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Research Article

Role of psychological empowerment in the reduction of burnout in Canadian healthcare workers

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Abstract In this study, we investigated the role of psychological empowerment as a protective factor for burnout among workers exposed to work-related stressors (e.g. daily hassles, overload, job changes). A cross-sectional questionnaire study was conducted, with a convenience sample of 401 healthcare workers. Hierarchical multiple regressions were performed to test main and moderating effects of empowerment cognitions. Results revealed partial support for the hypotheses. Only the job meaningfulness cognition exerts a beneficent main effect on all burnout symptoms beyond the effect of stressors. Some moderating effects differing according to burnout dimensions were also found. Most interestingly, high levels of empowerment cognitions accentuate the effect of change-related resources in the reduction of emotional exhaustion. Because psychological empowerment has beneficial effects, organizations could rely on different strategies to enhance it.

Key words burnout, healthcare, psychological empowerment, stressor, workforce.

INTRODUCTION

Being part of a public system, Canadian healthcare organizations are under considerable pressure to perform, given increased demands associated with population aging and a shortage of qualified personnel. Many changes were implemented in the past decade to meet this challenge (Laschinger *et al*., 2006). Therefore, in addition to daily stressors and heavy workloads, healthcare workers are commonly exposed to multiple changes in a context of limited resources. These different stressors – high demands and low resources – require employees to invest supplemental energy at work, and could eventually lead to burnout. Because environmental stressors are not expected to decrease in the near future in healthcare organizations (Laschinger *et al*., 2006), the search for protecting factors against burnout, such as psychological empowerment (PE), is particularly relevant.

PE is a motivational orientation composed of four cognitions (meaning, competence, autonomy, and impact), reflecting that an individual feels motivated and competent to actively fulfill work expectations (Spreitzer, 1995), and therefore, represents a job adjustment indicator (Vardi, 2000). These cognitions imply that employees: (i) find their jobs meaningful; (ii) feel competent to successfully perform job tasks; (iii) feel they have sufficient autonomy at work; and (iv) believe their actions can impact their work environment. PE tends to reflect the quality of the fit between individual characteristics and job requirements. Therefore, PE can be achieved both by maximizing person–job fit in selection procedures and through structural interventions, where the job context is modified to better match employees' needs (Spreitzer, 1995; Laschinger *et al*., 2006). Laschinger *et al*.'s (2006) study substantiates the proposition that structural empowerment can positively influence job fit perceptions, which in return can diminish emotional exhaustion, one of the main burnout symptoms.

This study verifies whether PE among Canadian healthcare workers can reduce the effects of stressors on three burnout symptoms: emotional exhaustion, cynicism, and feelings of reduced professional efficacy (Maslach *et al*., 2001). Emotional exhaustion occurs when an employee feels that they are unable to further invest themselves in their tasks. Cynicism refers to a cognitive distance or indifference regarding one's job. Reduced professional efficacy refers to a feeling of reduced competence to meet present and future job demands.

To better understand and prevent burnout, this study aims to investigate: (i) the main effects of PE on burnout based on multidimensional measures and a multivariate approach, including control variables; and (ii) the moderating role of PE on the relations between stressors and burnout among Canadian healthcare workers.

Literature review: psychological empowerment and burnout

Many studies have found that PE is negatively related to work-related strain and burnout (Spreitzer *et al*., 1997;

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Laschinger *et al*., 2001; 2003; Hochwälder & Brucefors, 2005; Hochwälder, 2007; Boudrias *et al*., 2010; Cavus & Demir, 2010). However, some of these studies were conducted in non-healthcare organizations (Spreitzer *et al*., 1997; Boudrias *et al*., 2010) and relied on global PE measures (Laschinger *et al*., 2001; 2003; Hochwälder, 2007; Cavus & Demir, 2010) or a reduced set of burnout indicators (e.g. Laschinger *et al*., 2001; 2003), rather than on appropriate multidimensional measures. Furthermore, with one exception (Hochwälder, 2007), the effect of empowerment was not studied beyond the effects of stressors. Yet it would be relevant to verify if PE can still reduce burnout beyond the effects of stressors, because their continued presence is expected. The authors of one study conducted in the healthcare context suggested that each of the four empowerment cognitions are related to at least one burnout symptom, although the effects of meaning and competence seem to be more important than those of autonomy and impact (Hochwälder & Brucefors, 2005). Results also show that global PE is negatively related to burnout in healthcare workers beyond the effects of stressors and demographic controls (Hochwälder, 2007). The following hypothesis can thus be formulated to extend current knowledge:

> Hypothesis 1: PE cognitions (meaning, competence, autonomy, and impact) will be negatively related to the three burnout symptoms, and these effects will hold after controlling demographic characteristics and stressors.

Moderating effects of psychological empowerment

A second way that PE could reduce burnout is by moderating the effects of stressors. As discussed earlier, PE reflects the degree of fit between employees and core job characteristics. This fit can act as a protective factor in reducing the effects of stressors on burnout. In the present study, two demand-type stressors (i.e. work overload and daily hassles) and two change-related stressors, considered within a resource perspective (i.e. perceived legitimacy of the changes and of the support provided to adapt to these changes), will be considered. The study of these two types of stressors (inadequate demands or resources) is highly relevant for healthcare workers (Laschinger *et al*., 2006).

Moderating the effects of demands (daily hassles and work overload)

Only one study was found where the moderating effect of PE on the stressor–burnout relationship was investigated (Hochwälder, 2007). That study found that global PE acted as a protective factor, attenuating the effects of job demands on emotional exhaustion for nurses. This suggests that workers are better equipped to cope with increased workloads when they perceive their job as meaningful, self-determined, and related to their skills. Indeed, these cognitive resources could help employees perceive these demands less negatively, as more temporary, easier to control, or compensated by their job's meaningfulness. The protective role of job meaningfulness on the relation between conflicts and stress symptoms was established in a previous study (Albertsen *et al*., 2001). Current evidence, albeit limited, suggests that the effects of daily hassles (e.g. daily tensions) and work overload (e.g. high quantitative demands) could be attenuated by PE:

> Hypothesis 2: Higher levels of PE cognitions will attenuate the positive relationship between demand-type stressors (overload, daily hassles) and burnout symptoms.

Moderating the effects of change-related resources

The effects of workplace changes depend on how these changes are implemented. To facilitate change adoption, change agents should provide employees with convincing explanations to legitimate these changes, as well as sufficient support (Wandberg & Banas, 2000; Jimmieson *et al*., 2004). These change management characteristics (legitimacy and support) are useful and might protect individuals from undue strain or burnout symptoms. Current results are mixed regarding the moderating role of PE in the resources–strains relationship. One study found that social support could increase perceptions of professional efficacy for weakly-empowered assistant nurses (Hochwälder, 2007). Yet two other results suggest the opposite, that is, that highly-empowered workers might benefit more than their counterparts from job control (Hochwälder, 2007) and supervisor support (Albertsen *et al*., 2001). However, none of the reviewed studies examined the specific role of support for change. Nonetheless, based on the available literature, we propose that highly-empowered individuals are better equipped to maintain good psychological health in times of change. They can devote more energy to adapt to these changes, and can thus benefit more from change support systems. This might not apply to weakly-empowered individuals requiring more energy simply to maintain usual performance levels when facing changes:

> Hypothesis 3: Higher levels of PE cognitions will amplify the negative relationship between change-related resources (e.g. legitimacy, support) and burnout symptoms.

METHODS

Study design

A cross-sectional questionnaire study with a non-random sample was conducted in Canadian healthcare organizations in the Eastern Townships, Quebec. Two organizations were recruited to obtain a sample size, allowing sufficient statistical power for the multivariate analyses. The questionnaire was distributed as part of a larger study on psychological health in the workplace. The full questionnaire took approximately 25 min to complete.

Data collection and sample

Data collection procedures were similar in both organizations. Following the organizational agreement, the project and procedures were explained to all unit managers and employees through information meetings with researchers

and other means (e.g. posters, internal mail). Our research team distributed questionnaires to all employees present during sessions scheduled by the organizations. Employees who were absent received the study information, researchers' contact information and questionnaire by internal mail. Employees who were not on the organization's payroll during the study (e.g. unpaid, maternity or health-related leaves) were considered not available. Employees were encouraged to complete the questionnaire during work hours. Participants returned their completed questionnaire anonymously to the researchers in a sealed envelope.

The first organization is a residential long-term care center. Of the 592 available employees, 266 completed the questionnaire (45%) between January and March 2007. The main personnel categories were represented: beneficiary attendants = 60%, nurses = 22%, and nurse assistants = 18%. The second organization is a rehabilitation center. Of the 232 available employees, 135 completed the questionnaire (58%) between May and June 2008. This sample comprises employees providing direct (72%) or indirect (15%) patient services, managers (10%), and individuals who did not indicate their position (2%).

These samples were combined, and the resulting sample size of 401 allows sufficient power to detect medium–small interactions (Aguinis, 2004). Because many demographic characteristics differed across samples (Table 1), a dummy variable was used to control the organization's influence.

Table 1. Sample descriptions

	Long-term care (ORG1)	Rehabilitation (ORG2)	χ^2	*P*-value
Sex				
Male	23%	11%		
Female	77%	89%	8.46	0.004
Job types				
Part time	47%	68%		
Full time	53%	32%	15.74	< 0.001
Organizational tenure				
< 5 years	25%	38%		
5–20 years	45%	49%		
> 20 years	31%	13%	16.51	< 0.001
Educational degree				
Secondary or less	55%	6%		
College	24%	19%		
University	20%	75%	128.43	< 0.001
Age				
< 30 years	10%	24%		
30–50 years	51%	58%		
> 50 years	39%	19%	23.63	< 0.001
No. children				
0	27%	32%		
1–2	52%	50%		
> 2	22%	18%	1.37	0.504
Family income ($CDN)				
< 30 000	24%	2%		
30 000 to 50 000	39%	25%		
> 50 000	38%	73%	51.89	< 0.001

ORG1, first organization; ORG2, second organization.

Ethical considerations

The University of Sherbrooke's research ethics committee and the ethical committees of both organizations approved this project. Individuals were informed that their answers would be treated anonymously and confidentially. Voluntary written consent was obtained from participants.

Measures

All instruments included in this study were validated on previous French-speaking samples. Unless otherwise noted, all items were answered on a five-point scale (1 = totally disagree to 5 = totally agree).

Daily hassles

The French version (Dumont *et al.*, 1998) of Lazarus and Folkman's (1989) seven-item daily hassles at work subscale was used. These items assessed how much each element (e.g. colleagues, supervisor, work, deadlines) constituted a source of stress on a four-point scale (1 = not at all; 4 = a lot. Dumont *et al.* (1998) reports acceptable scale score reliability ($\alpha = 0.75$) and validity.

Job overload

Perception of being overloaded by job demands was assessed with a five-item scale (e.g. My days are frequently so loaded that I don't have time to stop for lunch), adapted from Ivancevich and Matteson (1980). This scale was reported to present acceptable scale score reliability ($\alpha = 0.85$) and validity in a sample of 1534 Canadian workers (Morin *et al.*, 2006).

Change characteristics

Two dimensions taken from the Change Management Questionnaire (Desjardins, 2005) were used to assess employees' perceptions of change "legitimacy" (6 items, e.g. I understand fully what has motivated the organization to introduce certain changes) and of the adequacy of the "support" provided (five items, e.g. There were sufficient training opportunities available for me to adapt to the changes introduced in the organization), regarding changes introduced during the last year. Desjardins (2005) reports acceptable scale score reliability (legitimacy $\alpha = 0.75$, support $\alpha = 0.89$) and validity for both subscales.

Empowerment

PE was measured with the French adaptation (Boudrias *et al.*, 2010) of Spreitzer's (1995) 12-item instrument. This questionnaire measures employees' perceptions of meaning (e.g. The work I do is meaningful to me), competence (e.g. I am self-assured about my capabilities to perform my work activities), autonomy (e.g. I can decide on my own how to go about doing my work), and impact (e.g. My impact on what

happens in my work group is large). Boudrias *et al*. (2010) report acceptable scale score reliability ($\alpha = 0.73$–0.90) and validity for this instrument.

Burnout

Burnout was measured with the French version (Dubreuil *et al*., 2009) of the Maslach Burnout Inventory–General Survey (Schaufeli *et al*., 1996), assessing three dimensions of burnout: emotional exhaustion (five items, e.g. I feel emotionally drained from my work), cynicism (five items, e.g. I just want to do my job and not be bothered), and reduced professional efficacy (six items, e.g. I can effectively solve the problems that arise in my work – reversed item). Items were rated on a seven-point scale (0 = never to 6 = each day). Dubreuil *et al*. (2009) report acceptable scale score reliability ($\alpha = 0.76$ to 0.93) and validity for this instrument.

Analyses

The hypotheses were tested with hierarchical multiple regressions. Controls, predictors, and moderators were mean-centered before the analyses (Cohen *et al*., 2003). To verify hypothesis 1, three series of regressions were performed: model 1, each block of predictors (stressors, empowerment) was entered in separate analyses; model 2, each block of predictors was entered in separate analyses including significant controls; and model 3, all predictors and significant controls were entered in a single model.

To verify hypotheses 2 and 3, each interaction term (stressors * empowerment cognitions) was entered separately in regressions as a last step following model 3. To investigate significant interactions, the simple slopes of the regressions of burnout symptoms on stressors were computed at the mean of the moderating variable, as well as one standard deviation (SD) below and above the mean of the moderator. Regions of significance were also calculated (Preacher *et al*., 2006) to more precisely determine the moderator values at which the relations between the dependent variable and the predictor move from significance ($P < 0.05$) to non-significance ($P > 0.05$).

RESULTS

Descriptive statistics and correlations are reported in Table 2. Burnout symptoms were significantly related to stressors, empowerment dimensions, and some control variables. All significant controls were further controlled in the analyses.

Main effects of empowerment

Hypothesis 1 proposed that the four empowerment cognitions would exert a significant main effect on the three burnout symptoms (model 1), and that this effect would hold beyond the effects of controls (model 2) and stressors (model 3). Results from these analyses are reported in Table 3, and differ according to the dependent variable considered.

First, the meaning and competence cognitions were significantly related to emotional exhaustion in models 1 and 2, but only the meaning cognition remained significant in model 3. Second, the meaning cognition significantly predicted cynicism, as hypothesized (model 1); this effect remained significant in models 2 and 3. Finally, three empowerment cognitions (meaning, competence, impact) were significantly associated with reduced professional efficacy in model 1, but only the meaning and competence cognitions remained significant in model 3. Therefore, hypothesis 1 was fully supported in the case of meaning, partially supported in the case of competence, and fully infirmed in the case of autonomy and impact.

Moderating effects

The results from the interaction effect tests for hypotheses 2 and 3 are reported in Table 4, and again differ according to the dependent variable considered. Little support and mixed results were found in relation to hypothesis 2. Indeed, no significant interaction was found in the prediction of emotional exhaustion, three significant interactions were found in the prediction of cynicism (two of them were in the expected direction), and four interactions diverging from predictions were found in the prediction of reduced professional efficacy. Consistent with hypothesis 2, the meaning and impact cognitions attenuated the effects of daily hassles on cynicism. The decomposition of these interactions, presented in Table 5, indicates that the effects of daily hassles on cynicism decrease as a function of rises in meaning and impact to become non-significant when these cognitions respectively reach 1.24 and 0.99 SD above the mean. Therefore, the more employees perceive their job as meaningful and feel they can make a difference, the less they are affected by daily hassles.

Apart from these results, the remaining interactions were not in the expected direction. One of these interactions revealed that the relation between job overload and cynicism becomes more positive as a function of perceived competence levels, so that more competent employees tend to be more cynical when exposed to job overload. For employees with lower levels of perceived competence (–0.37 SD), job overload effects on cynicism are non-significant. The remaining four unexpected interactions were found in the prediction of reduced professional efficacy. Three of these interactions indicated that job overload and daily hassles are associated with decreases in professional inefficacy for employees presenting lower levels of autonomy (–1.41 SD), competence (–1.22 SD), and meaning (–1.86 SD). Results also showed that job overload is associated with higher professional inefficacy at high levels of meaning (1.83 SD). Finally, one significant interaction (overload * autonomy) appears to be a statistical artifact.

More support was found for hypothesis 3. Indeed, seven significant or marginally significant interactions, involving most of the empowerment cognitions, were found in the prediction of emotional exhaustion. As expected, decomposition of these interactions indicates that levels of change legitimacy and support are negatively related to emotional exhaustion among highly-empowered employees. The

Table 2. Descriptive statistics and correlations ($n = 401$)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.
1. Organization†	1.00	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2. Job types‡	–0.19**	1.00	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3. Tenure§	–0.18**	–0.34**	1.00	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4. Education¶	0.61**	–0.04	–0.12*	1.00	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5. Income ††	0.40**	–0.17**	0.13*	0.42**	1.00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6. Sex‡‡	0.14**	0.08	–0.01	0.08	0.10*	1.00	–	–	–	–	–	–	–	–	–	–	–	–	–
7. Child§§	–0.06	–0.01	0.23**	–0.04	0.25**	0.11*	1.00	–	–	–	–	–	–	–	–	–	–	–	–
8. Age¶¶	–0.27**	–0.14**	0.54**	–0.13**	0.06	0.02	0.38**	1.00	–	–	–	–	–	–	–	–	–	–	–
9. Daily hassles	0.05	0.09	–0.09	0.11*	–0.01	0.12*	–0.13**	–0.12*	1.00	–	–	–	–	–	–	–	–	–	–
10. Overload	0.14**	–0.06	0.08	0.22**	0.17**	0.06	–0.01	0.03	0.40**	1.00	–	–	–	–	–	–	–	–	–
11. Legitimacy	0.54**	–0.11*	–0.18**	0.35**	0.22**	0.08	0.02	–0.12*	–0.14**	–0.04	1.00	–	–	–	–	–	–	–	–
12. Support	0.19**	–0.11*	–0.03	0.09	0.10*	0.03	0.04	–0.03	–0.29**	–0.17**	0.47**	1.00	–	–	–	–	–	–	–
13. Meaning	0.01	–0.04	0.05	–0.05	0.06	–0.02	0.15**	0.14**	–0.32**	–0.12*	0.14**	0.23**	1.00	–	–	–	–	–	–
14. Autonomy	0.30**	–0.19**	0.05	0.20**	0.23**	0.07	0.05	0.03	–0.26**	–0.05	0.29**	0.37**	0.28**	1.00	–	–	–	–	–
15. Competence	–0.27**	–0.02	0.12*	–0.24**	–0.03	–0.12*	0.11*	0.24**	–0.38**	–0.24**	–0.11*	0.10*	0.44**	0.19**	1.00	–	–	–	–
16. Impact	0.13**	–0.21**	0.19**	0.22**	0.29**	–0.08	0.11*	0.11*	–0.24**	0.01	0.23**	0.27**	0.37**	0.50**	0.17**	1.00	–	–	–
17. Exhaustion	–0.11*	–0.04	0.02	–0.05	–0.10	0.10*	–0.14**	–0.05	0.60**	0.35**	–0.20**	–0.28**	–0.29**	–0.18**	–0.24**	–0.18**	1.00	–	–
18. Cynicism	–0.13**	–0.05	0.12*	0.01	–0.01	0.01	–0.10*	0.04	0.43**	0.27**	–0.27**	–0.31**	–0.52**	–0.22**	–0.25**	–0.24**	0.49**	1.00	–
19. Inefficacy	–0.02	–0.04	0.05	–0.02	–0.04	0.12*	–0.11*	–0.03	0.22**	0.10*	–0.15**	–0.24**	–0.43**	–0.26**	–0.38**	–0.29**	0.19**	0.32**	1.00
Mean	0.03	0.46	4.68	5.76	4.59	0.81	2.52	3.84	1.86	2.34	3.03	2.98	4.43	3.99	4.42	3.55	2.35	1.26	1.30
Variance	0.22	0.25	3.07	4.29	3.63	0.16	1.39	1.09	0.27	0.86	0.72	0.89	0.38	0.82	0.33	0.90	2.09	1.51	0.89
SD	0.47	0.50	1.75	2.07	1.90	0.39	1.18	1.04	0.52	0.93	0.85	0.94	0.62	0.91	0.57	0.95	1.44	1.23	0.94
Minimum	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.00	2.00	1.00	0.00	0.00	0.00
Maximum	1.00	1.00	7.00	10.00	7.00	1.00	5.00	6.00	3.57	4.80	5.00	5.00	5.00	5.00	5.00	5.00	6.00	5.80	5.00
Skewness	–	–	–0.13	0.13	–0.05	–	0.13	–0.43	0.57	0.59	0.01	–0.13	–1.35	–0.88	–1.01	–0.77	0.50	1.30	0.71
Kurtosis	–	–	–0.96	–1.30	–1.37	–	–0.97	–0.77	–0.14	–0.47	–0.26	–0.40	2.45	0.08	1.26	0.29	–0.71	1.39	0.16
α	–	–	–	–	–	–	–	–	0.71	0.73	0.87	0.91	0.77	0.81	0.74	0.85	0.90	0.79	0.68

**$P < 0.01$; *$P < 0.05$. †Organization was coded as: 0 = long-term care center, 1 = rehabilitation center. ‡Job type was coded as: 0 = full time, 1 = part time. §Tenure in the organization was coded in seven ordinal categories: 1 = less than 1 year to 7 = more than 20 years. ¶Education was coded in 10 ordinal categories: 1 = no diploma to 10 = doctoral degree. ††Family income was coded in seven ordinal categories: 1 = less than $19 999 to 7 = more than $70 000. ‡‡Sex was coded as: 0 = male, 1 = female. §§Child was coded in five ordinal categories: 1 = no child to 5 = four children or more. ¶¶Age was coded in six ordinal categories: 1 = under 20 years to 6 = 60 years or over. SD, standard deviation.

Table 3. Results of regressions predicting burnout dimensions

	Model 1 Multiple regressions, each block entered separately			Model 2 Multiple regressions, each block entered separately + controls			Model 3 Multiple regressions, final model		
	β	*t*	*P*-value	β	*t*	*P*-value	β	*t*	*P*-value
Prediction of emotional exhaustion									
Block: stressors									
Daily hassles	0.51	11.57	0.000	0.50	11.27	0.000	0.48	10.23	0.000
Job overload	0.13	3.01	0.003	0.15	3.57	0.000	0.15	3.48	0.001
Change legitimacy	−0.09	−2.08	0.038	−0.01	−0.16	0.870	−0.003	−0.07	0.948
Support for change	−0.06	−1.36	0.176	−0.07	−1.54	0.124	−0.07	−1.56	0.120
Adjusted R^2 (Δ adjusted R^2)	0.39	–	–	0.40 (0.35)	–	–	0.40 (0.35)	–	–
Block: empowerment									
Meaning	−1.20	−3.47	0.001	−0.18	−3.23	0.001	−0.10	−2.20	0.028
Autonomy	−0.08	−1.39	0.166	−0.04	−0.71	0.476	0.07	1.35	0.177
Competence	−1.14	−2.57	0.011	−0.17	−3.06	0.002	−0.02	−0.39	0.695
Impact	−0.05	−0.86	0.392	−0.02	−0.42	0.672	−0.001	−0.02	0.985
Adjusted R^2 (Δ adjusted R^2)	0.10	–	–	0.14 (0.09)	–	–	0.41 (0.01)	–	–
Prediction of cynicism									
Block: stressors									
Daily hassles	0.32	6.62	0.000	0.34	6.81	0.000	0.24	4.98	0.000
Job overload	0.11	2.40	0.017	0.11	2.26	0.024	0.11	2.60	0.010
Change legitimacy	−0.17	−3.47	0.001	−0.11	−1.88	0.061	−0.08	−1.55	0.122
Support for change	−0.12	−2.36	0.019	−0.13	−2.52	0.012	−0.09	−1.79	0.074
Adjusted R^2 (Δ adjusted R^2)	0.25	–	–	0.26 (0.22)	–	–	0.26 (0.22)	–	–
Block: empowerment									
Meaning	−0.47	−9.32	0.000	−0.45	−8.96	0.000	−0.40	−8.49	0.000
Autonomy	−0.07	−1.42	0.157	−0.02	−0.45	0.655	0.05	0.95	0.341
Competence	−0.03	−0.64	0.523	−0.09	−1.71	0.089	−0.003	−0.06	0.950
Impact	−0.02	−0.42	0.673	−0.06	−1.06	0.289	−0.03	−0.51	0.612
Adjusted R^2 (Δ adjusted R^2)	0.27	–	–	0.30 (0.26)	–	–	0.40 (0.14)	–	–
Prediction of reduced professional efficacy									
Block: stressors									
Daily hassles	0.16	2.91	0.004	0.13	2.29	0.023	−0.05	−0.90	0.370
Job overload	0.01	0.12	0.903	0.01	0.18	0.860	0.003	0.05	0.958
Change legitimacy	−0.05	−0.95	0.343	−0.06	−1.14	0.256	−0.08	−1.53	0.126
Support for change	−0.17	−2.92	0.004	−0.17	−3.01	0.003	−0.09	−1.68	0.093
Adjusted R^2 (Δ adjusted R^2)	0.07			0.09 (0.06)			0.09 (0.06)		
Block: empowerment									
Meaning	−0.26	−5.13	0.000	−0.27	−5.15	0.000	−0.25	−4.81	0.000
Autonomy	−0.09	−1.78	0.076	−0.11	−2.09	0.037	−0.07	−1.32	0.188
Competence	−0.23	−4.71	0.000	−0.21	−4.32	0.000	−0.24	−4.66	0.000
Impact	−0.11	−2.01	0.046	−0.09	−1.65	0.099	−0.08	−1.41	0.159
Adjusted R^2 (Δ adjusted R^2)	0.25	–	–	0.25 (0.22)	–	–	0.26 (0.15)	–	–

Table 4. Interaction effects (final step of regressions)

Multiple regression	Emotional exhaustion β	*t*	*P*-value	Cynicism β	*t*	*P*-value	Reduced professional efficacy β	*t*	*P*-value
Daily hassles * Meaning	–0.03	–1.16	0.247	–0.06	–2.01	0.045*	0.02	0.83	0.409
Daily hassles * Autonomy	0.02	1.04	0.299	0.004	0.144	0.885	0.05	1.96	0.050*
Daily hassles * Competence	–0.01	–0.44	0.664	0.04	1.330	0.184	0.06	1.93	0.055^{t}
Daily hassles * Impact	–0.01	–0.61	0.543	–0.07	–2.32	0.021*	–0.001	–0.03	0.976
Job overload * Meaning	–0.004	–0.21	0.836	–0.02	–0.74	0.459	0.06	2.31	0.021*
Job overload * Autonomy	0.02	0.77	0.443	0.01	0.50	0.619	0.05	2.04	0.042*
Job overload * Competence	0.01	0.46	0.649	0.06	2.029	0.043*	0.02	0.73	0.463
Job overload * Impact	0.002	0.11	0.909	–0.02	–0.59	0.557	0.01	0.27	0.785
Change legitimacy * Meaning	–0.03	–1.54	0.125	0.004	0.15	0.885	0.002	0.07	0.941
Change legitimacy * Autonomy	–0.08	–3.45	0.001*	–0.02	–0.59	0.558	0.02	0.87	0.386
Change legitimacy * Competence	–0.05	–2.35	0.019*	0.000	0.015	0.988	–0.04	–1.47	0.142
Change legitimacy * Impact	–0.06	–2.89	0.004*	–0.01	–0.27	0.786	0.04	1.39	0.167
Support for change * Meaning	–0.04	–2.00	0.046*	0.04	1.235	0.217	–0.03	–0.92	0.358
Support for change * Autonomy	–0.06	–2.54	0.011*	0.01	0.18	0.858	0.02	0.74	0.462
Support for change * Competence	–0.04	–1.92	0.055^{t}	0.02	0.82	0.413	–0.02	–0.91	0.364
Support for change * Impact	–0.05	–2.32	0.021*	0.06	1.98	0.049*	0.02	0.92	0.361

**$P < 0.01$; **$P < 0.05$; $^{t}P < 0.10$.

Table 5. Decomposition of significant moderating effects

Interaction (stressor * moderator)	Simple slopes of stressor –1 SD	Mean	+1 SD	Region of significance (SD units of the moderator) Effects are significant ($P < 0.05$):
Prediction of emotional exhaustion				
Change legitimacy * Autonomy	0.233*	0.004	–0.225*	Min to –0.898 SD & 0.910 SD to Max
Change legitimacy * Competence	0.213^{t}	0.004	–0.133	Min to –1.649 SD & 1.959 SD to Max
Change legitimacy * Impact	0.206^{t}	0.017	–0.172^{t}	Min to –1.168 SD & 1.296 SD to Max
Support for change * Meaning	0.028	0.095	–0.217*	0.409 SD to Max
Support for change * Autonomy	0.035	–0.105	–0.245**	0.268 SD to Max
Support for change * Competence	0.022	–0.091	–0.204*	0.475 SD to Max
Support for change * Impact	0.024	–0.102	–0.228*	0.382 SD to Max
Prediction of cynicism				
Daily hassles * Meaning	0.694**	0.523**	0.359*	Min to 1.242 SD
Daily hassles * Impact	0.708**	0.506**	0.304^{t}	Min to 0.994 SD
Job overload * Competence	0.055	0.156**	0.257**	–0.370 SD to Max
Support for change * Impact	–0.21**	–0.118^{t}	–0.026	Min to –0.038 SD
Prediction of reduced professional efficacy				
Daily hassles * Autonomy	–0.190^{t}	–0.048	0.094	Min to –1.406 SD
Daily hassles * Competence	–0.223^{t}	–0.084	0.055	Min to –1.223 SD
Job overload * Meaning	–0.104*	–0.005	0.093	Min to –1.861 SD & 1.831 SD to Max
Job overload * Autonomy	–0.090	–0.000	0.088	Artifact†: Min to –4.403 SD & 3.667 SD to Max

**$P < 0.01$; *$P < 0.05$; $^{t}P < 0.10$. †Can be considered as a statistical artifact based on the extreme values of the regions of significance. Min/Max, minimum/maximum of the measurement scale; SD, standard deviations.

negative effects of change legitimacy on emotional exhaustion become significant when levels of autonomy, competence, and impact reach 0.91, 1.96, and 1.30 SD, respectively, above the mean. Similarly, the negative effects of support for change on emotional exhaustion become significant when levels of meaning, autonomy, competence, and impact reach 0.41, 0.26, 0.48, and 0.38 SD, respectively, above the mean. These results indicate that the more the highly-empowered employees perceive changes as legitimate and feel supported in coping with these changes, the lower their levels of emotional exhaustion will be. Furthermore, the results also show that the effects of change legitimacy on emotional exhaustion become positive and significant when levels of autonomy, competence, and impact reach –0.90, –1.65, and –1.17 SD, respectively, below the mean. This suggests that for employees presenting low levels of psychological empowerment, exposure to more legitimate changes tends to be associated with higher levels of emotional exhaustion.

However, the results were not as conclusive for the remaining burnout dimensions. Indeed, no significant interaction was found in the prediction of reduced professional efficacy, and one unexpected interaction was observed in the prediction of cynicism. This last result indicated that support for change was beneficial only for employees with low job impact (i.e. –0.04 SD under the mean and lower).

DISCUSSION

In the present study, we investigated the role of PE as a potential protective factor against the deleterious effects of work-related stressors on burnout. The multidimensional approach used in this study resulted in increased specificity, compared with the studies presented in the available literature regarding the role of the four PE cognitions in the three burnout symptoms. As such, we obtained little evidence to support the proposal that all empowerment cognitions would be related to all burnout symptoms in a parallel manner. Consequently, our three omnibus hypotheses were only partially supported. Our results, therefore, indicate that current literature on the protective role of PE in burnout development could be improved by a finer-grained multidimensional conceptualization of the variables at play, at least for healthcare employees.

Only the meaning cognition had consistent main effects on the three burnout symptoms once the demographic variables and stressors were controlled. Furthermore, the competence cognition had a similar effect only on employees' feelings of professional inefficacy. These results reinforce Hochwälder & Brucefors' (2005) findings that meaning and competence were the empowerment cognitions most strongly related to burnout in healthcare settings. Our study goes one step further and indicates that individuals who develop a sense of competence and meaning in their job will be less likely to experience burnout, beyond the effects of stressors. According to Brief and Nord (1990), job meaningfulness is achieved when there is perceived fit between task requirements and employees' values, beliefs, and behaviors. This fit could be achieved by ensuring a good match between jobs and employees during the initial selection process, within training programs or during job-restructuring processes. Helping healthcare workers make initial job choices based on their personal interests and aptitudes might help them cope proactively with stressors in their professional lives (Maslach & Leiter, 2008; Taubman & Weintroub, 2008). Providing relevant job context information (characteristics of the organization, programs etc.) might help ensure that the job context is consciously chosen and perceived as empowering. Alternatively, structural empowerment initiatives might also foster job meaningfulness (Cai & Zhou, 2009). Developing a shared vision of patient care, recognizing the contribution of each individual to departmental and organizational objectives, and providing support to employees might generate a sense of ownership and job meaningfulness, which in turn might help attract and retain a competent workforce (Stordeur & D'hoore, 2007; Li *et al*., 2010)

Results supporting the moderating role of PE in the stressor–burnout relation were limited and generally specific to the stressor, burnout symptom, and empowerment cognition considered. Yet there was one notable exception where the moderating effects of all empowerment cognitions were aligned. Indeed, consistent with previous results (Albertsen *et al*., 2001; Hochwälder, 2007) and hypothesis 3, our study showed that highly-empowered employees across the four cognitions benefited more (in terms of presenting lower levels of emotional exhaustion) than less-empowered ones from exposure to legitimate and adequately supported changes. This finding, which represents a new contribution, is of practical importance in an era of fast-pace changes that have the potential to exhaust healthcare workers (Laschinger *et al*., 2006). Apparently, PE is a prerequisite for change resources to have beneficent effects on employees. Therefore, adopting human resource management practices aimed at optimizing employee–job fit, and developing employees' sense of meaning, competence, autonomy, and impact (Pfeffer, 1998), will likely pay off, because empowered employees will be better equipped to cope with future change initiatives. However, this conclusion should be limited to emotional exhaustion, because we also found that change support attenuates cynicism only for employees with a perceived low impact. Hochwälder (2007) reported similar results in the prediction of professional (in)efficacy.

This study also indicated that empowerment cognitions moderated the relation between job demands and burnout, although these effects were less systematic than for change-related resources. Consistent with hypothesis 2, the meaning and impact cognitions were found to attenuate the negative relation between daily hassles and cynicism, such that it became non-significant at higher levels of empowerment. Interestingly, there was also a stronger relation between job overload and cynicism when individuals felt more competent. This unexpected result suggests that competent individuals might more easily recognize excessive or unrealistic demands, and thus adopt a more cynical attitude. Therefore, this result could potentially be re-interpreted as a protective mechanism against the more severe burnout symptoms. This possibility should be further investigated in future studies.

Finally, we found mainly unexpected results regarding the buffering role of empowerment cognitions relative to professional inefficacy. A lower level of empowerment seems to reduce professional inefficacy when exposed to higher levels of job overload (meaning) and daily hassles (autonomy and competence). This "protective effect" could occur because more poorly-adjusted employees are more alienated and less internally motivated (Mottaz, 1981). Their locus of control could be more external, and thus allow them to externally justify their inability to perform. Their feelings of "relative inefficacy" could therefore be improved by hindering stressors (overload and daily hassles) that legitimate lower levels of performance. In contrast, when work-related changes appeared legitimate, emotional exhaustion levels also increased in these employees. Future studies should investigate more specific mechanisms by which professional (in)efficacy is affected by profiles of stressors and empowerment cognitions.

This study presents limitations that should be considered. First, the cross-sectional design precludes any conclusion

regarding the directionality of the relations. Second, although preliminary confirmatory factor analyses confirmed the distinctiveness of the study variables, the correlations observed between some predictors might have diminished the possibility of observing unique relations between some variables and burnout (e.g. autonomy and impact cognitions never had simultaneous main effects). Third, the testing of multiple interaction effects might have increased the probability of type II errors. However, this might be compensated by the rigorous tests that were conducted to identify these interactions, where multiple predictors and controls were included.

Conclusion

The present study showed that PE exerts beneficent main and moderating effects on burnout symptoms. Job meaningfulness exerts robust main effects on all burnout symptoms. The pattern of moderating effects was more complex. The clearer result was that psychologically-empowered workers could benefit more than their counterparts from change-related resources to decrease risks of emotional exhaustion. Overall, higher levels of PE cognitions seem desirable, because of their usefulness for burnout prevention.

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