

## Original Article

# Relationship between the job rotation efficacy and psychological empowerment of Iranian nurses

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## ABSTRACT

**Background & Aim:** Addressing the influential factors associated with the psychological empowerment of nurses has high importance. We aimed to assess the relationship between job rotation and the psychological empowerment of nurses working in the teaching hospital of Mazandaran University of Medical Sciences (Sari, Iran).

**Methods & Materials:** This is a cross-sectional study that was conducted in 2016. 277 nurses working in the teaching hospital of Mazandaran University of Medical Sciences were selected as sample size using simple random sampling method. Spritzer's psychological empowerment questionnaire and nurses' view to job rotation efficacy questionnaire were used. The data were analysed by means of SPSS 18.0 by using descriptive and inferential tests (Two-way ANOVA with Tukey test, Pearson correlation and multiple regression)

**Results:** In this study, 75% and 25% of nurses were female and male, respectively with mean age of 32.6 (SD=2.26). The mean score of overall psychological empowerment was obtained 69.51 (SD=3.95) while the mean score of job rotation efficacy was obtained 61.2 (SD=2.064). Also results showed that job rotation of nurses was related with psychological empowerment ( $r=0.65$ ,  $p<0.05$ ).

**Conclusion:** The obtained results indicate that planning job rotation efficacy for nursing staff can results better psychological health. Also more researches is recommended in future for earning better results.

## Introduction

Zhang defines empowerment as giving power to employees, in the meaning that they should be assisted to strengthen their self-confidence, overcome their inability and helplessness feeling and to be internally motivated and energized (1). In their cognitive model, Thomas and Velthuous believe that psychological empowerment is based on employees' perception of their role in organization. They define it as the promotion of the intrinsic motivation of employees towards performing their tasks. This motivation is constituted by 4 dimensions:

significance (job significance), competence, self-determination or autonomy and effectiveness (2). Huang (2017) has identified some dimensions for psychological empowerment significance (of job). this means that occupational objectives are valuable and employees are internally interested in their job. Significance means the proportionality of job requirements with beliefs, values and behaviors (3). Conger believes that capable people feel that they are significant. They value occupational objectives and their thoughts and standards comply with what they do. When people do a job which is significant in their view, they become more committed to it and endeavor to follow up ideal objectives. Competence is referred to an extent to which an employee can perform occupational tasks skillfully. Capable people

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feel self-efficacy or competence. They believe that they have required capabilities to successfully perform assigned tasks (4). Conger believes that capable people both feel competence and reliance and effectively perform assigned tasks. They feel that they are personally skilled and believe that they can learn to face new challenges and grow up. (iii) Self-determining of autonomy (4): according to Thomas and Velthuijs, self-determining or autonomy means the right of choice or individuals' independency in determining their occupational activities. If a person feel autonomy, he/she intentionally or voluntary will participate in organizational tasks instead of engaging in them with force or stopping them (2). Autonomy, or having the right of choosing proportional procedures for performing tasks, the extent of attempt for performing task, speed of working and the time bound within which a given task should be performed, are in direct relationships with each other (5). Capable persons feel that they are the owners of their works because they can determine the methods by which they should perform them and the speed at which they should be completed. Having the right of choice is the main component of autonomy (6).

Many researchers have pointed out the important role of empowerment as well as the necessity of paying more attention to it (7, 8). It can be argued that empowerment has two benefits in general: 1) organizational benefit and 2) individual benefit. Many studies are concentrated on the organizational benefits of empowerment because today's competitive environment on the one hand and the attempts of organizations for achieving efficiency and efficacy on the other hand highlight the importance of empowerment more than before (9). According to studies, empowered organizations have experienced considerable advances in economic components (8, 10).

Nurses are important pillars of health care and medical organizations because any deficiency of them will impose non-remediable harms to patients due to their important role in patients' recovery. Therefore, addressing the influential factors associated with the psychological empowerment of nurses is of high importance. We can recognize the extent to which the psychological empowerment and job rotation can improve individuals' capability in performing duties.

Based on reports job rotation can have significant effect on psychological empowerment. Job rotation is an instrument for developing professional skills, and the agreement between the employee and the employer on job rotation must always be based on the employee's own volition (11). More precisely, job rotation, as a part of a career development programme, is a tool for job orientation and development of professional skills the purpose of which is to help the new employee to acquire an adequate level of competence for the job (12). Job rotation is also a way to increase career flexibility. Studies have shown that once people start working in the public sector they usually "get stuck" in it. Job rotation can result in refreshment, education and new ideas relating to working life (13). Another positive aspect of job rotation is its socializing effect. Job rotation improves individual confidence of being able to cope with different tasks. Another positive aspect is increase the aspects of mental health (14, 15).

But based on available databases, there were no studies that assessed these items nurses. So for the first one we aimed to assess the relationship between job rotation and the psychological empowerment of

nurses working in the teaching hospital of Mazandaran University of Medical Sciences (Sari, Iran).

## **Methods**

This is a cross-sectional study that was conducted in 2016 (March – May). Its population consists of 1000 nurses working in the teaching hospital of Mazandaran University of Medical Sciences, 277 of them were selected as sample size using simple random sampling method. Sample size was calculated based on Krejcie and Morgan table (16).

Eligible nurses for the trial were those (i) satisfaction to participation in study, (ii) able to read Persian and write, (iii) having no physical and mental illnesses (e.g. dementia) and (iv) between 3 to 10 years work experience. Data were collected in a single session using a survey administered in paper-and-pencil format. Participants provided informed consent and dropped completed questionnaires through a slit into an enclosed box. Debriefing forms were given to participants as they exited the ward. The institutional review board approved the research prior to implementation of the study.

This study adopted questionnaires measuring psychological empowerment and the efficacy of job rotation in nurses.

*Spreitzer's psychological empowerment questionnaire* consists of two parts. The first part covers demographic information and the second part has 20 items measuring 5 main components: (i) competence, (ii) autonomy, (iii) effectiveness, (iv) significance of job and (v) trust between employees. The items were scored using Likert five-point scale. Total scores were between 20 to 100 and higher scores demonstrate better psychological statuses. The validity and reliability of this questionnaire were assessed in the study of Hosseinpour (2016) and the obtained results

showed the acceptable validity of this questionnaire where the Cronbach's alpha obtained for significance, competence, autonomy, effectiveness, trust and total score was 0.8, 0.81, 0.72, 0.81, 0.82 and 0.79, respectively indicating the high reliability of the questionnaire (17). Also in present study the content validity of the questionnaire was assessed and proved based on recommendations from 10 related experts from Mazandaran University of medical sciences. Then reliability was assessed and proved by using Cronbach's alpha on nurses ( $\alpha=0.821$ ).

A researcher-made questionnaire (job rotation efficacy questionnaire) was used to measure nurses' view to job rotation efficacy. It has 20 items scored using Likert five-point scale. The minimum and maximum range of score was 20 to 100. Scores between 20-40, 40-60, 60-80, 80-100 showed weak, mediate, good and well levels of job rotation efficacy respectively. The content and face validities of questionnaire were confirmed by 10 experts who were specialized in this field. The average of scale-level CVI was calculated to be 0.84; the CVI index for each item was higher than 0.79 and the average of CVI index was equal to 0.82. To measure its reliability, Cronbach's alpha was measured over a pilot sample size with 30 nurses and the obtained Cronbach's alpha was 0.88. It can be concluded, therefore, that it has an acceptable reliability.

Ethical approval was obtained from the research ethics committee of the Research deputy of Mazandaran University of medical sciences (IR.MAZUMS.REC.95.1486). All the participants received oral and written information about the aims of the study. It was made clear to them that their participation was voluntary and that all data would remain confidential. Research participants could not be personally identified and they were assured

that participation would in no way affect their academic results.

The data were analyzed by means of SPSS 18.0 for Windows (SPSS Inc., Chicago, IL, USA). Descriptive statistics were used to assess the n (%) and Mean (SD). Also Two-way ANOVA with Tukey test were used to assess the relationship of demographic variables with job rotation efficacy and psychological empowerment (quantitative dependent variable was job rotation). Pearson correlation was run to assess the job rotation efficacy in terms of the components of psychological empowerment. Also relationship between job rotation efficacy and subgroups of psychological empowerment were assessed with multiple linear regression analysis.

**Results**

In this study, 75% and 25% of nurses were female and male, respectively with mean age of 32.6 (SD=2.26). The majority of nurses (70%) had bachelor of sciences (BSc) degree and 80.14% of them had a job record less than 16 years.

**Table 1.** Demographic profile of participants (N=277)

Characteristic	Number	Percent
<b>Gender</b>		
Male	70	25
Female	207	75
<b>Educational situation</b>		
B.Sc.	194	70
M.Sc.	83	30
<b>Work experience</b>		
Less than 5 years	25	9.02
Less than 16 years	222	80.14
Less than 25 years	30	10.83
<b>Marital</b>		
Single	82	29.6
Married	195	70.4
<b>Characteristic</b>		<b>Mean(SD)</b>
Age		32.6 (2.26)

The mean score of overall psychological empowerment was obtained 69.51 (SD=3.95) while the mean score of job rotation efficacy was obtained 61.2 (SD=2.064). In addition, the mean score of nurses’ psychological empowerment in competence, autonomy, effectiveness, significance and trust was obtained, 12.68 (SD=1.23), 13.2 (SD=1.03), 14.5 (SD=1.65), 14.23 (SD=1.84) and 14.9 (SD=1.49), respectively.

Competence, autonomy, effectiveness, significance and trust variables were introduced to the adopted regression model. The correlation coefficient between the variables was obtained 0.7 which is significant ( $P<0.05$ ). According to table 2, Beta regression coefficients with standardized weights showed that a simultaneous change in the standard deviation of competence, autonomy, effectiveness, significance and trust, changes the standard deviation of job rotation efficacy by 0.47, 0.31, 0.15, 0.36 and 0.38, respectively. Job rotation efficacy= 6.31 + 1.86 (competence) + 0.39(autonomy) + 0.11 (effectiveness) + 0.31 (significance) + 0.29 (trust). All standard beta coefficient, except that of effectiveness, became significant at  $P<0.05$  level. Since all coefficients have plus sign, it can be concluded that the variables directly affect job rotation efficacy. Considering standardized beta coefficients, it can be argued that among these significant variable, competence and autonomy have the maximum and the minimum effect on job rotation efficacy, respectively. In this model, all tolerance values are higher than 0.4 implying the goodness of fitness and non-linearity of the model.

Two-way ANOVA was used to assess the relationship of demographic variables with job rotation efficacy and psychological empowerment of the studied nurses. From table 3 it can be concluded that there is a significant difference in job rotation efficacy

( $P=0.001$ ) and psychological empowerment ( $P=0.000$ ) between the nurses based on age.

**Table 2.** Relationship between components of psychological empowerment and job rotation efficacy

Variables	Standard B coefficient	B coefficients	t	P	Tolerance	
Constant	-	6.31	10.44	0.01		
Competence feeling	0.47	1.86	9.02	0.001	0.63	R=0.59
Autonomy feeling	0.31	0.39	6.02	0.01	0.49	Adjusted R <sup>2</sup> =0.259
Effectiveness feeling	0.15	0.11	0.23	0.2	0.73	R square=0.316
Significance of job	0.38	0.31	8.34	0.01	0.52	$p<0.001$
Trust between employees	0.35	0.29	10.	0.01	0.77	

**Table 3.** Inter-group effects of job rotation and psychological empowerment of nurses in terms of demographic information

Independent variables	Dependent variables	Mean square of roots	F	P value	Effect size
Age	Job rotation efficacy	42.6	8.73	0.001	0.31
	Psychological empowerment	53.6	12.89	<0.001	0.4
Sex	Job rotation efficacy	63.29	4.62	<0.001	0.38
	Psychological empowerment	5.49	2.7	0.2	0.051
Education	Job rotation efficacy	44.3	4.5	0.01	0.23
	Psychological empowerment	59.6	7.6	0.001	0.35

From Tukey test it can be concluded that there is a significant difference in psychological empowerment between nurses aged <30, 36<age<40 and above 40 ( $P<0.05$ ). There is a significant difference in job rotation efficacy between nurses aged <30 and other age groups ( $P<0.05$ ). In addition, the difference between nurses aged 30-35 and above 40 was significant ( $P<0.05$ ).

There is a significant difference in job rotation efficacy between nurses in terms of sex ( $P=0.000$ ) while the difference is not significant in psychological empowerment ( $P=0.2$ ). The mean score of job rotation efficacy is higher in males (68.95) than females (51.4). There is a significant difference in job rotation efficacy ( $P=0.01$ ) and psychological empowerment ( $P=0.001$ ) between the studied nurses in terms of education. According to Tukey test, there is a significant difference in psychological empowerment between nurses with diploma

and over diploma education and other education groups ( $P<0.05$ ) so that the higher education, the higher psychological empowerment. In addition, there is a significant difference in psychological empowerment between nurses with BSc degree (mean score =67.44) and Master of Sciences degree (mean score=73.93) ( $P<0.05$ ). There is a significant difference in job rotation efficacy between nurses with diploma and over diploma degree and other education groups ( $P<0.05$ ) so that the higher education the lower job rotation efficacy.

### Discussion

This study was carried out to assess the relationship between job rotation efficacy and the psychological empowerment of nurses. According to findings, nurses are highly psychologically empowered employees with a mean score of 69.51. Toorani, et al. (2008)

concluded in their study that although the mean score of effectiveness and significance components is in an acceptable level, the overall mean. Score of the perception of employees' empowerment was not in acceptable level and the studied hospitals were in unacceptable status (18). These findings were not in line with present study. Mirkamali and Nastaeizeei concluded that although the mean score of job satisfaction was 3.847 for nursing personnel, which implies a relative ideal satisfaction, payment component was the most dissatisfying component. The mean score of psychological empowerment was 4.218 implying a high empowerment level.

The findings show the satisfactory status of nurses in this variable. This means that empowered nurses feel that they follow important and valuable occupational objectives and walk on a way that is worth for the consumed time and energy. On the other hand, findings associated with competence show the satisfactory status of nurses in this variable. This means that empowered nurses believe that they possess the knowledge and skills required for performing their duties in a more satisfied level. According to studies, competence feeling affects the better performance of employees and their job satisfaction. To this end, acquiring required skills and knowledge and capability of promoting health are among the influential factors of self-efficacy (19).

According to correlation coefficients, there is a significant relationship between the psychological empowerment and job satisfaction of nursing personnel. According to multiple regression results, among the variables of psychological empowerment, only the relationship of trust with the changes of job satisfaction was significant (20). According to the findings of this study, there is a significant difference in the extent of job rotation efficacy and psychological empowerment between different age groups.

There was a significant difference in job rotation efficacy between nurses in terms of sex while the difference was not significant in psychological empowerment. The job rotation efficacy in males (mean score= 68.95) was higher than females (mean score=51.4). There was a significant difference in job rotation efficacy and psychological empowerment between nurses in terms of education. In addition, there was a significant difference in psychological empowerment between nurses with diploma and over diploma education and other groups so that the higher education the higher psychological empowerment. Furthermore, there was a significant difference in psychological empowerment between nurses degree. The coefficient of correlation between competence, autonomy, effectiveness, significance and trust and the dependent variable was obtained 0.7. Considering the coefficient of determination, it can be argued that the components of psychological empowerment variable explained almost more than half of the changes of the response variable of job rotation efficacy. Among the significant variables, competence and autonomy had the maximum and the minimum effect on job rotation efficacy, respectively. The study of Nasir pour et al concluded that the performance of the studied nurses is independent from their job rotation status so that job rotation did not improve their performance (2).

Present study had also some limitations including 1) inability to control the emotions and cultural differences of participants, 2) possible careless of nurses during completing of questionnaire, and 3) low sample size, that these limitations may can limited generality of the results. So recommended that more research be done to assess wider contents of this issue.

From the data obtained from the research, it is possible to make various suggestions to increase the effect of job rotation and

psychological empowerment. Rotation decisions should be made by the employees opinions and taken together and thus the rotation decision will be accepted more easily. When the employee embarks on the path of rotation willingly and consciously, he will share the responsibility at the point of development of management skills. It is necessary for the department manager to closely monitor the person on rotation and to make the effort to correctly evaluate their performance to be able to determine a job/position of higher productivity within the hospital or organization. Also these advise for better job rotation will affect the psychological status in nurses.

The general conclusion is that job rotation efficacy in the nurses of the studied hospital is related with psychological empowerment. Therefore, some factors including resignation, retirement and human capital deficiency are undeniable factors. Therefore, job rotation committee should be established in hospitals. This committee should develop the comprehensive plan of job rotation and relevant instructions and should supervise the good performance of it. In specialized and intensive care units, job rotation should be practiced carefully. In addition, nurses of specialized units should be rotated with specialized units and nurses of general units should be rotated with nurses of general units. Before the execution of job rotation, necessary training programs should be taken into account as a part of the programs of job rotation committee. Any attempt for improving the empowerment of personnel can serve as a valuable strategy for improving job rotation efficacy. Managers should enable nurses to believe that they have a valuable job, to become internally interested in it, to believe their ability and capability of doing assigned tasks and to have the sense of trust, interest,

competence and openness to each other. These are practiced through delegation of freedom to nurses, effective management, promotion of motivation and self-managing capability, in-service trainings and distributing works based on their competence.

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### **Conflict of Interest**

The authors of this study declare no conflicts of interest.

### **References**

1. Zhang AY, Song LJ, Tsui AS, Fu PP. Employee responses to employment-relationship practices: The role of psychological empowerment and traditionality. *Journal of Organizational Behavior*. 2014; 35(6): 809-30.
2. Thomas KW, Velthouse BA. Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of management review*. 1990; 15(4): 666-81.
3. Huang J. The relationship between employee psychological empowerment and proactive behavior: Self-efficacy as mediator. *Social Behavior and Personality: an international journal*. 2017; 45(7): 1157-66.
4. Conger JA, Kanungo RN. The empowerment process: Integrating theory and practice. *Academy of management review*. 1988; 13(3): 471-82.
5. Broeck A, Vansteenkiste M, Witte H, Soenens B, Lens W. Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational and Organizational Psychology*. 2010; 83(4): 981-1002.

6. Froiland JM, editor. Parental autonomy support and student learning goals: A preliminary examination of an intrinsic motivation intervention. *Child & youth care forum*; 2011: Springer.
7. Zhou L, Wang M, Chen G, Shi J. Supervisors' upward exchange relationships and subordinate outcomes: Testing the multilevel mediation role of empowerment. *Journal of Applied Psychology*. 2012; 97(3): 668.
8. Stanton-Salazar RD. A social capital framework for the study of institutional agents and their role in the empowerment of low-status students and youth. *Youth & Society*. 2011; 43(3): 1066-109.
9. Wong CA, Laschinger HK. Authentic leadership, performance, and job satisfaction: the mediating role of empowerment. *Journal of advanced nursing*. 2013; 69(4): 947-959.
10. Appelbaum SH, Hébert D, Leroux S. Empowerment: power, culture and leadership—a strategy or fad for the millennium? *Journal of Workplace Learning*. 1999; 11(7): 233-254.
11. Järvi M, Uusitalo T. Job rotation in nursing: a study of job rotation among nursing personnel from the literature and via a questionnaire. *Journal of Nursing Management*. 2004; 12(5): 337-347.
12. Ho W-H, Chang CS, Shih Y-L, Liang R-D. Effects of job rotation and role stress among nurses on job satisfaction and organizational commitment. *BMC Health Services Research*. 2009; 9(1): 8.
13. Delpasand M, Raeissi P, Begdeli F, Shahabi M. The impact of job rotation on nurses burnout in Ayatollah Kashani hospital, Tehran: A case study. *Iran Occupational Health*. 2011; 7(4): 2-0.
14. Kwon N-K, Kim H-L, Lee I-J. A study on the effects of employee value proposition and the importance of job rotation on the subjective career success. *Korean Journal of Culinary Research*. 2013; 19(3): 291-304.
15. Lu H, Barriball KL, Zhang X, While AE. Job satisfaction among hospital nurses revisited: a systematic review. *International journal of nursing studies*. 2012; 49(8): 1017-38.
16. Krejcie RV, Morgan DW. Determining sample size for research activities. *Educational and psychological measurement*. 1970; 30(3): 607-10.
17. Reza H. The Relationship between Managers' Communication Skills and Teachers' Psychological Empowerment in Education. *International Journal of Humanities and Cultural Studies (IJHCS)* ISSN 2356-5926. 2016; 1(1): 2551-65.
18. Turani S, Yazdi Feyzabadi V, Gohari M. The relationship between empowerment climate and perception empowerment's employees in teaching hospital of Kerman University of medical. *Health Management*. 2008; 11(31): 17-26.
19. Timby BK, Smith NE. Seasonal affective disorder: shedding light on the wintertime blues. *Nursing* 2017. 2005; 35(1): 18.
20. Mirkamli M, Nastiezaie N. The relationship between Psychological Empowerment and job satisfaction of nursing personnel. *Journal of Nursing and Midwifery Urmia University of Medical Sciences*. 2010; 8(2): 104-113.