

Original Article

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Relationship between Job Stress and Burnout of Psychiatric Nurses: The Mediating Role of Psychological Capital

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Abstract

Background & Aims: Psychiatric nurses are critical in caring for patients with mental health problems and many challenging problems. They are also likely to be tired because they have been in risky and stressful conditions for a long time. Thus, it is necessary to control job stress and burnout. This study examined the mediating influence of psychological capital in the relationship between job stress and burnout of psychiatric nurses.

Materials and Methods: The research method was a descriptive cross-sectional study. The study population comprised all psychiatric nurses working in three psychiatric hospitals in Tehran, Iran from 10 August to 15 September 2022. The study selected 170 psychiatric nurses working as samples through convenience sampling. The research tools were Job Stress Questionnaire of Nurses, Maslach Burnout Inventory (MBI), and the Psychological Capital Questionnaire (PCQ). After completing the questionnaires, Data were analyzed using descriptive statistics, Pearson's correlation coefficient, and multiple regression by IBM SPSS 24.0 program.

Results: The findings show a significant correlation between job stress, psychological capital, and burnout. The path coefficient of the direct effect of job stress on job burnout is significant (β =0.524, *P*<0.001). The path coefficient of the direct effect of psychological capital on job burnout is significant (β =0.551, *P*<0.05). The bootstrap result for this model was 0.49. The confidence interval's lower and upper limits were calculated as 0.41 and 0.58, respectively.

Conclusion: These findings suggest that psychiatric nurses' burnout can be decreased by implementing different healthcare programs to increase psychological capital. In general, according to the results of this research, it is suggested that the phenomena of occupational stress and burnout among nurses should be taken seriously. These variables can have destructive effects on the quality of nurses' therapeutic performance. One of the suggestions that can be made is holding psychological workshops to improve self-efficacy, optimism, hope, flexibility and psychological capital among nurses in general.

Keywords: Occupational stress, Burnout, Psychological, Psychiatric nursing

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1. Introduction

Work and health are two sides of the same coin, or are still considered as essential factors of life, but on the one hand, work helps to honor the individuality of a being who lives in a society and belongs to the system of rights and duties [1], on the other hand, it can be beneficial for adverse health outcomes [2]. In this scenario, where there is an agreement that the medical center is one of the most unsafe work environments, exposing workers to constant natural threats (such as infections and communicable diseases) and/or biological hazards (such as occupational stress) [3]. Leading to severe individuality, organizational and social problems [4]. In addition, health care institutions in various European countries are understaffed and often unable to retain staff long-term, exposing health personnel to a vicious cycle of stress and overwork [5]. This is inconsistent with findings from Germany, which report significantly higher job demands in the health sector compared to other occupations [6].

Occupational stress has discernibly picked up since the onset of the worldwide COVID-19 wides pread, particularly among to begin with responders, healthcare specialists, teachers, and to a lesser degree, working from home populaces [7]. Stress in psychiatric nursing is ascribed mostly to the physical work, enduring, and passionate needs of patients and families, work hours, move work, interpersonal connections (e.g., associate- and intraprofessional debate), and other weights central to nurses' work. Stress at work may contrarily affect nurses' quality of life, whereas bringing down the treatment quality [8]. Job-related stress has, as a result, caused a misfortune of kindness for patients and expanded frequencies of honey mistakes and so is unfavorably related with the quality of care. Various studies appear that it straightforwardly or by implication impacts the conveyance of care and persistent comes about [9].

Studies suggest that being a nurse can be stressful, tiring, and increase a person's chance of getting sick on the job



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[10]. Being a nurse can be very stressful and tiring, which can make you feel exhausted from work [11]. Research has found that having a lot of work stress can lead to high blood pressure, heart problems, tummy troubles, and problems with muscles and joints. These conditions really affect how much work and how often nursing staff show up to work. This leads to not enough people to do the work [12]. Researchers studied occupational stress among nurses working at a big hospital in Xinjiang. The study showed that more people had medium to high job stress (93.9%) than low job stress (6.1%). The numbers were bigger than the rest of the country. It is hard to stay calm over a long time, and when nurses get really stressed out, they might tire of their job [13,14].

The experience of burnout may arise because of the accumulation of high stress, ultimately resulting in individuals either resigning from their jobs or retiring. Psychiatric nurses are prone to encountering levels of burnout. Suffering from burnout in a healthcare environment can cause not only diminished work performance, but also hinder one's perception, leading to compromised judgment and lower quality of provided care [15]. Burnout, as described by Freudenberger [16], refers to a feeling of inadequacy and fatigue in reaction to an overwhelming requirement for personal resources or energy. This puts the negative sentiments and emotions associated with burnout in the context of work [17]. Gomes et al [18], responsibility, lack of effective decision-making skills, face limited opportunities for career progression, experience bureaucratic or posit that burnout syndrome may be more likely to occur when individuals are burdened with excessive levels of ineffective management, and receive inadequate support. As a result, healthcare professionals are more susceptible to experiencing burnout, which could have a detrimental impact on the quality of care they provide. Additionally, the harmful impact of work-related stress and burnout on an individual's professional health and overall well-being leads to reduced job contentment, heightened physical and mental issues, amplified rates of absence and employee turnover, and a range of other adverse outcomes [19]. Researchers have attempted to explain the process of job burnout by examining available resources in recent times. PsyCap refers to a valuable personal asset that reflects an individual's positive psychological outlook, cultivated over time through personal development and life experiences [20]. Perhaps psychological capital stands out as a human resource. Psychological capital pertains to an individual's proficiency in utilizing their psychological strengths to attain objectives and perform admirably. The elements that make up psychological capital possess the ability to foster personal growth through self-assurance, positive attitude, aspiration, and endurance. Positive cognition has a profound impact on both individuals and organizations and is a multifaceted psychological ability [21].

Nurses who are experiencing physical and mental exhaustion as well as stress have felt the positive effect of this [22]. Psychiatric nurses who experience sadness and suffering can benefit from the positive impact that the elements of psychological capital may provide. According to research, nurses' psychological capital can influence their job stress levels, burnout, and the likelihood of resigning [23]. Numerous studies have indicated the opposite connection between PsyCap and exhaustion across various fields [24]. In a similar vein, Kim and Jang discovered that elevated self-efficacy among seafarers led to a decrease in job burnout [25]. Furthermore, fatigue was influenced by resilience among the members of the hospital team [26].

The integration of PsyCap could potentially serve as a crucial component in the effective management of exhaustion among nurses. Consequently, individuals possessing high levels of psychological resources may experience reduced impact from the challenging circumstances of life. A study conducted on a sample of 200 nurses in China found a correlation between lowered levels of burnout and the possession of psychological capital [27]. In addition, research conducted in Iran discovered that nurses who possess psychological capital exhibited decreased levels of job burnout and improved mental health levels [28]. In a study involving 1354 nurses from China, it was observed that psychological capital was positively associated with a greater sense of organizational commitment and a reduced occurrence of burnout and stress [29]. Focusing on psychological capital in the nursing field is vital in maintaining their physical and mental well-being as it intersects with factors such as burnout, occupational tension, and emotional health. The research questions of this research are whether the Psychological Capital variable can play the mediating role between the two variables job stress and burnout of psychiatric nurses? As per the research context, the current investigation scrutinized the correlation between job-related stress, fatigue, and psychological well-being, with the intervention of psychological resources, known as capital.

2. Materials and Methods

The research method was analytical study. The study population comprised all psychiatric nurses working in three psychiatric hospitals in Tehran, Iran from 10 August to 15 September 2022. These three hospitals were selected in such a way that first, a list of psychiatric hospitals in Tehran was given and then three hospitals were randomly selected from this list. These hospitals are selected by lottery.

To find the size of the statistical population, the researcher obtained the list of psychiatric nurses in these three hospitals. The size of the statistical population in this research was 270 psychiatric nurses, and the researcher, based on Cochran's formula, reached a sample size of 159 people in the research. In the next step, G*Power program was also used to confirm the value of the sample volume. In total, in this study, 172 psychiatric nurses were selected as samples through available sampling.

According to G*Power program, a minimum sample size of 157 was required to get a medium effect size with two independent variables and one dependent variable regression analysis at a two-sided important threshold of 0.05 and a power $(1-\beta)$ of 0.95. Researchers selected a medium effect size based on previous research to evaluate the mediating influences on the internal factors among nurses in the psychiatric unit [30]. They calculated the final sample size based on the 10% dropout rate suggested in the final sample size, which was 172 questionnaires. The research sample included: (a) nurses who were presently working in the department of psychiatry, (b) nurses who had worked in the psychiatric unit for over three years, and (c) nurses who freely volunteered to engage in the study after being informed of its goal and met the conditions for entering the research.

The exclusion criteria based on previous studies were those nurses who did not have much work experience. In this way, first, the researcher provided a questionnaire for the satisfaction of the people to participate in the research. This questionnaire consisted of 6 questions, the answers of which were two answers: "I agree" and "I do not agree". If the subjects did not answer all 6 questions, or did not receive a full score of these questions for satisfaction, they were removed from the research (full score of this questionnaire = 6). The sampling process in this research was in such a way that, at first, all people filled the questionnaire of consent to participate in the research. The researcher gave these questionnaires to the statistical population. Among them, only 190 people were suitable for the research. In the next step, based on the researcher's time in the hospitals, nurses who could enter the research were selected. Writing the name and surname was unnecessary, and participation in the study was voluntary.

2.1. Measures

In general, the researcher used three questionnaires in this research to measure the research variables, which include Job Stress variable, Burnout variable and Psychological Capital variable.

Job Stress Questionnaire of Nurses: To examine the level of work-related tension experienced by nurses, the Gray Toft and Anderson nursing stress gauge was employed [31]. The document comprises 34 expressions that fall under seven categories centered on factors of jobrelated stress. These categories include end-of-life issues affecting patients (seven expressions), disagreement with physicians (5 expressions), insufficient training (three statements), absence of support (three expressions), conflicts with fellow nurses (5 expressions), workload concerns (six expressions), and perplexity regarding treatment (five expressions). Using the Likert Scale as its foundation, this instrument was evaluated to determine stress, ranging from never inducing stress (one point) to consistently being a source of stress (four points). The overall scores span from 34 to 136, where 68 or lower show low stress, 69 to 103 shows moderate stress, and 104 or higher is categorized as high stress [32]. Numerous studies conducted in Iran have established the credibility and consistency of the questionnaire [33]. The Cronbach's alpha of the scale in this study researcher also investigated the was 0.71.

Maslach Burnout Inventory (MBI): Maslach formulated this inventory in 1981 along with others. The study comprising 22 questions that investigated three factors: emotional exhaustion (questions 1, 2, 3, 8, 13, 14, 16, and 20), depersonalization (questions 5, 10, 11, 15, and 22), and sense of personal competence (questions 4, 7, 9, 12, 17, 18, 19, and, 21). The Likert scale used for grading is based on a point system of seven, where the highest score of six is awarded to indicate a strong level of agreement or approval, and the lowest score of zero is never used. The scores on this survey can fall anywhere between 22 and 132. A score of at least 27 indicated a high degree of emotional exhaustion in the questionnaire, while a score of 13 or above implies a considerable level of depersonalization. Conversely, a score of only 31 reflects a low level of personal adequacy. Job burnout is indicated when there is a high degree of emotional exhaustion or depersonalization coupled with a low level of personal efficacy. The creators of this questionnaire evaluated the validity of this scale using Cronbach's alpha, based on three separate elements, each element received a score equal to 0.90, 0.79 and 0.71[34]. Furthermore, in the research conducted by Kazemi et al, the questionnaire's Cronbach's alpha coefficient was computed to be 0.83 [35]. The researcher also investigated the Cronbach's alpha of the scale in this study and the overall Cronbach's alpha coefficient of the tool in the current study was 0.76.

The Psychological Capital Questionnaire (PCQ): Encompassed in this survey are 24 questions organized into four separate sub-categories (self-assurance: questions 1-6, aspiration: questions 7-12, toughness: questions 13-18, positivity: questions 19-24). The subcategories consist of six components and the individual rates each aspect on a six-point Likert scale ranging from absolute agreement to complete agreement. Psychological capitals refer to a combination of self-confidence, positivity, anticipation, and the ability to overcome obstacles, indicating an individual's level of pleasant mental well-being. Remarkable strengths in psychological capital are associated with higher scores [36]. The sixpoint scale evaluates a person's ability to persist and adjust course towards objectives to accomplish success. According to a study conducted in 2012 by Fatehi et al on Iranian participants, the instrument has demonstrated its reliability with a Cronbach alpha coefficient of 0.82 [37]. The researcher also investigated the Cronbach's alpha of the scale in this study and the overall Cronbach's alpha coefficient of the tool in the present study was 0.79.

2.2. Data analysis

After completing the questionnaire, it analyzed Data using descriptive statistics, Pearson's correlation coefficient, and multiple regressions by SPSS 24.0 program. For data analysis, descriptive statistics including mean index and standard deviation were used, as well as to check the assumption of normality (univariate and multivariate data), kurtosis, skewness, Kolmogorov-Smirnov and Mahalanobis test were used.

3. Results

The sample population included 172 participants, at the end, two people were excluded from the study due to missing data, and as a result, the study was conducted on 172 people. All the participants in the study were aged 24 years or older and were utilized at diverse psychiatric establishments. Within the provided sample, a significant majority of 53.2% of the participants were male, while 46.8% were female. Ninety-three individuals reported being engaged in full-time employment, while seventy-seven participants reported their involvement in part-time enrollment. In the presented sample, people were also examined in terms of education. 51.2% of the research subjects had a bachelor's degree, and 48.8% of the subjects had a graduate degree. The sample population with a mean and the standard deviation of the age was 35.84 ± 9.36 (Table 1).

Based on the results shown in Table 2, The results of the Pearson correlation coefficient analysis indicated significant correlations among all the variables (P < 0.01).

According to Table 3, the root mean square error of estimation in the initial model amounted to RMSEA = 0.051, suggesting that the model is confirmed.

Based on the results shown in Table 4, all path coefficients related to the final model are significant. The path coefficient of the direct effect of job stress on job burnout is significant ($\beta = 0.524$, P < 0.001). The path coefficient of the direct effect of psychological capital on job burnout is significant ($\beta = 0.551, P < 0.05$). This finding confirms the structural model of the research (Figure 1).

Table 5 shows that the two-variable correlation between the variables in the above table is significant at the P < 0.01 level. The bootstrap result for this model was 0.49. The confidence interval's lower and upper limits were calculated as 0.41 and 0.58, respectively. The significance level obtained is equal to 0.001 and the number of bootstrap resampling is 2000. Considering that zero is outside the confidence interval, the indirect effect is significant, and the proposed model is confirmed (Figure 2).

4. Discussion

The aim of this study was to explore the correlation between job stress, burnout, and psychological capital in the context of psychiatric nursing. An additional aim was to examine the potential mediating effect of psychological capital on the relationship between job stress and burnout. Numerous study was conducted to determine the role of psychological capital between job stress and burnout in psychiatric nurses and to develop strategies to facilitate their burnout. The results show high job stress



Figure 1. The path coefficient of the direct effect of psychological capital on iob burnout



Burnout

Figure 2. The proposed model for indirect effect

Table 1. Descriptive findings of the studied variables

Variables	Mean ± SD	Minimum score	Maximum score
Job stress	211.29 ± 18.34	37	133
Job burnout	85.47 ± 8.36	23	108
Psychological capital	$63.13 \pm 7/09$	26	98

Table 2. Correlation between research variables in the sample of nurses

Variables	1	2	3
Job burnout	-	0.476	-0.594ª
Job stress	-	-	-0.61
Psychological capital	-	-	-
a P < 0.01			

Table 3. Comparison of the suitability indices of the research model

Fitness indicators	χ²	df	χ²/df	GFI	AGFI	IF	TAG	CFI	NFI	RMSEA
Research model	10.12	4	2.53	0.989	0.956	0.994	0.975	0.983	0.991	0.051

Note. NFI=normed-fit index; CFI=comparative fit index; GFI=LISREL goodness-of-fit index; AGFI=LISREL adjusted goodness-of-fit index; RMSEA=root mean square error of approximation.

Table 4. Paths and standard coefficients related to direct effects between research variables

D ' soften	Research model			
Direction	Р	β		
Job burnout \rightarrow Job stress	0.001	0.524		
Job burnout \rightarrow Psychological capital	0.001			

 Table 5. Correlation between independent, dependent, mediator variables and bootstrap results

Correlation between variables	1	2	3
1. Burnout	-	0.476**	-0.594**
2. Job stress	-	-	-0.611**
3. Psychological capital	-	-	-
Bootstrap value	The lower limit	The upper limit	The significance level
0.49	0.41	0.58	0.001
44 B 0 0 1			

**P<0.01

and burnout among psychiatric nurses in Iran. The job stress score was 211.29 ± 18.34 , and the results are similar to those of the prior studies on psychiatric nurses [4, 37]. These results are in line with other scientific research in Iran on nurses. In the study of Abolfazli et al [38], findings showed that more than 57% of nurses have moderate and severe stress. In addition, in the research of Rezaei-Kahkhaei et al, nurses reported a high level of work stress [39].

The findings of a prior study conducted in Saudi Arabia were consistent with those of this investigation [40]. According to this research, the stress level at work is higher for nurses in psychiatric facilities than for nurses in other settings. The nurse's job stress directly and negatively affects the patient. Research, in particular, points to a link between nurse job stress and patient safety [27,28]. So, in general, as it is known, the results of several studies are in line with the results of the present study and confirm these results. In principle, we can conclude that nurses' work in hospitals is very stressful. Their interaction with patients and the need for immediate reactions to solve their problems can cause stress in nurses, especially in the psychiatric department. Moreover, communicating with patients experiencing mental health issues and their families is the primary responsibility of psychiatric nurses. In addition, they must offer advice on how to handle the psychological issues that patients are dealing with. Thus, it is essential to control and avoid the occupational stress experienced by psychiatric nurses [34-36]. In addition, in another study, burnout levels among nurses were measured, and it was found that nurses in the intensive care unit had the highest burnout rates [41]. In previous research, researchers determined that burnout among nurses working in intensive care units is moderate and that emotional exhaustion and depersonalization are common and also have a high level for nurses [42].

The findings of this study reveal strong connections between the variables. Burnout and job stress among psychiatric nurses were significantly correlated. Our findings indicate that psychiatric nurses stressed due to their work are significantly more likely to experience burnout. Psychiatric nurses suffer more strain at work than nurses from non-psychiatric settings do since they have to deal with many mental patients face-to-face [3,12,29]. Nursing staff members are particularly prone to the onset and progression of burnout because of their continual interaction with people. In addition, psychiatric nurses experience job stress due to pressure and anxiety. They occasionally face hazardous situations (such as patient injury to themselves or others and acute symptoms) and a labor shortage [43]. These working conditions in mental hospitals have the potential to produce several negative effects, including stress, tension, and discontent [39-41]. It is necessary to try to change internal elements to manage the inescapable stress. According to this study, occupational stress and burnout are negatively correlated with the psychological capital of psychiatric nurses, and it can be expected that psychological capital will decrease when job stress and burnout rise. The primary goal of this research is to emphasize how psychological capital may act as a mediation mechanism between occupational stress and the risk of burnout in psychiatric nurses. According to the findings of our study, psychological capital mediates the link between burnout and job stress. Psychological capital has a significant inverse effect on worker burnout. Studies suggest that increasing psychological capital is essential to prevent and relieve the burnout of nurses within limited resources, along with decreasing job stress [29]. According to the research of Rezaee et al, psychological capital has an effect on job burnout in nurses [44]. Our study is meaningful because it identifies that psychological capital, which was found to make self-development possible and influence individuals and organizations positively in earlier studies [39], is a parameter of job stress and burnout. In general, the previous research is in line with the current research and shows that the amount of occupational stress and burnout variables is very high among nurses. Likewise, the amount of psychological capital has an inverse relationship with the variable of job stress.

In addition, this study solely looked at how psychological capital affected the link between burnout and job stress among psychiatric nurses. Other factors, such as selfesteem, social support, and the workplace environment, may also have impacts similar to those of psychological capital. In addition, the data excluded from the analysis in this study comprised 10% of the subjects. Some of the research samples were dropped in this research due to the conditions of the hospital and medical emergencies that occurred during the research in the hospital. However, the drop rate of the samples was not so large.

5. Conclusions

The study seeks to recommend strategies for mitigating burnout among psychiatric nurses based on the research findings. The findings of this study reveal that the presence of psychological capital among psychiatric nurses emerged as a noteworthy predictor of burnout. Furthermore, it was observed that it also played a partial mediating role in the association between job stress and burnout experienced by psychiatric nurses.

In general, according to the results of this research, it is suggested that the phenomena of occupational stress and burnout among nurses should be taken seriously. These variables can have destructive effects on the quality of nurses' therapeutic performance. One of the suggestions that can be made is holding psychological workshops to improve self-efficacy, optimism, hope, flexibility and psychological capital among nurses in general. Among the suggestions for further studies, the following can be mentioned: Conducting longitudinal research on nurses, Investigating the situation of nurses in non-psychiatric hospitals and so are the nurses of hospitals in other cities and research with a larger sample size.

Authors' Contribution

Conceptualization: Hedyeh Kazemi, Fatemeh Goudarzi. Data curation: Fatemeh Shojaei, Zeinab Parsa Moghadam. Formal analysis: Fatemeh Shojaei, Zeinab Parsa Moghadam. Funding acquisition: Hedyeh Kazemi Nava, Fatemeh Shojaei, Zeinab Parsa Moghadam, Narges Kavoli Haghighi, Fatemeh Goudarzi. Investigation: Fatemeh Goudarzi. Methodology: Narges Kavoli Haghighi. Project administration: Hedyeh Kazemi, Fatemeh Shojaei. **Resources:** Narges Kavoli Haghighi. Software: Fatemeh Shojaei. Supervision: Hedyeh Kazemi, Fatemeh Goudarzi. Validation: Hedyeh Kazemi, Fatemeh Goudarzi. Visualization: Fatemeh Shojaei, Zeinab Parsa Moghadam, Narges Kavoli Haghighi. Writing-original draft: Hedyeh Kazemi. Writing-review & editing: Fatemeh Goudarzi. **Competing Interests**

The authors declared no conflict of interest.

Ethical Approval

The article in question carefully followed all ethical guidelines that may apply to its research area. The Ethics Committee of Tehran University of Medical Sciences approved the conduct of this research along with the ethical codes IR.SUMS.REC.1400.026.

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