

Investigation of the relationship between structural empowerment and reduction of nurses' occupational stress and job burnout (case study: nurses of public hospitals in Tehran)

Investigación de la relación entre el empoderamiento estructural y la reducción del estrés laboral de las enfermeras y el agotamiento laboral (estudio de caso: enfermeras de hospitales públicos en Teherán)

Shahram RashidAzar¹, Khalil Alimohammadzadeh^{2*}, Niloufar Akhyani³

¹Msc Student of Health care Management, Islamic Azad University, Tehran, Iran.

²Department of Health Services Management, Tehran North, Islamic Azad University, Tehran, Iran

³Bachelors of Science in Nursing, Islamic Azad University of Medical Sciences, Tehran Branch, Tehran, Iran

*corresponding author: Khalil Alimohammadzadeh. Department of Health Services Management, Tehran North, Islamic Azad University, Tehran, Iran.

Corresponding Author E-mail: dr_khalil_amz@yahoo.com

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Abstract

Introduction: Empowerment is one of the most important solutions for creating traits such as creativity, innovation and superior job performance. For this, the purpose of this study was to investigate the relationship between nurses' structural empowerment and reduction of their occupational stress and job burnout (case study: nurses of public hospitals in Tehran)

Method: This is a descriptive - correlational study that investigates 400 nurses of the selected hospitals of Tehran University of Medical Sciences. The statistical population includes the nurses with undergraduate degrees who have spent the period of human resource planning (at least 2 years of work experience) without sick leave of more than 1 month in the last 6 months and certain chronic conditions that affect burnout, such as severe migraine headaches and backache. Maslach Burnout Questionnaire, Spreitzer's Structural Empowerment Questionnaire and Job Stress Questionnaire were used to collect data for the research. Then, SPSS, version 18.0 and statistical test of regression were used to analyze the data.

Results: The structural empowerment of nurses had an inverse correlation with job stress and burnout, while job burnout had a direct relationship with job stress ($P < 0.001$). Regression results showed that structural empowerment had a greater impact on job burnout compared to job stress.

Conclusion: Structural empowerment is an internal motivation factor that is reflective of the active role of staff in the organization. Supportive working environment is the most important factor for job satisfaction among nurses. Using the results of this research, nursing managers can provide adequate work environment to continue their activities by increasing organizational support. Considering that job burnout reduces the quality of nursing care, increases stress and ultimately reduces the satisfaction of patients, its prevention is effective in improving nursing services, increasing the satisfaction of patients, reducing nurses stress and preventing their burnout at work.

Keywords: structural empowerment, occupational stress, job burnout

Resumen

Introducción: el empoderamiento es una de las soluciones más importantes para la creación de rasgos como la creatividad, la innovación y el desempeño laboral superior. Para esto, el propósito de este estudio fue investigar la relación entre el empoderamiento estructural de las enfermeras y la reducción de su estrés laboral y el agotamiento laboral (estudio de caso: enfermeras de hospitales públicos en Teherán)

Método: Este es un estudio descriptivo correlacional que investiga a 400 enfermeras de los hospitales seleccionados de la Universidad de Ciencias Médicas de Teherán. La población estadística incluye a las enfermeras con títulos universitarios que han pasado el período de planificación

de recursos humanos (al menos 2 años de experiencia laboral) sin baja por enfermedad de más de 1 mes en los últimos 6 meses y ciertas afecciones crónicas que afectan el agotamiento, como migraña severa, cefaleas y dolor de espalda. Se utilizaron el cuestionario de agotamiento de Maslach, el cuestionario de empoderamiento estructural de Spreitzer y el cuestionario de estrés laboral para recopilar datos para la investigación. Luego, se usaron SPSS, versión 18.0 y prueba estadística de regresión para analizar los datos.

Resultados: el empoderamiento estructural de las enfermeras tuvo una correlación inversa con el estrés laboral y el agotamiento, mientras que el agotamiento laboral tuvo una relación directa con el estrés laboral ($P < 0,001$). Los

resultados de la regresión mostraron que el empoderamiento estructural tuvo un mayor impacto en el agotamiento laboral en comparación con el estrés laboral.

Conclusión: el empoderamiento estructural es un factor de motivación interna que refleja el papel activo del personal en la organización. El ambiente de trabajo de apoyo es el factor más importante para la satisfacción laboral entre las enfermeras. Usando los resultados de esta investigación, los gerentes de enfermería pueden proporcionar un ambiente de trabajo adecuado para continuar sus actividades al aumentar el apoyo organizativo. Teniendo en cuenta que el agotamiento laboral reduce la calidad de la atención de enfermería, aumenta el estrés y, en última instancia, reduce la satisfacción de los pacientes, su prevención es efectiva para mejorar los servicios de enfermería, aumentar la satisfacción de los pacientes, reducir el estrés de las enfermeras y prevenir su agotamiento en el trabajo.

Palabras clave: Empoderamiento estructural, estrés laboral, agotamiento laboral.

The main source of competitive advantage is not only the use of technology, but also shaping creativity, innovation, positivity, quality, commitment and ability of employees. Empowerment is one of the most important solutions to create traits such as creativity, innovation and superior occupational performance¹. Empowerment has a positive effect on employees' attitude and behavior. Increasing job satisfaction, reduction of stress, reduction of job uncertainties and so on reflect some of the changes in staff attitudes. Empowerment also creates decision-making power, independence in work and freedom in choice. However, an increase in employees' confidence, increased adaptation power, acceleration in responsiveness to customers etc. can be mentioned as its behavioral effects. In sum, the studies can be divided into two parts: first, the research in which scientists examine the structural approach of empowerment² and second, the research in which scientists have focused on psychological and perceptual empowerment. The current study concerns the structural empowerment. In this section, empowerment is considered as a result of a structural approach of "process". This section is called the structural approach³. Structural approach studies mostly focus on what tools and means managers should provide to empower the staff through creating the necessary context in the physical environment of the work. In other words, structural empowerment refers to the activities that the organization takes to involve employees in power sources and decisions. This type of empowerment concerns empowering the staff in the organization (contrary to the cognitive empowerment that means creating an internal sense in individuals to make appropriate

working decisions for themselves, and the type of attitude and view of the job is enabled and developed by them)⁴. Once structural empowerment is successfully implemented, employees feel empowered, their attitude to the organization improves and organizational effectiveness will probably increase. Meanwhile, the influence of structural empowerment has been emphasized on reducing job burnout⁵. In the same vein, job pressure has also been addressed in the literature of nursing. Job burnout is a common phenomenon in nursing and other health professions. According to the findings of Maslach (1982), it is a phenomenon which gradually highlights the cumulative effects of stressful work environment to undermine employees' rights, forcing them to psychologically retreat⁶. The results of occupational burnout are summarized in chronic emotional exhaustion (over-exhaustion of work), depersonalization (insensitiveness and non-personal approach towards caregivers), and individual failure (competence and achievement of success in the work). This disease which gradually develops over time, takes the nurses to a downward employment and productivity spiral, which is difficult to recover from⁷.

Job burnout has been widely studied in the nursing profession settings. It is one of the critical consequences of job stress and will continue as long as this stress is eliminated. Therapeutic environments have always been subject to a wide range of emitting stressors, severe illnesses, death of patients, high workload and uncertainty in the role which affect their psyche and feelings in addition to their bodies. Factors such as shift work, insufficient use of personal capabilities, high workload, discrimination on wages, uncertainty of future of the job, intense conflict of emotions and feelings in the work environment, quality status of tools and the likelihood of physical risk and a small amount of work in a repetitive monotonous work environment are very effective in developing job burnout in hospitals⁸.

Aiken et al. (2002) showed that burnout level among the nurses is affected by good relations with colleagues and leaders, and autonomy in the workplace⁹. Nursing workplace stress mostly occurs due to the factors such as workload, work environment, and relationships between bosses and employees. Job stress is likely to occur when the quality of communication between nurses and their workplace is low⁷. Job stress has a negative impact on both nurses and patients, since when people cannot effectively deal with the negative effects of stress, other manifestations like burnout, low work satisfaction, conflict, violence, etc. would reveal¹⁰ and if the nurse's occupational stress increases, the satisfaction level of patient care will decrease.

In recent years, many studies have been conducted on labor-related factors including job burnout, job stress, self-esteem, job satisfaction and intention to leave, job control and social support among nurses. The results have shown that nurses suffer high levels of occupational stress and burnout. Therefore, many researchers have turned to

Materials and methods

explore the components that can reduce the level of job stress and burnout. Nurse empowerment, particularly the structural empowerment, is one of the important components that the study of its relationship with job stress and burnout among nurses has been very limited and the gap in this area, especially in internal research, is tangible. For this reason, the main question of this research is that whether there is a significant correlation between the status of the structural empowerment of nurses and reducing their occupational stress and burnout. The study will be conducted among the nurses of public hospitals in Tehran, and its results are expected to provide practical and scientific solutions to the managers and planners of human resource development and management of hospitals to reduce stress and burnout among the nurses.

This is a descriptive-correlational research that was done in 2017. The statistical population consisted of all the nurses of selected educational hospitals affiliated to Tehran University of Medical Sciences that were selected based on simple random sampling; all the nurses had equal chance in answering the questions of this research. To determine the sample size, Charlie Cochran method was used for limited populations as follows: once the exact number of the nurses in the hospitals were determined, the statistical sample size for the intended population was extracted from the following formula:

$$n = \frac{Nz^2\sigma^2}{d^2(N-1) + Z^2\sigma^2}$$

Where

$$270 = N$$

$$33/0 = S^2$$

$$05/0 = d$$

$$96/1 = Z$$

The statistical population includes the nurses with undergraduate degrees who have spent the period of human resource planning (at least 2 years of work experience) without sick leave of more than 1 month in the last 6 months and certain chronic conditions that affect burnout, such as severe migraine headaches and backache. The samples were allocated to large and small hospitals as proportional to the number of nurses in the two groups. The data was collected via the standard Maslach Burnout Questionnaire⁶ (25 questions on 3 dimensions of emotional exhaustion, depersonalization, and lack of individual career success) from two aspects of the time and

intensity of each of the dimensions, Spreitzer's Structural Empowerment Questionnaire¹¹ (15 questions in 4 dimensions of feeling of competence, efficacy, significance and trusting to others), and Job Stress Questionnaire. The individual information questionnaire with 13 questions was completed by research units. Maslach and Jackson Burnout Questionnaire includes 25 items (9 questions related to emotional exhaustion, 7 questions related to depersonalization, and 9 questions for lack of individual career success). The time and intensity were measured by a Likert scale; the time score ranged from 0 to 6 and intensity ranged from 0 to 7. Finally, by separate scoring for questions of each of the three dimensions of burnout, these dimensions were categorized as low, medium, and high. The original version was sent to a number of nursing education specialists to check content validity (the extent of appropriateness to evaluate the level of burnout and support) and its suitability in terms of writing and organizing. After applying their viewpoints and verifying the validity of the tool, Cronbach's alpha coefficient was used to determine the internal consistency: 0.82 for structural empowerment, 0.86 for burnout and 0.88 for occupational stress; since they are greater than 0.7, the internal consistency of the questions was favorable. The Cronbach's alpha coefficient ranges from 0 and 1. Internal consistency of the questionnaire is high because it is closer to 1. Values more than 7% are acceptable, values more than 8% are good and those greater than 9% are excellent, while coefficients less than 5% are unacceptable. Content validity method was used in this research. Since the structural empowerment, job burnout and job stress questionnaires were translated from external sources, they were provided to some management experts and using their opinions, the final questionnaire was developed. The Cronbach's alpha coefficient was used to calculate the reliability of the questionnaire. (Table 1) displays the Cronbach's alpha values for each of the variables. Then, the collected data was analyzed by SPSS, version 18.0 using the regression analysis.

Table 1. Cronbach's alpha coefficient for variables

No.	Components	Cronbach's alpha coefficient
1	Psychological Empowerment	0.83
2	Stress	0.84
3	Burnout	0.86

Results

The results from analyzing the data showed that 22 of the 228 participants were single that was equivalent to 9.6% of the total sample, and 206 participants were married that was equivalent to 90.4% of the total sample. Nurses with 6 to 10 years of experience (25% of the participants) had the highest frequency of work experience and those with 21 to 25 years (5.7% of the participants) had the lowest frequency.

With respect to the type of employment, 19.3% of the respondents were temporary-to-permanent, 60.5% were permanent and 20.2% of them were under the contract of the organization (Table 2).

Table 2. Demographic variables by frequency and frequency percentage

Variable	Frequency	Frequency (%)
Marital status	Single	22
	Married	206
Work experience	1-5 years	23.7
	6-10 years	25
	11-15 years	14.9
	16-20 years	17.5
	21-25 years	5.7
	26-30 years	13.2
The type of employment	temporary-to-permanent	19.3
	Permanent	60.5
	Contractual	20.2

According to (Table 3), the feeling of competence had the highest mean and the feeling of efficacy had the lowest mean among the dimensions of structural empowerment. In addition, emotional exhaustion had the highest average and depersonalization had the lowest mean among the dimensions of job burnout. The correlation coefficient between psychological empowerment, job stress and burnout was negative and significant. This means that as the psychological empowerment increases, the job stress and burnout will decrease (Table 4). As indicated by (Table 5), 48% of the variance of stress and burnout is explained by empowerment. Based on the beta results obtained for this dimension, 16% of the changes in job stress are explained by empowerment. Hence, it can be said that nurses' psychological empowerment affects their stress reduction. The beta results also show that 44% of burnout variations are explained by empowerment. Therefore, it can be said that structural empowerment impacts on the job burnout among the nurses (Table 6).

Table 3. Means of questions per variable

Components	Mean	SD
Psychological Empowerment	3.35	0.923
Job stress	4.18	0.724
Job burnout	2.92	0.925
Feeling of competence	4.1	0.615
Right to choice	3.432	0.782
Trusting to others	3.175	0.863
Feeling of significance	4.318	0.51
Feeling of efficacy	3.14	0.937
Emotional exhaustion	2.214	0.84
Depersonalization	1.882	0.671
Individual performance	2.045	0.551

Table 4. Correlation between psychological empowerment, job stress and burnout

Variable	1	2	3
Psychological empowerment	1		
job stress	**0.44	1	
Job burnout	**0.32	0.51	1

Table 5. Summary of stress, burnout and empowerment regression model

	R	R ²	Adjusted R ²	SD	F	Sig
Model 1	0.563	0.526	0.482	0.210	.702.63	000.0

Table 6. Summary of stress, burnout and empowerment regression model

Predictive variable	Empowerment				
	B	SD	β	t	Sig
Constant				4.60	0.00
Stress	0.617	0.134	0.169	7.83	0.00
Burnout	0.972	0.124	0.447	7.09	0.00

According to the results, there is a negative and meaningful relationship between nurses' structural empowerment and depersonalization. It means that with the increase of empowerment, depersonalization decreases. Moreover, there is a positive and significant relationship between psychological empowerment and job achievements, that is, as the psychological empowerment increases, depersonalization increases as well (Table 7).

Table 7. Correlation between psychological empowerment and research variables

Variables	1	2
Psychological empowerment	1	
Depersonalization	**0.34	1
Job achievements	**0.38	1

The results from the relationship between job stress and burnout suggest that as the emotional exhaustion increases, depersonalization in job increases as well, while job achievements are significantly reduced (Table 8).

Table 8. Correlation between job stress and research variables

Variable	1	2
ob stress	1	
ob burnout	**0.59	1
Emotional exhaustion	**0.43	1
Depersonalization	**0.32	1
ob achievements	**0.51	1

Results

The results showed that there was an inverse and significant correlation between structural empowerment and job stress of employees. In other words, the interpersonal problems of employees, including positive collective communication, management styles and how managers support their employees, co-operation and asking for opinions of the staff and managers with the aim of making changes in different sections- organizing and implementing organizational changes and understanding and perceiving the role of job by employees can be seen as the result of their lack of psychological-social skills. Anger management and ef-

fective communication are two psychological-social skills. As we know, changing the attitude towards the others is effective in managing feelings, behavior, and social performance. If we manage to control our negative thoughts and stress, we will be able to communicate more easily with others, have a positive feeling about them and ultimately enhance our social relationships. Anger management also causes individuals to learn they must not control others by aggressive and threatening behaviors, in fact, schism does not occur among the staff. These people learn to establish more friendly and positive relations with other employees through daring practices, stopping thought, and relaxation.

Our findings are consistent with the findings of the internal studies conducted by Shokuhi-e Yekta (2015), Mahmudian (2010), Mostafavi (2006), Mohammadpour (2006), Sepah-e Mansour (2007), and Taj Abadi (2006). The results are also in line with external research findings done by Kenrad (2009), Lee and Alen (2002), Albertin et al. (2001), Smeltzer (1987), Leri (1987) and Mack Namara et al (1982).

The experience of occupational stress has a disastrous effect on the physical and mental health of individuals. Another important issue is the impact that it makes on the performance of organizations. Job stress underlies the absence from work, leaving the organization and occupational incidents, which impose a lot of expenses on organizations every year. Accordingly, for each organization, it is of great importance to recognize, measure and control the job stress. These results are consistent with the results found by Talaei (2006) and Mohammad pour (2006)^{12,13}. In the other words, those who are less stressed are more satisfied with their job, have more organizational commitment and also suffer less from burnout. Due to the commitment and job satisfaction, the individual would further love his/her organization, colleagues, and job. *S/* he also easily would cope with problems, easily tolerate them and thus less likely to suffer from stress and burn out. In the study by Tesang (2007), emotional exhaustion was reported to be moderate, depersonalization to be low to moderate, and the lack of individual career success was reported to be low which seems consistent with our findings about emotional exhaustion and depersonalization¹⁴. However, his results about the lack of individual career success is different from our findings. Perhaps, this difference is related to the studied units that included nurses in the care units of AIDS patients in Tesang's study, while our sample included nurses cared for patients with different illnesses. In addition, some of these differences in burnout dimensions are related to cultural differences, because the results from each dimension reflect nurses' feelings about the above issues. Also, in the study conducted by Khaghanizadeh et al. (2006) in Tehran, emotional exhaustion and depersonalization were reported to be low both in terms of frequency and severity, and the lack of career success occupied the next ranking both in times and severity which is consistent with our findings in this study¹⁵.

In this study, no significant correlation was found between co-worker support and none of the burnout dimensions. This is in line with the study conducted by Sahebalzamani et al. (2009) who also found that there was no significant relationship between co-worker support and the burnout dimensions¹⁶. Further, Aricak et al (2008) in Turkey realized that in comparison with other sectors, dialysis nurses had an increased stress and burnout, and decreased satisfaction with tendency to leave the work¹⁷. In the USA, Feagan et al. (2008) aimed at investigation of the effect of organizational factors and work environment on the care and burnout process among the nurses in the hemodialysis department. Their findings showed that there was a relationship between the effective factors and increasing burnout and the likelihood of deciding to leave the job by the hemodialysis department nurses¹⁸.

The results of this study provides remarkable implications for managers of health care organizations. Statistical analysis indicated that nurse's stress can increase due to the structural empowerment. Therefore, continuous control of nurses' perception of the structural empowerment in hospitals, efforts to resolve the weaknesses of empowering structures in the workplace and improvement of their strengths will likely be effective in improving nurses' job involvement. However, it should be noted that there was a significant relationship between indecency in the workplace and structural empowerment. Hence, with regard to the relationship between structural empowerment and the indication of stress in the workplace, efforts to increase the nurses' job engagement will likely be useless in an environment full of indignity. Due to the negative relationship between structural empowerment and indication of stress in the workplace, efforts to increase the nurses' burnout is important considering the structural empowerment. Finally, conducting interventional studies are recommended which should focus on improving the structural empowerment of the workplace.

Our study also showed that nurses' psychological empowerment affects their job burnout which are in line with the findings of Meyerson et al. (2013)¹⁹. They realized that organizational commitment is beneficial to employees and is attached to motivation and satisfaction and can bring about rewards such as promotion and salary increase. However, a high organizational commitment might cause adverse outcomes by limiting the mobility of employees and their sense of freedom to change job. It can also prevent opportunities for individual growth and development²³. Commitment to organizational values can result in silence of the staff's creativity and their resilience to change. When employees spend lots of their energy for the needs of the organization, their family and social life might be harmed and burnout may occur among them. Working for an occupation which creates the feeling of significance, the employees are more involved in and committed to it, they focus more on the work, and they are more persistent in following the desired goals than the case when the feeling of significance is low among them²⁰.

The current study suggests that the feeling of having a right to choice is associated with less self-alienation in the workplace, more work satisfaction, higher levels of performance, more entrepreneurial activity, higher levels of "job involvement" and lower work pressures. According to the results in medical research, recovery from severe illnesses has been associated with forcing the patient to deny himself. The probability of a positive experience for those who are helped to feel that they can have a personal impact on whatever happen to them - even considering the effects of illness - is stronger than those who do not have such a feeling. The sense of self-determination or "right to choice" is directly correlated with the methods used to implement the task, the amount of effort that must be made, the speed of doing the work and the time framework that the work is to be done during it^{21,22}.

Katner believes that employees' access to information, opportunities, support, and resources needed to do the work has a positive impact on employees, including a low level of burnout and a high degree of job satisfaction. Empowerment is related to important organizational outcomes such as job satisfaction, job control, and low level of stress. It is also associated with burnout and satisfaction²².

Conger and Kanungo describe psychological empowerment as "a process in which people's feeling about the self-efficacy increases and this is achieved through conditions that resolve disability and incapability". These conditions can be defined by a formal organization or informal techniques²³. As seen in this definition, the empowered people do not experience a feeling of inability and failure, and as a result, they experience a lower level of job burnout. Those who are psychologically empowered will have promoted self-efficacy belief; self-efficacy means that the individuals is able to succeed. People with high self-efficacy reflect better performance than those with low self-efficacy and therefore receive positive feedback²⁴. As a result, they would believe in their ability to eliminate stress in working conditions, and therefore less psychological stress will be imposed on them.

Empowered people are self-controlling and self-regulating²⁵. They easily take responsibility and have a positive view towards themselves, others and the environment²⁶. They are optimistic about working life, and basically see others as partners and co-workers instead of rivals²⁷. If a conflict or a problem occurs in the workplace, instead of being disinterested and passing the buck, they will look for a solution to it. They are open to criticism and are constantly learning²⁸. Therefore, a low level of job burnout will be likely observed among the staff in working units with the characteristics necessary to empower employees²⁹.

Conclusions

In this study, an inverse relationship was observed between structural empowerment and job burnout and occupational stress. It can be concluded that as the structural empowerment of the personnel is based on professional standards and principles, nurses will experience less stress and consequently less burnout. The relationship between empowerment and occupational stress of nurses, valuing nurses' job and triggering the sense of significance can reduce stress among them. Promoting this dimension after empowerment (valuing and feeling of significance) can play an important role in elimination of the nurses' mental stress in the workplace. Therefore, solutions such as changing the management style in the sectors, the participation of nurses in decision making and the development of an appropriate organizational culture can pave the path to promote the various dimensions of nurses' psychological empowerment. Indeed, psychological empowerment is an internal motivation factor that is reflective of the staff's active role in the organization. The significance of a job makes it possible for the employee to value the goals or activities s/he is engaged in. The more the job duties match the staff's physical and mental potential, the more delectation and satisfaction will be achieved.

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