

# The Mediating Role of Occupational Burnout between Job Stress and Job Performance among Iranian Teachers

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#### Abstract

**Background:** Teachers are exposed to work stress due to high workload, role conflict, and environmental conditions that affect their performance. The present study investigates the mediating role of occupational burnout between job stress and job performance among Iranian teachers.

**Methods:** This is a cross-sectional study, and the participants were 292 high school teachers in Golestan province in 2019. To collect the data, we used three questionnaires of the Maslach burnout inventory, Paterson's job performance questionnaire, and Health and Safety Executive (HSE) stress indicator tool. The data were analyzed using descriptive statistics, Pearson correlation test, and structural equation modelling.

**Results:** The findings showed that 19.9% of teachers had burnout. The SEM indicated a negative and significant relationship between occupational burnout ( $\beta=-0.226$ ) and job performance and job stress and job performance ( $\beta=-0.428$ ). The mediating role of occupational burnout between job stress and job performance in teachers was confirmed.

**Conclusion:** Occupational burnout is a mediating variable for the impact of job stressors on human performance. The findings of this study showed that role conflict and the quality of the relationship between colleagues could be recognized as two stressors affecting performance.

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**Keywords:** Occupational stress, Psychological burnout, Work performance, Structural modelling, Iranian teachers

## Introduction

Job stress is defined as a harmful physical and psychological reaction that occurs following an imbalance of work needs and human capacities.<sup>1</sup> Workforces are exposed to various job-related stressors that can harm their performance and efficiency. Reduced productivity and quality of work are the consequences of low performance due to stress.<sup>2</sup> It has been confirmed that there is a significant and negative relationship between job performance and stress.<sup>3</sup> A study between healthcare personnel indicated that occupational burnout was significantly associated with employee

performance.<sup>4</sup> Although this negative effect has been confirmed in many studies, Cavanaugh showed that job stress could have contradictory effects in two models of challenge stress and hindrance stress.<sup>5</sup> Challenge stress refers to situations in which people can enhance their performance, such as workload, responsibility, and time importance. However, hindrance stress refers to factors that individuals cannot overcome and threaten their career development. Some hindrance factors include role conflict and work insecurity.<sup>6</sup> These differences should be considered in evaluating work-related stressors and pathways of the effect of job stress.

A study indicated that job stress in indirect paths

and use of mediating variables affect performance in which job satisfaction is considered as a mediating variable.<sup>7</sup> In addition, motivation,<sup>8</sup> work engagement,<sup>9</sup> and perceived social support,<sup>10</sup> as other mediating variables, are examined. The general approach in studying these factors is the assessment of the short-term or medium-term effect of job stress on employees' behaviors, while the long-term effects are ignored. Burnout is known as the prolonged response to chronic workplace stressors that have been linked to job stress in casual researches or as mediators. In 1974, Freudenberg described the concept of burnout as a state of weakness and discomfort, emotional exhaustion or lack of emotional resources, depression, or the development of pessimistic attitudes toward work.<sup>11, 12</sup>

Although the role of job stress on burnout is evident, the mediating role of burnout between job stress and other psychosocial factors is somehow ambiguous, especially among teachers. Pestonjee's theory states the first stage of job burnout among teachers with the term "honeymoon", which expresses the happy feelings of a person who encounters a new job. In the final stage, the term "collision with the wall" is described, which indicates the psychological stress of job burnout and the ending of individual forces for adaptation to the work environment. The most important of these factors can be work demands, challenges with students and colleagues, and social problems.<sup>13</sup> Various studies have been conducted on the assessment of burnout and its multiple aspects. For instance, Anastasiou and Papakonstantinou have reported that environmental conditions, as a job-related stressor, can affect the nurses' job performance.<sup>14</sup>

To the best of our knowledge, there is no research on the effects of job stress on job performance and occupational burnout among teachers. Thus, the present study was conducted to evaluate the mediating role of occupational burnout caused by occupational stress in job performance among elementary and high school teachers in Iran.

### Hypothesis

As shown in Figure 1., a model was presented to better understand the study objectives. The model showed the relationship between job performance, occupational burnout, and job stress. Job stress was identified as the independent latent variable and job performance was the dependent latent variable. Three hypotheses were stated in the model: first, job stress is negatively related to job performance (*p1*), second, job stress is associated with occupational burnout (*p2*), and third, occupational burnout is negatively related to job performance (*p3*). In addition, the mediator role of occupational burnout between work-related stress and job performance was evaluated.

### Methods

#### Study Design and Participants

This cross-sectional, descriptive-analytical study was conducted among high school teachers from January to March 2019 in three cities of Golestan province (Glikesh, Minoo dasht, and Gonbad-e-kavoos), Iran. Anonymous questionnaires were utilized to collect the data. Using Cochran's Formula, we determined 320 participants. After reviewing the gathered questionnaires, 292 participants responded to the survey, resulting in a response rate of 91%. In the first step, workshops were held for the participants to explain the goals and steps of the study. After obtaining their written informed consent, the paper questionnaires were distributed. The Scientific and Medical Ethics Committee of all study sectors approved the ethical standards of the study.

#### Instruments

**Occupational burnout:** To analyze occupational burnout, we used Maslach Burnout Inventory (MBI). MBI is a 22-item self-report questionnaire, which is widely used to assess burnout in different work environments.<sup>15, 16</sup> This questionnaire assesses three dimensions of emotional exhaustion, depersonalization,

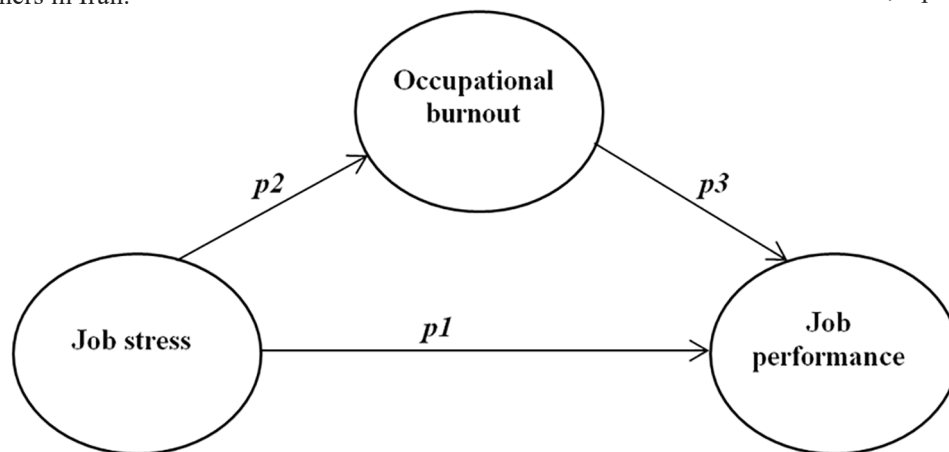


Figure 1: The research model (*p1*=path 1, *p2*=path 2, *p3*=path 3)

**Table 1:** The cut-off points of the Maslach burnout subscales

Burnout dimensions	Intensity of burnout		
	Low	Moderate	High
Emotional exhaustion	0–16	17–26	>27
Depersonalization	0–6	7–12	>13
Personal accomplishment	0–31	32–38	>39

and lack of personal accomplishment in the context of individual occupational activity. In this questionnaire, each question is scored on a seven-point scale (from 0=Never to 6=every day). Cut-off scores for each dimension of MBI have been shown in Table 1. Higher scores in emotional exhaustion and depersonalization and lower scores in personal accomplishment were considered to be acceptable.<sup>15, 17</sup> The validity and reliability of the Persian version of this questionnaire were verified by Moalemi et al.<sup>18</sup>

**Job performance:** To assess job performance, Paterson's job performance questionnaire was used.<sup>19</sup> This one-dimensional questionnaire assesses safety performance via 15 items using a five-option Likert scale (1=Never to 4=Always). The Cronbach's alpha of the Persian version of PJQ was found to be 0.76.<sup>20</sup>

**Job stress:** The Stress Indicator Tool (SIT) was utilized to measure job-related stress. This scale includes 35 questions that measure job stress in seven dimensions consisting of relationships, role, peer support, control demands, changes, and managerial support. The items are scored through a five-point Likert scale (never, seldom, sometimes, often, and always).<sup>21</sup> The Persian version of the tool was verified by Akbari et al.<sup>22</sup>

### Statistical Analysis

In this study, a series of statistical tests and Structural Equation Modeling (SEM) were used to evaluate the model. The SPSS and AMOS version 22 were used for statistical analyses. Descriptive statistics were used to analyze the characteristics of the participants and job-related factors. The Pearson correlation test examines the correlation between the study variables.

SEM is a method for data analysis that is designed to evaluate observable and latent variables. SEM can simultaneously test the hypotheses about associations between latent and observable variables.<sup>23</sup> In SEM, an essential component of the analysis is the evaluation of how the hypothesized model is fitted with the observed data. For this reason, goodness-of-fit indices have been proposed.<sup>15</sup> In the present study, goodness-of-fit indices were investigated based on the Root Mean Square Error of Approximation (RMSEA), Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), and the chi-square/degree of freedom ratio ( $\chi^2/df$ ).<sup>24</sup> RMSEA values less than 0.08 and greater than 0.1 were considered to be a reasonable fit and a poor

fit, respectively.<sup>25</sup> Besides, GFI values more than 0.8 and close to 1 showed the best goodness-of-fit;<sup>26</sup> also, CFI values more than 0.9 were considered to be a reasonable fit.<sup>27</sup> Finally,  $\chi^2/df$  ratio of more than two was determined as a good fit.<sup>28</sup>

## Results

The mean age of the studied population was 42.2 years (SD=19.82), ranging from 23 to 57 years. The majority of the participants were aged 40–49 years (48.7%). Additionally, most of the participants were male (54.8%) and had academic education (96.7%). The mean of job tenure was 7.44 years (SD=8.28), ranging from 1 to 32 years. Besides, the mean daily work hours were 6.5 hours (SD=1.78). Other demographic characteristics are presented in Table 2.

Table 3 shows the means and standard deviations, and the correlation coefficients of the variables. As shown, job stress was negatively associated with job performance ( $r=-0.505$ ) and positively associated with occupational burnout ( $r=0.261$ ). Also, there was a

**Table 2:** Demographic and job characteristics of the participants

Characteristics	n (%)
Age (year)	
≥29	19 (6.5)
30-39	67 (22.9)
40-49	142 (48.7)
≥50	64 (21.9)
Job tenure (year)	
5-9.9	39 (13.4)
10-19.9	70 (24.0)
≤20	183 (62.6)
Work hours (daily)	
≥4	8 (2.8)
4.1-8	260 (89.0)
<8	24 (8.2)
Gender	
Male	159 (54.4)
Female	133 (45.6)
Marital status	
Single	23 (8.4)
Married	269 (91.6)
Education level	
Diploma	1 (0.3)
Associate degree	30 (10.3)
BSc*	197 (64.5)
MSc* and PhD*	64 (21.9)

\*BSc: Bachelor of Science; MSc: Masters of Sciences; PhD: Doctor of Philosophy

**Table 3:** Correlation coefficients and descriptive statistics of the studied variables in the studied population

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Job Stress	-												
2. Role	0.67***	-											
3. Relationship	0.53***	0.36***	-										
4. Managerial Support	0.79***	0.47***	0.29***	-									
5. Peer Support	0.67***	0.35***	0.31***	0.61***	-								
6. Control	0.57***	0.27***	0.01	0.52***	0.32***	-							
7. Demand	0.60***	0.18***	0.40***	0.19***	0.18***	0.017	-						
8. Change	0.67***	0.43***	0.17***	0.65***	0.52***	0.41***	0.14*	-					
9. Burnout	0.26***	0.14*	0.23***	0.15*	0.11*	0.02	0.32***	-0.06	1				
10. Emotional exhaustion	0.45***	0.33***	0.31***	0.29***	0.25***	0.16***	0.41***	0.17***	0.86***	-			
11. Depersonalization	0.33***	0.28**	0.34*	0.18**	0.17**	0.07	0.29***	0.12*	0.67***	0.57***	-		
12. Personal accomplishment	-0.48***	-0.47***	-0.30***	-0.33***	-0.32***	-0.28*	-0.25***	-0.26***	0.05	-0.39***	-0.29***	-	
13. Job performance	-0.50***	-0.57***	-0.36***	-0.38***	-0.40***	-0.18**	-0.20**	-0.34***	-0.25***	-0.36***	-0.24***	0.29***	-
Mean	73.94	8.15	5.96	10.36	7.75	15.43	19.96	6.51	59.13	19.16	6.20	33.76	74.85
SD	13.81	2.69	2.11	3.27	2.30	3.67	5.30	2.20	9.61	8.45	3.05	4.72	4.94

\*\*\*P<0.001; \*\*P<0.01; \*P<0.05; SD: Standard deviation

**Table 4:** Hypothesized and final SEM model based on fit indicators

	Cut-offs	Hypothesized Model	Final Model
$\chi^2$	P>0.05	258.88 (P<0.001)	114.66 (P=0.132)
$\chi^2/df$	<2 or <3	6.16	3.09
GFI	>0.90	0.85	0.93
CFI	>0.90	0.79	0.92
NFI	>0.90	0.76	0.89
RMSEA	<0.08	0.13	0.08

GFI: Goodness of fit index; CFI: Comparative fit index; NFI: Normed fit index; RMSEA: Root mean square of approximation; SEM: Structural Equation Modelling;  $\chi^2$ : Chi-square; df: Degree of freedom

significant negative relationship between occupational burnout and job performance ( $r=-0.250$ ,  $P<0.0001$ ).

Table 4 shows the result of SEM, indicating that the hypothesized model had a good fit with the data.

The final model shows a direct effect of job stress on job performance ( $\beta=-0.428$ ,  $P<0.0001$ ) and occupational burnout ( $\beta=0.494$ ,  $P<0.0001$ ) and a direct effect between occupational burnout and job performance ( $\beta=-0.226$ ,  $P<0.001$ ) (Figure 2).

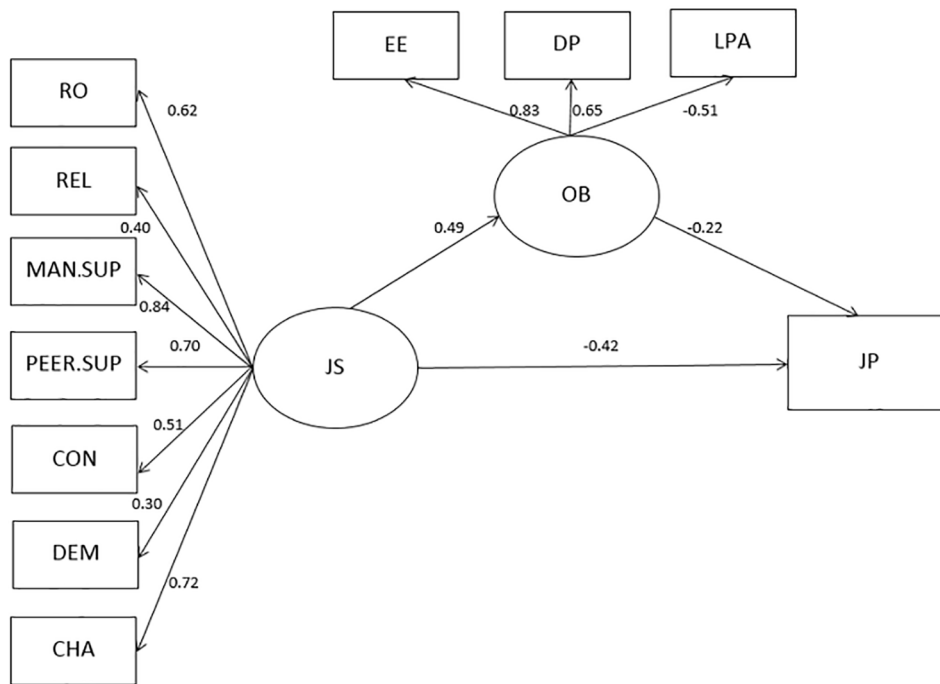
The indirect effects using bias-corrected bootstrapped indicate confidence intervals between -0.0282 and -0.0001. The results indicated that job stress had a significant indirect effect on job performance via occupational burnout ( $\beta=-0.012$ ,  $P<0.001$ ).

## Discussion

This study was carried out to evaluate the mediating role of occupational burnout between job stress and job performance among Iranian teachers. As expected, there was a strong correlation between job stress factors and occupational burnout. Along the same line of research, a study mentioned that occupational burnout explained 61% variance of job stress.<sup>29</sup> Besides, it has been shown

that job stress could be explained by at least 20% of each dimension of occupational burnout.<sup>30</sup> The impact of job stress dimensions (e.g., management's and colleagues' support) emphasized that organizational factors were not significantly effective in individual aspects of occupational burnout. A research suggested that organizational interactions, such as managers' and colleagues' support, had a negative relationship with emotional exhaustion among nurses.<sup>31</sup>

The association of job stress and performance was investigated in the study. The results indicated that peer support and job performance were positively correlated. It can be concluded that stress could impair the staff's organizational effectiveness and quality of work.<sup>32</sup> It was also indicated that social support had a positive role, and the subscales of relationships and demands were negatively associated with job performance. It can be argued that when there is no proper relationship between teachers and students, the physical and psychological workload will be higher than their tolerance level. When the workload and environmental patterns are inadequate for teachers, their efficacy decreases; this was confirmed by the mean score of demands. The loading factors between job stress dimensions indicated that the two dimensions of role and relationship had the most



**Figure 2:** The mediator role of occupational burnout (OB) between job stress (JS) and job performance (JP) – role (RO), relationships (REL), managerial support (MAN.SUP), peer support (PEER.SUP), control (CON), demands (DEM), changes (CHA), emotional exhaustion (EE), depersonalization (DP), lack of personal accomplishment (LPA)

effective role. The role has been described as the teachers' perceptions of their duties and the absence of contradictions. Also, the interaction between teachers and students and colleagues as well as peer support was described as the individual positive attributes to colleagues' support and encouragement. Moreover, more assistance of principals in planning for classes can reduce the job stress of low-experienced teachers.<sup>33-35</sup> Another research described the negative effect of job stress on performance by mental strain, job dissatisfaction, difficulty in decision making, and reduced work interest and job capacity.<sup>30</sup>

In the current study, SEM was used to examine the mediating role of occupational burnout. Based on the good-of-fit indices, it was confirmed that the proposed model widely matched the actual data. Occupational burnout could translate the job stress effect into job performance. Although no similar studies were found to confirm these data, the negative impacts of job stress and occupational burnout have been reported in many studies.<sup>36-38</sup> Overall, the results of SEM supported the mediating role of occupational burnout between job stress and job performance. The negative impact of job stress on employees' performance has been confirmed in other studies.<sup>39,40</sup> It should be noted that the role of burnout is important as the output of long-term stress. In the study of occupational stress, there are many organizational, individual, and environmental factors that affect individuals' efficiency and performance. By examining occupational burnout as the output of these factors, better results can be achieved in reducing the negative effects of job stress on performance.

A review of the literature showed that research similar to the present one has not been conducted. Although several studies have examined the relationship between stress and burnout and performance between different occupational groups, the structural model has not been evaluated. Like other cross-sectional studies, this study had its limitations. Self-reported questionnaires were used to measure the variables, so that the participants could provide directional answers. The use of questionnaires also limited the evaluation of variables to the dimensions of the same questionnaires.

## Conclusion

The results confirmed that job burnout had a significant effect on the teachers' performance due to long-term stress. Among job-related stressors, role and relationships were the two main dimensions of occupational stress that played a significant role in the teachers' performance and efficiency. Teachers who had better communication with the colleagues and better control over the classes represent higher performance. This shows that creating a supportive climate in schools can reduce the teachers' stress and improve their performance.

**Conflict of Interest:** None declared.

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