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Preventing employee burnout during episodic organizational changes

Preventing
employee
burnout

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Abstract

Purpose – The purpose of this paper is to explore the effect that training and development have on employee burnout during episodic organizational changes. Moreover, it investigates the mediating role of overall job satisfaction (OJS) in conjunction with the moderating role of personal computer (PC) literacy.

Design/methodology/approach – The study took place in Greece, in four branches of a public organization which adopted a new information technology (IT) system. Statistical analyses include exploratory and confirmatory factor analysis for instrument testing and multiple regressions for mediated moderation.

Findings – The findings provide partial support to the hypotheses. It appears that employee training and development are significant predictors of burnout, indeed. However, OJS mediates the effect of one dimension of each, namely training effectiveness and support. Concerning PC literacy, a full-mediated moderation was revealed in the case of training effectiveness and a partial-mediated moderation in the case of support.

Research limitations/implications – As with most studies examining change initiatives, the main limitations of this study are the cross-sectional design, the possible self-selection bias, and the limited sample size.

Practical implications – The findings are important for preventing burnout during IT-related episodic changes, facilitating the successful implementation of change.

Originality/value – To the best of knowledge, this study is the first to examine burnout in a changing public setting. Additionally, no previous direct evidence exists regarding the relationship between training and development and burnout while the evidence on the impact of organizational resources on burnout is scarce.

Keywords Development, Training, Public sector, Burnout, Episodic change, PC literacy

Paper type Research paper

1. Introduction

Change initiatives are currently the norm for organizations, regardless of industry, sector, or type, taking multiple forms. An episodic change, being “an occasional interruption or divergence from equilibrium [...] that tends to be dramatic” (Weick and Quinn, 1999, p. 366) is inevitably followed by negative employee responses, including feelings of loss (for what is to be left behind), threat (for future loss), and uncertainty and anxiety (Scheck and Kinicki, 2000) for the new reality, causing stress to employees (McHugh, 1997) and in turn burnout (Shaw *et al.*, 1993). In fact, when changes take place “[...] there is evidence for burnout contagion” (Zapf, 2002, p. 256), which may put in danger the success of the change initiative (Cordes and Dougherty, 1993).

Therefore, the present study aimed at identifying ways to preferably prevent, or at least diminish, burnout during episodic changes. This study is, to the best of our knowledge, the first to investigate burnout during an organizational change in the



public sector. Specifically, the change examined is episodic, including changes in strategy and structure (Tushman and O'Reilly, 1996). Although most evidence on burnout antecedents relates to distinct burnout dimensions, our intention is to shed light on the construct as a whole. Thus, in congruence with the suggestions of Martin *et al.* (2005), we aimed to explore the influence of psychological climate on burnout. Given that James *et al.* (2008) have identified employee training and development as facets of psychological climate and that these are critical when introducing a change that necessitates the acquisition of new skills and knowledge, we adopted them as burnout antecedents. Additionally, since training and development are vehicles for personal and career development that may influence employees' overall evaluation of their job (Back *et al.*, 2010), the present study adopts overall job satisfaction (OJS) as an explaining mechanism for the relationship between training and development and burnout. Finally, having taken into consideration the type of episodic change, we include in our conceptual framework a relevant personal coping resource as a moderating variable. In particular, we investigate the effect that employee personal computer (PC) literacy has on the influence that employee training and development have on burnout via their OJS when IT-related episodic changes occur. Besides, Ullrich *et al.* (2012) have already recognized employee PC literacy as a significant personal coping resource when introducing new IT systems (Figure 1).

As such, we seek to add to existing – limited hitherto – knowledge about burnout during episodic changes by focussing on its organizational antecedents and shed light to the process of burnout prevention. From a practical perspective, our findings are expected to facilitate the introduction of new IT systems, which are anything but new or scarce for any type of organization, public, or private.

2. The change setting

The Greek public sector has been highly bureaucratic and centralized for decades, characterized by legalism and formalism (Makrydimitris, 1991). The “Politia 2001” act, falling under the New Public Management, dictated the initiation of a new administrative model that would emphasize cost efficiency, and performance (Bellou, 2007) and espouse user-friendliness and needs-orientation for citizens (Chatzoglou *et al.*, 2013). Under this act, several public organizations in Greece tried to reform their operation (Ioannou, 2013).

The present study was conducted in a large public insurance organization. Aiming at modernization, its top management introduced an episodic change. A new IT system was adopted to increase productivity, transparency, and service quality. This change was considered to be the most multidisciplinary and complicated process that has ever been implemented in the Greek public sector, due to the size and the geographical extension of the organization and the intensity of the interventions, followed by changes in structure and processes. After the decision for the new IT system, the Head of the branch informed employees regarding the scope of the change and

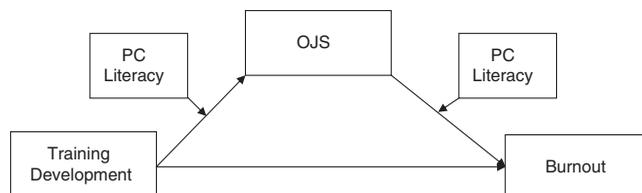


Figure 1.
The model under investigation

related procedures. Initially, a team of experienced employees per branch was trained to serve as on site supporting team. Then, gradually all employees were trained by specialized trainers.

3. Literature review

3.1 *Employee burnout*

Maslach and Jackson (1981) conceptualized burnout as the combined experience of emotional exhaustion (feeling of being emotionally spent), depersonalization (detachment from others), and diminished accomplishment (limited sense of efficacy at work). Leiter (1991) argued that burnout results from the gap between employees' expectations to fulfill their working roles and their actual ability to do so. Nevertheless, according to Golembiewski *et al.* (1983), the emergence of burnout follows a phase model, with depersonalization being the least potent contributor and emotional exhaustion being the most powerful. Despite of the approach adopted for its examination, the burnout syndrome has attracted increased attention over time probably due to subsequent negative effects, for organizations (i.e. Zapf, 2002; Babakus and Yavas, 2012) and employees (i.e. Leiter *et al.*, 2013), turning researchers to the investigation of its antecedents (i.e. Maslach *et al.*, 2001).

The evidence on burnout during organizational changes is rather limited. In particular, Ramarajan *et al.* (2008) concluded that satisfaction with the organizational change caused decrease in emotional exhaustion while Woodward *et al.* (1999) reported increase in burnout due to the negative impact of the organizational change on the working environment. Finally, examining aspects of change, de la Sablonnière *et al.* (2012) found that negative and radical organizational changes enhance burnout and Cordes and Dougherty (1993) revealed that employee burnout hinders change program implementation.

3.2 *The role of employee training and development for burnout*

Training refers to teaching employees how to perform their jobs. During organizational changes, the more radical the change is, the greater the role of training is for its effective realization, as it can create a new common language, assist the understanding of change, increase its acceptance and facilitate its implementation (Francis, 2003). Employee development incorporates supplying employees with new knowledge and competences, which enable them to handle future job requirement (Rothwell and Kazanas, 1989), making individuals and organizations flexible and change-ready (Lee and Bruvold, 2003).

Since training and development prepare employees for new challenges, enhancing their ability to manage job demands successfully, they may reduce burnout. Supporting evidence for this proposition can be found in different theoretical frameworks. Psychological climate is one of them as it reflects "perceptions that assess the significance and meaning of work environments to individuals" (James *et al.*, 2008, p. 8). Besides, representations of organizational structures, such as training and development, influence individuals' overall perceptions of the change process (Armenakis and Harris, 2009).

The cognitive-phenomenological stress and coping theory, suggesting that individuals go through a long process to survive a stressful event (Smith and Lazarus, 1990), can also explain the expected effect of training and development on burnout. According to Lazarus and Folkman (1984), both the evaluation of a stressful event and the ability to cope with it can be supported or undermined by personal and organizational factors. So far, the former

have attracted the vast majority of theoretical and empirical researches, with the most commonly examined factor being individual's stress (i.e. Alarcon *et al.*, 2009). The latter have attracted limited attention (Martin *et al.*, 2005). Therefore, training and development are seen as organizational determinants of burnout.

Similarly, the Conservation of Resources (COR) theory (Hobfoll, 1989), proposing that individuals strive to acquire and maintain resources, advocates that the greater the resources one has access to, the less vulnerable one is to resource loss (Hobfoll, 2001). In this sense, Ângelo and Chambel (2013) suggested that training and development are useful means for intervening in the perceived levels of resources and organizational demands, especially during organizational changes that individuals are faced with differentiated and usually increased job demands (Wolpin *et al.*, 1994). Consequently, we anticipate that:

H1. During an episodic change, training will reduce burnout.

H2. During an episodic change, development will reduce burnout.

3.3 OJS as a mediator

Locke (1969) described job satisfaction (JS) as a positive emotional state coming from employee's work role. Within a changing context, evidence suggests that JS decreases (Burke and Greenglass, 2001; Howard and Frink, 1996; Lee and Teo, 2005). Numerous researchers have stressed the mediating effect of JS due to its cornerstone role in the delineation of employee responses (i.e. Crede *et al.*, 2007). Yet, it is only recently that Avanzi *et al.* (2014) confirmed the mediating role of JS in the relationship between employee commitment and burnout.

Regarding the relationship with training and development, corresponding to Back *et al.*'s (2010) suggestion, an effective training program offers employees more knowledge, which may increase their satisfaction, patronizing personal, and career development. On the other side there is evidence that the unmet needs for training are associated with job dissatisfaction (Quastel and Boshier, 1982). Concerning the relationship with burnout, ample evidence shows that JS reduces burnout (i.e. Alarcon, 2011). As Griffin *et al.* (2010) revealed, dissatisfied employees are likely to want to exit their organization and inability to do so, due to lack of alternative, may make them feel trapped, experiencing thus burnout. Thus, our expectation is that:

H3. During episodic changes, OJS will mediate the relationship between training and burnout.

H4. During episodic changes, OJS will mediate the relationship between development and burnout.

3.4 Employee PC literacy as a moderator

Employee PC literacy, the extent to which employees consider themselves able to use PCs, accommodates the adoption of new IT-related knowledge. According to the theory on cognitive-phenomenological stress and coping (Smith and Lazarus, 1990), personal factors can confine a stressful event and increase individuals' ability to cope with it. Similarly, consistent with the COR theory (Hobfoll, 1989), personal coping resources reduce anxiety and negative feeling evoked by inability to respond to increased job demands. Given that the present study examines an IT-related change and that training and development aimed at supporting this change, PC literacy is considered to be central to employees' actual and perceived ability to maximize the

benefits of training and development, offering protection against burnout. Since we also expect OJS to mediate the impact of training and development on burnout, we hypothesize that:

- H5. During episodic changes, employee PC literacy will have a moderating effect on the impact that training has on burnout, in conjunction with OJS.
- H6. During episodic changes, employee PC literacy will have a moderating effect on the impact that development has on burnout, in conjunction with OJS.

4. Method

4.1 *Sample and procedures*

The research took place in four major branches of a public organization, located in four cities of a continental periphery in Greece. Initially, semi-structured interviews took place with two executive officers and three trainers, in order to understand the change initiative, its aims, and procedures. Then, questionnaires were personally administered to volunteer respondents. Researchers informed employees about the purpose of the study and ensured anonymity for participants and confidentiality of responses. We randomly asked from employees to participate in the study (the number of employees approached in every branch was proportionate to the number of individuals employed in it). Out of 137 that responded, 131 returned usable questionnaires, yielding a response rate of almost 44 percent.

The sample consisted of 98 (74.8 percent) female individuals, considered representative of the population (the organization occupies approximately 70 percent female employees). Regarding age, 5.3 percent were up to 30 years old, 25.2 percent were 31-40 years old, 41.2 percent were between the age of 41-50, and 28.2 percent were older than 50 years. About half participants (51.1 percent) finished secondary education, 29 percent had a university degree, and only a few (4.6 percent) had a master's degree or a PhD. Finally, 52.7 percent had 20-30 years of tenure, while 29.8 percent had been working for less than ten years for the organization.

4.2 *Measures*

Training. In absence of related measures, we developed 11 items, based on Kirkpatrick's (1994) model. As advocated by Clark and Watson (1995), initially we reviewed relevant literature thoroughly, to consolidate previous researchers' suggestions on potential training. To create the items pool, we gathered all content that could be relevant. In fact, as indicated, this list was over-inclusive, to ensure fullness. Emphasis was given on identifying different training aspects. Regarding the choice of format, Likert type scales (five-point) indicating agreement with the statements chosen. All items were pilot tested by 30 individuals employed in the public sector to examine the structural validity of the scale.

Development. This instrument, comprising of seven items, was developed by Schalk *et al.* (1998). Sample items include: "In my opinion, the way the organization communicated change was satisfactory," and "In my opinion, the support that I received when changes were implemented was satisfactory." Responses were given on a five-point Likert scale, ranging from "strongly disagree" to "strongly agree."

OJS. To measure JS a single question was used, as it may explain greater variance than JS facets do (Scarpello and Campbell, 1983). Respondents indicated their responses on a five-point Likert scale, ranging from "strongly disagree" to "strongly agree."

Burnout. It was measured with the Maslach Burnout Inventory Human Services Survey (Maslach *et al.*, 1986), consisting of 22 items. Sample items are “I feel depressed at work,” “I have accomplished many worthwhile things in this job” (reverse scored), and “I don’t really care what happens to some recipients.” Responses were given on a seven-point Likert scale, ranging from “never” to “every day.”

Employee PC literacy. PC literacy was measured with one item, asking respondents to respond to a dichotomous question: “Do you feel confident with the use of PC (No = 0, Yes = 1).”

5. Results

Initially, we used exploratory factor analysis (EFA) (principal components, varimax rotation) to examine the internal consistency of the scale and the underlying pattern of training items. Principal components analysis was chosen as the extraction method because it determines linear combinations of observed variables, retaining as much information as possible (Fabringer *et al.*, 1999). To identify emerging factors, we adopted the eigenvalue criterion, selecting only those factors that had eigenvalue greater than 1. These factors, named training effectiveness and training content, explain 67.51 percent of variance of training (Table I). Next, we performed EFA for employee development, as it was the first time to translate the instrument in Greek. Two instead of three factors emerged (support – including both support and communication original dimensions – and participation), explaining 80.31 percent of total variance. Again, the eigenvalue criterion was adopted. In both EFAs, the total variance explained by the factors that emerged was considered satisfactory according to Streiner’s (1994) suggestion.

Mean scores, standard deviations, Pearson correlations, and Cronbach’s α appear in Table II. As evident, burnout correlates negatively with training effectiveness, training organization, support, participation, and OJS. Given that most independent variables

	Training effectiveness	Training organization
This training program helped me understand the objectives of my organization better	0.82	
This training program helped me improve my knowledge on the job	0.81	
This training program made me a more effective employee	0.80	
This training program enriched my computer skills	0.78	
This training program helped me understand the objectives of the change	0.77	
This training program helped me offer better services to citizens	0.75	
This training program helped me increase my contribution to my department	0.73	
Eigenvalue: 5.89, Variance explained: 53.52		
The content of each training course was organized and easy to follow		0.84
The training program provided experiences and conditions (surroundings, tasks, equipment) that replicate my actual work setting		0.84
The training objectives were clearly identified		0.79
Ample and extensive examples and cases were examined to reflect any possible real case		0.63
Eigenvalue: 1.54, Variance explained: 13.99		
Total variance explained: 67.51%		

Table I.
EFA for employee perceptions of training

(IV) also correlate significantly with each other, we checked the variation inflation factor (VIF) to make sure that multicollinearity would not be an issue during regression analyses. VIF scores ranged between 2.36 and 3.48 and are hence not expected to influence the stability of the parameter estimates to a significant extent (Hair *et al.*, 1998).

Table III shows that training organization and training effectiveness have negative effect on burnout ($\beta = -0.24, p < 0.05$ and $\beta = -0.28, p < 0.01$, respectively), offering support to *H1* (expecting negative impact of training on burnout). Similarly, Table IV shows that only support has a significant negative effect on burnout ($\beta = -0.32, p < 0.001$), providing partial support to *H2*, predicting the negative impact of development on burnout.

To test *H3* and *H4*, we adopted Baron and Kenny's (1986) procedure, comprised of three steps. Specifically, for mediation to exist: the IV and the proposed mediator must have a significant impact on the dependent variable (DV) when examined on a separate basis; the IV must significantly impact the proposed mediator; and the relationship between the IV and the DV must become at least weaker, if not non-significant, when both the IV and the proposed mediator are included in the regression, compared to when the proposed mediator is omitted. Concerning the mediating role of OJS in the relationship between training and burnout (*H3*), as aforementioned both training dimensions have negative direct effect on employee burnout and so does OJS ($\beta = -0.38, p < 0.001$) (Table III). However, only training effectiveness has a significant impact on OJS ($\beta = 0.57, p < 0.01$). Testing both training dimensions and OJS as

	Mean	SD	1	2	3	4	5	6
Training effectiveness	3.80	0.81	(0.91)					
Training organization	3.76	0.75	0.56**	(0.83)				
Support	3.65	0.85	0.62**	0.67**	(0.91)			
Participation	3.36	1.21	0.50**	0.41**	0.41**	(0.93)		
OJS	4.07	0.76	0.57**	0.33**	0.38**	0.30**		
Burnout	3.35	0.56	-0.37**	-0.37**	-0.32**	-0.16	-0.38**	(0.91)
PC literacy	1.57	0.50	0.18	0.21*	0.07	0.11	0.03	-0.21*

Note: * $p < 0.05$; ** $p < 0.01$

Table II.
Descriptive statistics,
Pearson correlations,
and Cronbach's α
for all variables

	OJS	Burnout
Training organization	0.02	-0.24*
Training effectiveness	0.57***	-0.28**
Adj. R^2	0.32	0.16
F-ratio	55.45***	15.84***
OJS		-0.38***
Adj. R^2		0.14
F-ratio		19.38***
Training organization		-0.23*
Training effectiveness		-0.09
OJS		-0.29**
Adj. R^2		0.20
F-ratio		14.16***

Notes: ^aEntries are standardized regression coefficients. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table III.
Multiple regression
analyses for the
mediated effect of
training on burnout^a

Table IV.
Multiple regression
analyses for the
mediated effect of
development on
burnout^a

	OJS	Burnout
Support	0.38***	-0.32**
Participation	ns	ns
Adj. R^2	0.13	0.10
F-ratio	18.94***	13.25***
OJS		-0.38***
Adj. R^2		0.14
F-ratio		19.38***
Support		-0.21*
Participation		ns
OJS		-0.30**
Adj. R^2		0.17
F-ratio		12.64***

Notes: ^aEntries are standardized regression coefficients. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

burnout antecedents revealed that only training organization ($\beta = -0.23, p < 0.05$) and OJS ($\beta = -0.29, p < 0.01$) have significant negative impact on employee burnout. Consequently, OJS mediates only the effect that training effectiveness has on burnout, as it became non-significant when predicting burnout along with OJS, providing partial support to *H3*.

We used the same steps to examine OJS as a mediator in the relationship between only support and burnout, as participation does not have a direct effect on burnout. As apparent in Table IV, support – other than the negative impact on burnout already mentioned, it also has significant positive impact on OJS ($\beta = 0.38, p < 0.001$). Finally, when both support and OJS are examined as burnout antecedents, they both have a significant negative impact, and β weight of support decreases ($\beta = -0.21, p < 0.01$). Therefore, *H4* is partially true.

Since mediation applied in the case of training effectiveness and support, we continued our analysis with examining the moderating role of PC literacy on the mediation effect of OJS between training effectiveness and burnout (part of *H5*) and between support and burnout (part of *H6*). To test such relationship, one could choose between structural equation modeling, the Sobel test, and multiple regressions. However, the first two methods presuppose sample sizes greater than 200 (Quintana and Maxwell, 1999), our only option was multiple regressions (Frazier *et al.*, 2004).

According to Muller *et al.* (2005), three models (equations) that underlie mediated moderation and moderated mediation exist, the examination of which will display the actual form of the relationship. In brief, the models to be examined are: the effect of the IV, the moderator and the interaction term between the IV and the moderator first on the DV and then on the mediator (two equations) and the effect of the IV, the moderator, the interaction term between the IV and the moderator, the mediator and the interaction term between the mediator and the moderator on the DV (for more information, please see the work of Muller *et al.*, 2005). To reduce multicollinearity related with the use of interaction terms, we centered the variables around 0, by subtracting the sample mean from all individuals' scores on the variable (Aiken and West, 1991). Then, we created the interaction terms, between training effectiveness and PC literacy, between support and PC literacy and between PC literacy and OJS. Tables V and VI present the results of multiple regressions. Training effectiveness and the interaction term between training effectiveness and PC literacy have a significant impact on both burnout ($\beta = -0.46$,

$p < 0.001$ and $\beta = -0.19$, $p < 0.05$, respectively – Step 1) and OJS ($\beta = 0.57$, $p < 0.001$ and $\beta = 0.21$, $p < 0.05$, respectively – Step 2). The interacting term between OJS and PC literacy on burnout has also a significant effect on burnout ($\beta = -0.40$, $p < 0.01$ – Step 3). Since in accordance with Muller *et al.*'s (2005) suggestions, Step 1 shows that there is overall moderation of the treatment effect and the interaction term between the IV and the moderator becomes non-significant in Step 3, we can conclude that a full mediated moderation exists (Table V). This means that PC literacy moderates the effect that training effectiveness has on burnout which is also mediated by OJS, providing partial support to *H5*, as only one training dimension is moderated. Finally, PC literacy has a significant direct negative effect on burnout, too.

Similarly, Table VI shows that support and the interaction term between support and PC literacy have a significant impact on both burnout ($\beta = -0.45$, $p < 0.001$ and $\beta = 0.24$, $p < 0.05$, respectively – Step 1) and OJS ($\beta = 0.38$, $p < 0.001$ and $\beta = 0.20$, $p < 0.05$, respectively – Step 2). In Step 3, support, PC literacy and OJS have significant effect on burnout ($\beta = -0.21$, $p < 0.05$, $\beta = -0.20$, $p < 0.05$, and $\beta = -0.31$, $p < 0.01$, respectively). However, the interacting term between OJS and PC literacy on burnout does not have a significant effect on burnout ($\beta = 0.08$, ns). Consequently, a mediated moderation also exists, but only in the effect that support (IV) has on OJS (mediator) and not on the effect that OJS (mediator) has on burnout (DV), providing partial support to *H6*, as only one development dimension is moderated and only to on the IV-mediator part of the relationship.

Graphical representations of these interactions appear in Figures 2 and 3. To create these, first we calculated groups at the high (1 SD above the mean), mean and low (1 SD

	Step 1 Burnout	Step 2 OJS	Step 3 Burnout
Training effectiveness	-0.46***	0.57***	-0.20*
PC literacy	-0.10	0.10	-0.21*
Training effectiveness \times PC literacy	-0.19*	0.21*	0.28
OJS			-0.39**
OJS \times PC literacy			-0.40**
R^2	0.15	0.32	0.17
<i>F</i> -ratio	11.57***	55.45***	13.33***

Notes: Entries are standardized regression coefficients. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table V.
Results for burnout after mediated moderation (IV: training effectiveness)

	Step 1 Burnout	Step 2 OJS	Step 3 Burnout
Support	-0.45***	0.38***	-0.21*
PC literacy	0.05	0.06	-0.20*
Support \times PC literacy	-0.24*	0.20*	-0.09
OJS			-0.31**
OJS \times PC literacy			0.08
R^2	0.13	0.17	0.21
<i>F</i> -ratio	9.47***	13.33***	11.06***

Notes: Entries are standardized regression coefficients. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table VI.
Results for burnout after mediated moderation (IV: support)

Figure 2.
Plot of PC literacy × training effectiveness interaction for predicting OJS

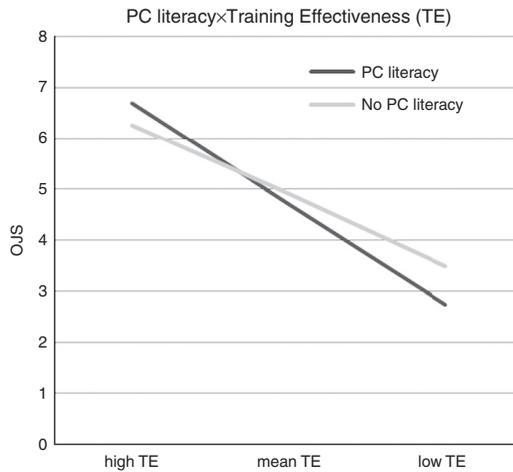
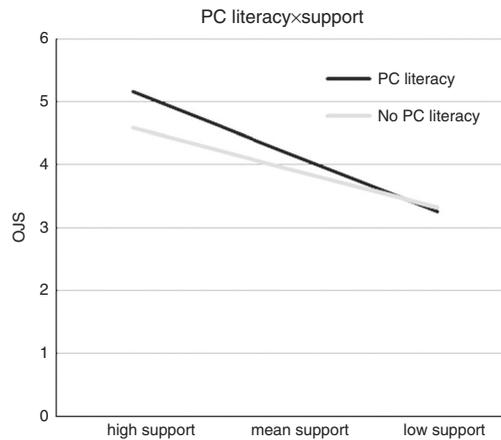


Figure 3.
Plot of PC literacy × support interaction for predicting OJS



below the mean) values for continuous variables (Cohen *et al.*, 2003). Then we multiplied the unstandardized regression coefficient for each variable by the appropriate values for each variable in the equation, as Frazier *et al.* (2004) suggest. Figure 2 reveals that individuals with PC literacy display greater OJS when they believe that their training was effective than PC illiterate individuals who considered training effectiveness low. By the same token, Figure 3 shows that PC literate employees are more likely to experience greater OJS when they receive ample support during the change process, than PC illiterate individuals who received less support. Furthermore, Figure 4 demonstrates that PC literate employees experience lower burnout levels when their OJS is increased compared to PC illiterate employees with lower OJS levels.

6. Discussion

Nowadays, change is probably the only certainty for organizations, including public ones (Fernandez and Rainey, 2006). The external and internal environment often asks for episodic changes, challenging organizational inertia (Weick and Quinn, 1999).

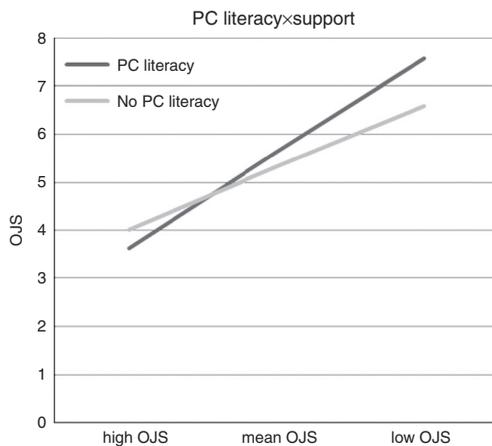


Figure 4.
Plot of PC
literacy×OJS for
predicting burnout

Unfortunately, such changes cause negative employee attitudinal, behavioral, physiological, and psychological responses (Armenakis and Harris, 2009), which threaten their success (Kotter, 1995). Therefore, this study aimed at identifying ways to shield employees against burnout and subsequent negative organizational and individual consequences.

To start with, our findings suggest that training and development could be helpful toward this direction. To the extent that employees believe that during change their training was well organized and effective and their support was ample, they are likely to experience less burnout. Such effects may be attributed either to the fact that new knowledge and skills may make employees be and feel better equipped to face the new reality (Hobfoll, 1989, 1991) or to the more positive evaluation of the change process that augments psychological climate (James *et al.*, 2008). These findings are in accordance with Martin *et al.* (2005), who emphasized the necessity to examine environmental and organizational coping resources to improve change management. Similarly, researchers have stressed the importance of delineating contextual and work-related characteristics when investigating employee responses to organizational change initiatives (Ghitulescu, 2013). Furthermore, our findings indicate that training effectiveness and support increase OJS, which in turn lowers burnout. The mediating role of JS taps the proposition of Clark *et al.* (1993) who argued that training familiarizes employees with different, interesting, and thus rejuvenating job content, in a quicker, more thorough and more optimistic way.

This study also looked into the role of employee PC literacy. Given that it reflects employees' prior (before training and development) ability to handle the forthcoming change and the IT context of the change examined, we expected PC literacy to be a personal coping resource and examined it as a moderator, to further understand the – mediated by OJS – impact of training effectiveness and support on burnout. Our results suggest that during episodic IT-related changes, PC literate employees with greater OJS tend to experience lower burnout when they perceive the training they received as effective and the support as sufficient. Such findings seem to comply with the cognitive-phenomenological theory of stress and coping (Smith and Lazarus, 1990), as both organizational – training and development – and personal – PC literacy, characteristics seem to have a significant impact on their evaluation of a, stressful *per se*, organizational event such as a radical change initiative. Overall, it appears that the development process of burnout during episodic changes may be more complex than expected.

Since burnout limits both employee's ability and willingness to adjust and contribute (Appelbaum *et al.*, 2000), putting the change initiative at risk, it is vital for leaders and agents of change to find ways to prevent or at least reduce it. Apparently, training and development can be helpful toward this direction. Training, not only designates the way that work roles will be perceived and enacted (Katz and Kahn, 1978), but during episodic changes it also seems to protect employees from burnout. Hence, initiating well organized and effective training programs that grant employees the resources to manage episodic changes successfully may confine burnout. Well organized training programs presuppose clear training aims and objectives that relate directly to the new setting, along with opportunities to reflect personal experiences (Kirkpatrick, 1994). To ensure training effectiveness, change agents should pilot test the training process on those employees that are more likely to handle it successfully (based on personal resources evaluation), make adjustment and then offer it to all. In addition, it is important that a solid evaluation process, providing feedback throughout the training program to aid improvements, is built. Concerning the role of support for reducing burnout during episodic initiative, change agents should start with identifying employee fears, recognize factors that cause stress and enrich their coping ability both with the unknown and known part of the change. Then timely and precise communication regarding the necessity and scope of change could help toward reducing fears and subsequent stress. Moreover, effective coaching and mentoring through the change process may enhance well being in the workplace. As Leiter (1992) revealed, when employees are not granted enough help, their exhaustion and cynicism increases while their effectiveness and ability to handle challenges reduces. Generally, it is worth mentioning that, since organizational determinants of stress during radical organizational changes are easier to alter, compared to individual ones (Martin *et al.*, 2005), and our findings suggest that they can be helpful toward preventing burnout, change agents could give priority to them when designing change initiatives

Given that according to our findings personal resources prior to the change (PC literacy here) are critical, emphasis should be given on the identification and evaluation of the core personal resources for the specified change. This suggests that to maximize the benefits of such programs, training and development should be customized for participants. For instance, more capable and confident employees could become change facilitators and ought to be separately trained, to avoid daunting those who are less confident. As Reynolds (1997) proposed, any employee psychological problems ask for individualized support that will facilitate the more effective and efficient handling of stressful event. Yet, since OJS is also a central, intervening with individuals' personal resources, change agents might also want evaluate it and seek to boost it before decisions on episodic changes are put into action.

As with any study, the present one is not without limitations. The first limitation relates to potential common method bias of responses due to the cross-sectional design of the study. The second arises from the fact that all responses came from a single source. In fact, the fact that our sample size is rather limited and that all responses came from four branches of the same organization may limit the generalizability of our findings. Moreover, since responses came from volunteers, non-participants might have decided to abstain due to increased burnout. Still, we strongly believe that forcing participation during such change initiatives could cause greater bias in responses. Additionally, the causal relationship of JS and burnout needs further investigation, since there is some conflicting evidence (i.e. Babakus and Yavas, 2012; Mesmer-Magnus *et al.*, 2012). Finally, it is likely that other variables may also intervene in the

relationship between employee training and development and burnout during such organizational changes while scale of training itself needs further testing. Despite all these limitations, taking into account difficulties inherent in convincing both top management to allow and employees participate to a study during stressful initiative, we strongly believe that employee insight into the effective management of episodic changes is precious.

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Further reading

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