. Next, to determine the construct validity of our variables two sets of CFAs were conducted using the Mplus 6.1 software package (Muthén & Muthén, 2007). First, a model with our two mediators (psychological and perceived team empowerment) modelled as separated factors was tested against a model in which the mediators loaded on one factor. Second, a model composed of four factors (three job demands and burnout) was compared with a model in which all the items loaded on the same factor.

The goodness of fit of the models was examined using the following absolute and relative fit indexes: Root mean square error of approximation (RMSEA), the comparative fit index (CFI) and the Tucker-Lewis Index (TLI). Because the competing models were not nested, two indexes were used to evaluate the best fit: the Akaike information criterion (AIC) and Bayes information criterion (BIC) (Muthén & Muthén, 2007).

Moderation Analyses. The moderation hypotheses were tested by means of Moderated structural equations (LMS) using the Mplus 6.1 software package (Muthén & Muthén, 2007). The main advantage of this technique compared to others (such as ANOVA or regression analysis) is that it differentiates the error variance from the true variance (Moosbrugger, Schermelleh-engel, Kelava, & Klein, 2006). Furthermore, evidence has shown that LMS is one of the most efficient and reliable techniques to estimate non-linear effects. A total of 8 LMS were calculated, one per interaction effect (i.e. cognitive demands

X psychological empowerment). Each model included one job demand, the moderator (i.e. psychological or team empowerment) and the criterion variable (i.e. burnout) (Moosbrugger et al., 2006). All significant interactions were plotted using Mplus 6.1 to examine the direction of the associations.

Results

Descriptives and correlations

Table 1 shows the means and standard deviations of the variables as well as their intercorrelations and reliabilities. All the study variables were significantly correlated and the directions of these associations were in line with our hypotheses. In the group of job demands, role conflict and emotional demands were positively related to burnout whereas cognitive demands showed a negative association. The mediators, psychological and perceived team empowerment, displayed negative associations with burnout, role conflict and emotional demands and a positive relationship with cognitive demands. With regard to the reliability indexes, all the measures showed good levels of reliability with Cronbach's alpha coefficients over .70 (Nunnally & Bernstein, 1994).

Confirmatory factor analyses

Table 2 displays the fit indices for the two sets of CFAs. As can be seen, in the first set the two-factor model of psychological and perceived team empowerment yielded a better fit than the one-factor model. Similarly, in the second set of CFAs, the model in which items of job demands and burnout loaded on their respective factors provided a better data fit in

relation to the one-factor model. These results confirm that our variables are different, though related, they constructs.

Moderation analyses

Direct effects

As displayed in Tables 3 and 4, in both samples the three job demands and the two moderators (psychological and team empowerment) showed significant associations with burnout. As expected, the three job demands were positively related to burnout whereas psychological and perceived team empowerment exhibited negative associations with burnout.

Interactions effects

Psychological empowerment. LMS lent partial support to the moderating role of psychological empowerment in the relationship between job demands and burnout (Table 3). Four out of six interactions were found significant. Interestingly, most of these interactions were confirmed in the hospital sample, in which the influence of the three job demands on burnout was moderated by psychological empowerment. In contrast, in the administrative sample psychological empowerment only moderated the effect of emotional demands on burnout.

Each of the four models in which the interactions were significant were compared to an alternative model in which the all interactions were constrained to 0. By means of the log likelihood ratio test we found that the models with the interactions yielded a better fit than the constrained models (Table 5).

Finally, we plotted the four significant interactions to examine the direction of the paths. All the interactions exhibited the same pattern: workers with high psychological empowerment showed lower burnout than those with low psychological empowerment even under high job demands (figure 1). Therefore, psychological empowerment buffered the effect of job demands on burnout.

Perceived team empowerment. Similar to psychological empowerment, the LMS partially supported the buffer role of perceived team empowerment in the association job demands-burnout. As displayed in table 4, three out of six interactions were significant. Contrary to the results found on psychological empowerment, most of the interactions were found in the administrative staff. In this sample, perceived team empowerment moderated the influence of all the job demands on burnout, whereas in the hospital sample perceived team empowerment only moderated the effect of emotional demands on burnout.

The log-likelihood test confirmed that the models with the interactions showed a better fit than the constrained models (where the interactions were set to 0) (see table 5).

The graphical representations of the interactions showed that perceived team empowerment buffered the effect of job demands on burnout. Then, workers with high perceived team empowerment showed lower levels of burnout compared to those with low perceived team empowerment even in conditions of high job demands.

Overall, our results showed that both psychological and perceived team empowerment buffered the impact the job demands on burnout, with seven out of twelve significant interactions.

Discussion

The central aim of our study was to broaden knowledge on the variables that may help to reduce burnout. To this end, we investigated whether the association between three relevant job demands (role conflict, emotional demands and cognitive demands) and burnout was moderated by psychological and perceived team empowerment. Following the health impairment process of the JD-R model (Bakker et al., 2014), we advanced that psychological empowerment, defined as a personal resource, ameliorated the negative effect of job demands on burnout.

LMS analyses partially supported this hypothesis. While in the hospital sample psychological empowerment buffered the influence of the three job demands, in the administrative sample psychological empowerment only offset the effect of emotional demands on burnout. Hospital staff exposed to high levels of role conflict, emotional demands and cognitive demands, experienced less burnout if they felt high psychological empowerment compared to those with low psychological empowerment. Government employees facing high emotional demands showed lower burnout when they experienced high psychological empowerment.

These differences may be explained in part by the nature of the work implied in both samples. Hospitals tend to hire highly skilled and specialised workers who even though they work in teams or work units, tend to assume individual responsibility for their jobs (i.e. in case of failure or negligence they face individual consequences). Then, for hospital staff psychological empowerment acquired more relevance when dealing with job demands compared to government employees.

Although only seven out of twelve interaction effects were significant, our findings support the notion that psychological empowerment may act as a personal resource helping employees to cope with adverse conditions (i.e. high job demands) and therefore, increasing wellbeing.

Furthermore, our results are in line with the few studies available on the buffer role of psychological empowerment. For instance, in Erdogan and Bauer (2009) psychological empowerment diminished the negative effect of overqualification on voluntary turnover, the intention to remain and job satisfaction. Similarly, Mishra & Spreitzer (1998, in Spreitzer, 2008) showed that psychological empowerment helped workers to keep their hope and attachment when their organisations adopted downsizing strategies.

As regards to our second hypothesis, namely the buffer role of perceived team empowerment, results provide partial support. LMS analyses evidenced that perceived team empowerment offset the influence of emotional and cognitive demands in the governmental organisation whereas, in the hospital perceived team empowerment only counteracted the effect of emotional demands on burnout. As expected, in conditions of high job demands workers who experienced high perceived team empowerment reported less burnout than those with low perceived team empowerment.

In line with our previous argument, these differences can be attributed to the content and nature of work involved in the samples. The government organisation was composed of older workers with more tenure compared to the hospital (83% of the participants of the government organisation had more than 10 years of tenure). Several studies have shown that team empowerment positively associates with age and tenure (Maynard et al., 2012). Moreover, government employees mostly performed their activities in the same work-unit

or team whereas the hospital staff carried out their tasks in different units (i.e. surgeon assistants worked in several work-units such as paediatrics and emergency service). Accordingly, government employees had more opportunities to develop a sense of group and therefore, appraise some team aspects. Then, because of the nature of their job, for government workers perceived team empowerment as a resource they can develop and rely on to face their job demands and diminish stress, such as burnout.

Different from the work on psychological empowerment, as far as we know there are no studies testing the moderating effect of perceived team empowerment on individual wellbeing (Maynard et al., 2012; Seibert et al., 2011). Therefore, because of the exploratory nature of our findings, our results should be interpreted with caution. Further studies are needed to confirm the generalizability of our study.

Overall, our findings tend to support the health-promoting role that both psychological and perceived team empowerment play in the health impairment process. Although only seven out of twelve interactions effects were significant, all of these effects were consistent with our hypotheses. Higher levels of psychological and perceived team empowerment mitigated the influence of job demands on burnout. Furthermore, both kinds of empowerment across samples mitigated the detrimental influence of emotional demands on burnout.

Limitations. Before our final conclusion we need to comment on the limitations of our study and the future research directions. First, although our analyses were drawn on two heterogeneous samples (including different occupations such as librarians, technicians, surgeons, gardeners and engineers, to name a few), both of them belong to the service sector. Because burnout is a problem that also affects other areas, future studies should

include samples from other sectors such as e.g. industry and farming. Second, another point that could influence our results is the predominance of women in our samples. This is however, a common tendency in organisations from the service sector. Although initial studies on empowerment showed gender differences in the experience of psychological empowerment, further meta-analyses did not support these results (Seibert et al., 2011; Spreitzer, 2008). Third, instead of calculating one model with all the interactions, we run separated models for each interaction. This decision was mainly based on the use of LMS, which requires parsimonious models (Moosbrugger et al., 2006). Although this technique is relatively new to study moderation, it is highly recommended because it offers more advantages compared to others common techniques to test interaction effects (i.e. regression analysis, path analysis and analysis of variance). For instance, LMS allows calculating interactions between latent continuous variables and their associated measurement errors, leading to more reliable estimates (Moosbrugger et al., 2006). Furthermore, when comparing LMS with others techniques using similar approaches (i.e. SEM), LMS provides more precise estimates. Additionally, LMS allows to control multicollinearity issues which are common when using interaction terms (Moosbrugger et al., 2006). Finally, given that our study used a cross-sectional design, we cannot draw causal inferences. To compensate this, we built our hypothesized model on well documented theories besides a strong body of evidence (several meta-analyses) (Bakker et al., 2014; Maynard et al., 2012; Seibert et al., 2011; Spreitzer, 2008). However, further research with longitudinal designs is necessary to confirm our results.

Theoretical contributions

Burnout is a crucial topic for occupational health psychology due to its increasing prevalence, difficult treatment and recovery (Maslach et al., 2001). Hence, factors that help to prevent or reduce burnout have captured the attention of researchers and practitioners. In this context, we think that the findings from our study make several contributions to the current literature. Since the buffer role of job resources has been covered by several studies (Schaufeli & Taris, 2014), we focused on the influence that personal (psychological empowerment) and perceived collective resources (perceived team empowerment) exert on the relationship job demands-burnout.

Whilst our study did not support all the interaction effects, it offered consistent evidence in relation to the path between emotional demands and burnout. First, we showed that the perception of one's empowerment (i.e. psychological empowerment) can modify the negative effect that emotional demands have on burnout across different occupations. Therefore, these findings further our understanding of the benefits that personal resources, and psychological empowerment in particular, may have for workers dealing with high emotional demands. More importantly, our study makes a unique contribution by showing that the perception of a collective variable (i.e. perceived team empowerment) also plays a role in the link between individual job demands and burnout. In particular, we demonstrated that perceived team empowerment ameliorated the influence of emotional demands on burnout across occupations.

The present results are significant in at least two major respects. First, as regards to burnout research, our study provides a new understanding of the role that perceived collective resources have on individual wellbeing. Second, our findings add to the existing

research on collective variables. Traditionally, studies on collective variables tend to use a multi-level approach which emphasizes the shared aspects of the variables (Maynard et al., 2012). Our study innovates by exploring how individual perceptions of a collective variable (perceived team empowerment) influence individual wellbeing. In doing so, we demonstrated that individual perceptions of collective variables can be used to promote individual workers health.

Practical implications

Our study also offers some practical applications. First, our findings show how organisations and practitioners may benefit by using both psychological and perceived team empowerment as a means to prevent burnout due to high job demands. Different from variables such as personality traits, both kinds of empowerment are characterized by being malleable. This means that they can be influenced by the environment (Spreitzer, 2008). Hence, organisations can integrate empowerment (psychological and perceived team empowerment) as part of their initiatives to improve wellbeing at work.

Second, the fact that our results differed among the study samples may suggest that the moderating effect of psychological and perceived team empowerment might vary depending on the type of job. For instance, our results suggest that psychological empowerment may be helpful in jobs that require workers to rely more on their own abilities, assume individual responsibilities and have multiple team membership. On the contrary, perceived team empowerment may be advantageous for more stable jobs (in terms of tenure), which tend to maintain fix work-units (such as public institutions). These differential effects may help practitioners to create more tailored health-promoting interventions aimed to prevent burnout in specific occupational settings.

A further implication is related to the role of psychological empowerment in relation to emotional demands. Our results suggest that empowerment (psychological and perceived team empowerment) may be a critical variable to cope with high emotional demands and prevent burnout. This is particularly relevant when emotional demands are inherent to the occupation. In these cases, the promotion of psychological and perceived team empowerment may help workers to successfully deal with emotional demands and therefore, avoid or diminish their negative consequences such as burnout.

Conclusion

The evidence from this study points towards the idea that psychological and perceived team empowerment can be relevant health-promoting factors for organisations. In general, our results suggest that both kinds of empowerment acquired particular relevance in the context of high job demands. This implies that psychological and perceived team empowerment may alleviate burnout caused by excessive job demands.

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Table 1

Summary of Means, Standard Deviations, Intercorrelations and Coefficient Alphas for the Study Variables (N=1268)

Measure	Mean	SD	1	2	3	4	5	6
1. Role conflict	2.51	.92	(.84)					
2. Emotional demands	3.19	.94	.52**	(.78)				
3. Cognitive demands	4.02	.69	-.10**	.12**	(.79)			
4. Psychological empowerment	3.63	.33	-.26**	-.18**	.27**	(.70)		
5. Perceived team empowerment	3.39	.50	-.31**	-.26**	.25**	.39**	(.87)	
6. Burnout	2.38	.81	.57**	.56**	-.18**	-.36**	-.38**	(.90)

Note. **. All coefficients are significant at $p < 0.01$ (2-tailed).

Table 2

Goodness-of-Fit indicators of the Confirmatory Factor Analyses for the two samples (Sample 1 N=287, Sample 2 N=981)

Model	<i>df</i>	χ^2	RMSEA	CFI	TLI	AIC	BIC
Sample 1							
Job demands and burnout							
Single factor	189	1937.07	.16	.62	.58	21278.69	21527.25
Four factor	179	440.66	.06	.94	.93	19802.28	20090.30
Moderators: psychological and perceived team empowerment							
Single factor	252	1791.18	.13	.55	.51	15189.97	15474.42
Two factor	229	585.83	.06	.90	.87	14030.62	14405.93
Sample 2							
Job demands and burnout							
Single factor	189	5142.10	.14	.61	.57	74789.56	75115.62
Four factor	179	897.48	.056	.94	.93	70564.94	70942.75
Moderators: psychological and perceived team empowerment							
Single factor	252	3607.23	.10	.63	.59	57971.53	58344.40
Two factor	229	948.34	.05	.92	.90	55358.64	55850.60

Table 3

Parameter Estimates for Latent Moderated Structural Equations of Burnout: Interactions of Job Demands and Psychological Empowerment

Predictor	Sample 1 (N= 287)		Sample 2 (N=981)	
	UPC	SD	UPC	SD
Cognitive demands	.16**	.06	.09**	.03
Psychological empowerment	-1.46**	.21	-4.16**	.78
Cognitive demands x Psychological empowerment	-.36	.21	-1.23*	.60
Emotional demands	.48**	.05	.38**	.03
Psychological empowerment	-.77**	.18	-2.76**	.59
Emotional demands x Psychological empowerment	-.42*	.17	-1.39**	.45
Role conflict	.64**	.09	.49**	.04
Psychological empowerment	-1.11**	.18	-1.82**	.47
Role conflict x Psychological empowerment	-.16	.24	-.90*	.43

Note. UPC = unstandardized path coefficient

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

Table 4

Parameter Estimates for Latent Moderated Structural Equations of Burnout: Interactions of Job Demands and Team Empowerment

Predictor	Sample 1 (N= 287)		Sample 2 (N=981)	
	UPC	SD	UPC	SD
Cognitive demands	.15**	.06	.08*	.03
Team empowerment	-1.64**	.21	-.96**	.10
Cognitive demands x team empowerment	-.83**	.21	-.14	.13
Emotional demands	.46**	.05	.38**	.03
Team empowerment	-.73**	.18	-.61**	.80
Emotional demands x team empowerment	-.36*	.17	-.19*	.45
Role conflict	.59**	.09	.48**	.04
Team empowerment	-1.06**	.19	-.55**	.08
Role conflict x team empowerment	-.04	.21	-.11	.09

Note. UPC = unstandardized path coefficient

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

Table 5

Goodness-of-fit indices of LMS with significant interactions

Model	SSABIC	AIC	LL (fp)	$\Delta\chi^2$	Δfp
Sample 1 (N= 287)					
Emotional demands x Psychological empowerment	19218.42	19156.9	-9499.48 (79)		
Emotional demands x Psychological empowerment constrained to 0	69687.43	69531.27	-34687.63 (78)		
Cognitive demands x team empowerment	1164.81	21101.46	-10468.73 (82)		
Cognitive demands x team empowerment constrained to 0	79089.14	8926.98	-39382.49 (81)		
Emotional demands x team empowerment	20042.41	19981.38	-9911.69 (79)		
Emotional demands x team empowerment constrained to 0	5430.96	5274.81	-37559.40 (78)		
Sample 2 (N=981)					
Cognitive demands x Psychological empowerment	73340.08	73175.92	-36505.96 (82)		
Cognitive demands x Psychological empowerment constrained to 0	73341.03	73178.87	-36508.43 (81)		
Emotional demands x Psychological empowerment	69676.75	69518.59	-34680.29 (79)		
Emotional demands x Psychological empowerment constrained to 0	69687.43	69531.27	-34687.63 (78)		
Role conflict x Psychological empowerment	73043.32	72879.16	-36357.58 (82)		
Role conflict x Psychological empowerment constrained to 0	73044.43	72882.26	-36360.13 (81)		
Emotional demands x team empowerment	75429.27	75271.11	-37556.55 (79)		
Emotional demands x team empowerment constrained to 0	75430.96	75274.81	-37559.40 (78)		

Note. SSABIC sample size adjusted Bayesian information criterion, AIC Akaike information criterion, LL log likelihood, fp number of free parameters

Figure 1

Interaction between Psychological Empowerment and Emotional Demands on Burnout in Hospital Staff (N=981)

