The Mediating Role of Job Resources and Psychological Capital in the Job Demands - Job Burnout Relationship

Hassan Mohagheghi¹, Effat Parto², Parisa Nahalgar³, Sayyed Mohammad Hosseini⁴, Kiiumars Farahbakhsh⁵

¹MA in Occupational Counseling Faculty of Psychology and Education, Allameh Tabataba'i University, Tehran, Iran.
²MA in psychology, Islamic Azad university of Torbat-e-jam, Iran.
³Ma student in Rehabilitation Counseling, Allameh Tabataba'i University, Tehran, Iran.
⁴MA in Rehabilitation Counseling, faculty of Psychology and Education, Allameh Tabataba'i University, Tehran, Iran.
⁵Assistant Professor in department of counseling, Allameh tabataba’i University, Tehran, Iran.

ABSTRACT

Aim: The objective of this study was to investigate the mediating role of job resources and psychological capital in the job demands - job burnout relationship.

Design: The study population (N = 340) consisted of employees in the industries of Khorasan Razavi Province, Iran selected by multistage cluster sampling method. Structural Equation Modeling and Sobel Test were administered.

Conclusion: The findings revealed that job demands were the main predictors of job burnout and job resources, while psychological capital can play a mediating role in the relationship between job demands and job burnout. Generally, the presented model explains 0.50 of job burnout changes.

KEYWORDS: Job demands, psychological capital, job burnout, job resources

INTRODUCTION

As globalization, continued international pressures on organizations and substantial reduction in employment opportunities has forced employees to meet a large and diverse number of demands from organizational stakeholders, job burnout and its formative influences have been considered by many organizational researchers. Although burnout has exclusively been conceptualized in helping professions, it has recently expanded to all types of occupational groups (Rothmann & Joubert, 2007). Burnout is characterized by three components of emotional exhaustion, cynicism and reduced professional efficacy occurring as a result of chronic job stress (Zimbardo, Maslach, & Haney, 2000). Emotional exhaustion represents the individual stress component of burnout, and refers to feelings of being depleted of emotional and physical resources and incapable of work performance because all energy has been lost. Cynicism entails a general indifferent, insensitive or cynical attitude towards the work. Reduced professional efficacy refers to negative self-evaluation of competence, achievement and productiveness, as well as feelings of insufficiency (Maslach, Schaufeli, & Leiter, 2001).

The Job Demands-Resources model (JD-R) (Bakker, Demerouti, Boer, & Schaufeli, 2003; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) is among many theories and models developed to explain the effects of job demands and lack of resources on burnout. The model assumes that every working environment may have its own specific risk factors associated with job stress or burnout; these factors can be classified in two general categories - job resources and job demands. “Job resources refer to those physical, psychological, social, or organizational aspects of the job that are either/or: (1) functional in achieving work goals; (2) reduce job demands and the associated physiological and psychological costs; (3) stimulate personal growth and development” (Bakker, Demerouti, Boer, & Schaufeli, 2003). Job resources may include ‘autonomy’, ‘co-worker support’, ‘performance feedback’ and ‘career opportunities’. Job demands refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs. Job demands consist of workload and job-related emotions. Many studies have shown that heavy job demands such as high workload, emotionally demanding interactions with clients, role ambiguity, an unfavorable physical environment and issues related to job insecurity and change can have a profound impact in...
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creating job stress causing fatigue, and negative and cynical attitudes towards work (Schaufeli & Enzmann, 1998; Bakker, Demerouti, Boer, & Schaufeli, 2003).

A central assumption of the JD-R model is that job strain or burnout develops – regardless of the type of job or occupation – when job demands are high and when job resources are limited (Demerouti et al., 2001). Bakker and colleagues (2004) confirmed the assumption that undesirable job characteristics and high job demands can reduce the physical and mental potential resulting in physical-mental problems and decreased energy. Moreover, lack of job resources lead to cynicism towards work and a reduction in job competence and motives for work (job motivations) (Bakker, Demerouti, & Verbeke, 2004).

Specifically, JD-R model proposes another assumption – less studied - that job resources may buffer the impact of job demands on job strain, including burnout (Baker, Demerouti, Taris, Schaufeli, 2003). This assumption is consistent with Karasek demand-control model (DCM) (1979), but expands this model by claiming that several different job resources can play the role of buffer for several different job demands. Thus, whereas the DCM suggests that greater control over the execution of tasks may buffer the impact of work overload on job stress, the JD-R model expands this view and states that many different types of job demands and job resources may interact in predicting job strain (Bakker et al., 2004).

In addition to job resources, it is assumed that another factor can play a moderating role in the relationship between job demands and burnout which is employees’ individual resources or ‘human capital’, known as ‘psychological capital’. Psychological capital or PsyCap has been defined as “an individual’s positive psychological state of development and is characterized by: having confidence to succeed at challenging tasks; persevering toward goals in order to succeed; making a positive attribution about succeeding; and when beset by problems or adversity, sustaining to attain success” (Luthans, 2004). Psychological capital is a composite construct comprised of four perceptual-cognitive components: hope, optimism, self-efficacy (or confidence), and resilience. Hope is defined as a positive motivational state that is based on an interactively derived sense of successful (a) goal-oriented energy and (b) planning to meet goals. Optimism is making internal, stable, and global attributions regarding positive events. Self-efficacy or confidence is defined as individual’s conviction about his or her to successfully execute a specific task. Resilience is positive adaptation in response to adversity. Resilience is purely passive resistance against damage or is threatening conditions but a surprising twist, the active and constructive participation of their surroundings (Waller, 2001).

According to the different studies on job psychological models including JD-R and DCM, this study considered (1) autonomy, co-worker support, and performance feedback and (2) workload, emotional demands, emotional dissonance, and organizational change as its main job resources and job demands respectively. Autonomy includes activities associated with a sense of freedom to choose the right mobile experience and refers to the ability to set and achieve goals based on personal knowledge and self-assessment (Gagné & Deci, 2005). Social support can be classified in two types: structural and functional. The structural concept refers to the objective aspect of support and the main and original social communication; while the functional concept of support refers to the qualitative aspects of social communication including functions such as information providing, intimacy in relationships, support availability and received support time (Cohen & Wills, 1985). Another job resource is performance feedback that improves the relations between supervisors and employees and employee performance.

Although previous studies have offered a long list of possible antecedents of burnout, theoretical progress in this area is limited. Furthermore, the role of psychological capital as a mediator in the relationship between job demands and job burnout has been ignored. Therefore, a need for new studies to fill the literature gap in this field is felt. To address this problem, researchers have proposed the following conceptual model to examine the impact of job resources and psychological capital on the relationship between job demands and job burnout.
Fig. (1) The conceptual model

The presented theoretical model indicates that job resources and psychological capital can play a mediating role in the job demands - job burnout relationship. Considering the causal relationships among the effective variables on burnout, the main problem of this study is to determine the fitness of the presented theoretical model.

METHOD, PARTICIPANTS AND SAMPLING METHOD

The study population consisted of all staff working in three sectors of non-metallic, food and electronics industrial units in Khorasan Razavi, Iran. The sample comprised of 340 subjects who were selected by multistage cluster sampling. Of these, 78.6 were males, and 21.4% (N = 73) were females. The mean age of participants was 33.58 years (SD = 6.42), and the number of years of professional experience was 9.36 (SD = 3.05). In terms of educational level, 169 (49.7%) had a high school diploma or less, 99 (29.1%) had an associate degree, 54 (15.9%) had a BA or BSc, and 18 (5.3%) had an MA or MSc. 295 (86.8%) participants were married and the remainder (N = 45) were single.

MEASURING INSTRUMENTS

Maslach Burnout Inventory (MBI)

MBI is a 22-item scale designed to measure the frequency and severity of hypothesized dimensions of burnout, namely (a) Emotional Exhaustion (9 items), (b) Depersonalization (5 items), and (c) Personal Accomplishment (8 items). The frequency of burnout symptoms is rated on a seven point Likert scale ranging from ‘never’ to ‘always’. High scores on emotional exhaustion and depersonalization and low scores on personal accomplishment indicate job burnout (all items of Personal Accomplishment were reverse-scored). Cronbach's α reliability coefficient for the scale reported in Moradi (1386) was 0.80. In the present study, Cronbach's α for the overall scale was 0.76 and for the subscales ranged from 0.80 to 0.85.

Psychological Capital Questionnaire (PCQ-24)

To measure psychological capital, Psychological Capital Questionnaire (PCQ-24) was used (Luthans, Youssef, & Avolio, 2007) which measures the four constructs of hope, resilience, optimism and self-efficacy. PCQ-24 consists of 24 items and 4 subscales. Respondents are asked to rate each item on a six-point Likert-type rating scale ranging from (1) “Strongly disagree” to (6) “Strongly agree.” Cronbach's α reliability coefficient for the scale reported in Forouhar (1390) was 0.85. In the present study, Cronbach's α for the overall scale was calculated 0.88.

Karasek Job Content Questionnaire (JCQ)

Twenty-seven items of the JCQ were selected from the full recommended version of 49 items to measure job resources and demands (Karasek, 1985). Job resources were assessed using eleven items: autonomy (3 items), co-worker support (3 items), and performance feedback (5 items). Job demands were assessed using sixteen items: workload (4 items), emotional demands (3 items), emotional dissonance (5 items), and organizational change (4 items).
items). All sub-scales were scored on a five-point Likert-type rating scale ranging from (1) ‘Never’ to (5) ‘Always’.

Internal consistency of the final form was estimated by Cronbach’s coefficient alpha, which yielded reliability coefficients for the three sub-scales of job resources: 0.72 for autonomy, 0.76 for co-worker support, 0.73 for performance feedback, and 0.78 for the overall scale with eleven items. The Cronbach alphas for each of the four sub-scales of job demands and the overall scale were as follows: workload (0.74); emotional demands (0.80); emotional dissonance (0.74); organizational change (0.74); and the overall scale with sixteen items (0.83).

**RESULTS**

The present study sought to explain causal relationships among variables of job demands and resources, psychological capital, and Burnout. Psychological capital and job resources played a mediating role in this study’s model. To test the research hypotheses, structural equation modeling was used. Descriptive statistics and variables correlation matrix are presented in Table 1.

**Table 1. Mean, standard deviations, and correlation between the variables**

| R       | 13 | 12 | 11 | 10 | 9  | 8  | 7  | 6  | 5  | 4  | 3  | 2  | 1  | SD | M  | Variable                |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------------------|
| 3/5     | /12| 1  |    |    |    |    |    |    |    |    |    |    |    |   | Workload                |
| 0/36**  | 2/4| 7/7|    |    |    |    |    |    |    |    |    |    |    |   | Emotional demands      |
| 0/48**  | 0/37**| 3/7| 3/6| 13|    |    |    |    |    |    |    |    |    |   | Emotional dissonance   |
| 0/38**  | 0/33**| 0/18**| 3/6| 1/10|    |    |    |    |    |    |    |    |    |   | Organization changes   |
| -0/06   | -0/06| -0/10| -0/18**| 2/7| 9/3|    |    |    |    |    |    |    |    |   | Autonomy                |
| 0/29**  | -0/05| -0/06| -0/21**| -0/21**| 2/8| 2/10|    |    |    |    |    |    |    |   | Co-worker support      |
| 0/36**  | 0/32**| -0/12*| -0/15**| -0/27**| -0/20**| 3/7| 9/12|    |    |    |    |    |    |   | Feedback                |
| 0/29**  | 0/45**| 0/27**| -0/20**| -0/16**| -0/27**| -0/17**| 4/7| 9/25|    |    |    |    |    |   | Self-efficacy           |
| 0/64**  | 0/29**| 0/36**| 0/19**| -0/14**| -0/03| -0/21**| -0/03| 4/4| 9/27|    |    |    |    |   | Hope                    |
| 0/52**  | 0/46**| 0/09| 0/20**| 0/10*| -0/11*| -0/10| -0/16**| -0/10| 3/6| 5/24|    |    |   | Resilience              |
| 0/46**  | 0/41**| 0/40**| 0/27**| 0/22**| 0/13*| -0/15**| -0/15**| -0/18**| -0/03| 4/06| 0/25|    |   | Optimism                |
| -0/26**| -0/13*| -0/39**| -0/43**| -0/32**| -0/30**| -0/24**| 0/22**| 0/29**| -0/39**| 0/20**| 10/3| 7/23|   | Exhaustion              |
| 0/36**  | 0/31**| 0/26**| 0/42**| 0/40**| 0/28**| 0/34**| 0/22**| -0/15**| -0/20**| -0/30**| -0/06| 7/4| 0/36|   | Professional efficacy   |
| -0/30**| -0/70**| -0/20**| -0/20**| -0/40**| -0/43**| -0/18**| -0/25**| -0/08| 0/32**| 0/27**| 0/26**| 0/18**| 5/8| 9/4| Depersonalization       |

**. Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).**

Correlation test results indicated a significant relationship among most of the variable, so that the highest correlation was found between the variables of exhaustion and depersonalization (p<0.01, r = -0.70), and (p<0.01, r = 0.64), whereas the lowest correlation was between resilience and autonomy (p<0.05, r = 0.10) and resilience and organizational changes (p<0.05, r = 0.11).

For a detailed explanation of the relationships among variables, the presented conceptual model using structural equation modeling was tested. As Figure 2 indicates, the initial model shows the structural relationships between the variables of job demands, job resources, psychological capital and burnout.
Fig. (2) Null model in standardized estimate

Table 2. Fit indices of null structural model

<table>
<thead>
<tr>
<th>CFI</th>
<th>AGFI</th>
<th>GFI</th>
<th>RMSEA</th>
<th>CMIN/DF</th>
<th>Sig. level</th>
<th>df</th>
<th>χ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.89</td>
<td>0.84</td>
<td>0.89</td>
<td>0.09</td>
<td>4.02</td>
<td>0.01</td>
<td>72</td>
<td>289.59</td>
</tr>
</tbody>
</table>

As shown in Table 2, the applied goodness-of-fit indices were not acceptable to confirm the model. The indices are either exceeding or less than critical values (cut-off points), so that relative chi-square ($\chi^2/df$) is below 3. For each of the fit indices (GFI, AGFI and CFI), values equal to $\%0.90$ or higher are acceptable (Hoyle, 1995); except for RMSEA, that values equal to or below 0.05 are considered acceptable (McCallum & Austin, 2000). The implicit meaning is that the null model did not yield acceptable fit by the research data. To improve the fit indices, the null model was modified. Fig. (3) presents the final model by both standardized estimate and significant coefficients.

Fig. (3) Final model by standardized estimate

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Fig. (4) Final model by significant coefficients
Table 3. Fit indices of final structural model

<table>
<thead>
<tr>
<th>CFI</th>
<th>AGFFI</th>
<th>GFI</th>
<th>RMSEA</th>
<th>CMIN/DF</th>
<th>Sig. level</th>
<th>df</th>
<th>x2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.93</td>
<td>0.88</td>
<td>0.93</td>
<td>0.07</td>
<td>2.83</td>
<td>0.01</td>
<td>67</td>
<td>190.16</td>
</tr>
</tbody>
</table>

The model testing results in Fig. (3) by the standardized estimate of coefficients (β) and in Fig. (4) by significant amounts of statistics (t) indicated a significant causal relationship between the variables of ‘job demands’ and the mediating variables between ‘job resources’ and ‘psychological capital’ and ‘burnout’ at 0.95 level (p<0.05).

The presented results showed that job demands’ direct effect on job burnout were positive and significant (t = 3.17, B = 0.33). Furthermore, the mediating impact of job resources on the relationship between job demands and burnout was negative and significant (t = -3.21, B = -0.37) and mediating impact of psychological capital on the relationship between job demands and burnout was negative and significant (t = -7.08, B = -0.60). The fit indices presented in Table 3 also show that many of these indices have reached the acceptable value. Thus, the final model yielded acceptable fit by the research data. Regarding the good fitness of the final model, the direct and mediating effects of variables on the model was tested, the results of which in shown Table 4.

Table 4. SEM test paths in the final model

<table>
<thead>
<tr>
<th>Variance percentage</th>
<th>Overall effect</th>
<th>Mediating effect</th>
<th>Direct effect</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>to ‘Job burnout’ from</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.50</td>
<td>0.75</td>
<td>-</td>
<td>0.33</td>
<td>Job demands</td>
</tr>
<tr>
<td>0.51</td>
<td>0.51</td>
<td>0.18</td>
<td>-0.38</td>
<td>Job resources</td>
</tr>
<tr>
<td>0.57</td>
<td>0.57</td>
<td>0.24</td>
<td>-0.60</td>
<td>Psychological capital</td>
</tr>
</tbody>
</table>

| from ‘Demands’ to |
| 0.25                | -0.51         | -               | -0.51         | Job resources |
| 0.16                | -0.14         | -               | -0.41         | Psychological capital |

As is presented in Table 4, the direct impact of job demands on job burnout was 0.33, whereas its indirect effect by job resources and psychological capital was 0.18 and 0.24 respectively. The direct impact of job resources on job burnout was -0.37, while the direct impact of psychological capital on job burnout was -0.60. The total impact of job demands on job burnout by job resources was 0.51; the total impact of job demands on job burnout by psychological capital was 0.57; and the total impact of job demands on job burnout by all paths was 0.75. Job demands explained 0.25 of job resources and 0.16 of psychological capital variances. Generally, the presented model explained 50% of burnout changes.

To test the mediating effects of ‘job resources’ and ‘capital psychological’ variables, the variables simultaneous entry in the regression equation and Sobel Test was used. Regarding that the correlation between the variables of ‘job demands’ and ‘job resources’ (r = -0.26), the relationship between ‘job resources’ and ‘burnout’ (r = -0.18), and the relationship between ‘job demands’ and ‘job burnout’ (r = 0.30) are statistically significant at (p<0.01), and with entering the impact of ‘job resources’ and ‘job demands’ variables in the regression equation, the regression coefficient of ‘job demands’ was reduced from (B = 0.30) to (B = 0.269), while it is statistically significant at (p<0.01). Therefore, the mediating role of ‘job resources’ in the relationship between job demands and job burnout is confirmed. Moreover, given that the correlation between the variables of ‘job demands’ and ‘psychological capital’ (r = 0.24), and the relationship between ‘psychological capital’ and ‘job burnout’ (r = -0.22) are statistically significant at (p<0.01), and entering the impact of ‘psychological capital’ and ‘job demands’ variables in the regression equation, the regression coefficient of ‘job demands’ was reduced from (B = 0.30) to (B = 0.261), while it is statistically significant at (p<0.01). Therefore, the mediating role of ‘psychological capital’ in the relationship between job demands and job burnout is confirmed. The above results were also confirmed by Sobel Test.

DISCUSSION AND CONCLUSION

The objective of this study was to investigate the mediating role of job resources and psychological capital in the job demands - job burnout relationship which in addition to helping the theoretical development of JD-R model, assessed the role of psychological capital as a new component of positive psychology in preventing staff job burnout. SEM fit indices indicates that the obtained data are in good fitness with the research theoretical model and confirm it. Considering that job demands are among the most important predicting factors of job burnout (Demerouti et al., 2001; Schaufeli & Bakker, 2004), the results obtained from this study showed that job resources and psychological capital
can have a mediating role in the relationship between the job demands of burnout. These results are consistent with Bakker, Demerouti and Euwema (2005), and Bakker and colleagues (2003). In fact, it seems that employees’ increased work control and autonomy, co-worker support and necessary feedback to improve performance could lead to renewed interest and enthusiasm of the staff to work. These results are consistent with research findings of Bakker and colleagues (2004), and Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli (2009).

Due to confirmation of the mediating role of psychological capital in the relationship between job demands and burnout, the results can be explained as follows: employees who believe in their own capabilities enjoy a high level of compatibility in stressful circumstances. Thus in line with Luthans and colleagues (2006), having intrapsychic resources in addition to having a more positive view of the future results in a greater ability to adapt to a wide range of stressful psychological stimuli. The presence of high stress and tough job demands reduces the impact of mentioned factors on burnout. However, the present results are not consistent with the findings of (2007) one of whose research hypotheses was to examine the mediating role of psychological capital in the relationship between job demands and burnout. Moreover, considering the fact that there is a reciprocal and motivational relationship between job resources and psychological capital, it can be expected that positive and satisfying circumstances and a high level of energy and interest in work due to the availability of variant work-related job resources, would increase intrapsychic resources of employees and result in positive outcomes, such as health and improvement of work performance. These results are consistent with Xanthopoulou, Bakker, Demerouti, & Schaufeli (2007).

Generally, the results of this study, in addition to helping the theoretical development of JD-R model, assessed the mediating role of job resources and psychological in the relationship between job demands and job burnout. Based on the findings of this study, it is recommended that human resources managers pay more attention to employees’ in organizations. Because the promotion of employees’ job resources and psychological capital besides reducing the job demands would result in less burnout in stressful conditions. It is also recommended that organizations pay attention to employees’ views on and task execution and work management. Also, by providing feedback and support for employees in normal circumstances, and especially in stressful situations, managers can achieve organizational development and performance improvement. Moreover, by organizing special training courses, train the staff in each of the components of ‘hope’, ‘resilience’, ‘self-efficacy’ and ‘optimism’ in extraordinary working conditions, and explain the impact of each component on employees’ performance in coping with stress. The present study has certain limitations. The research was based solely on self-reports. Another limitation is the lack of consideration of the consequences arising out of job resources and demands, and psychological capital. As a result of the fact that most employees in organizations are married, the mentioned factors could impact on employees’ various aspects of life at the individual and organizational levels.

REFERENCES


