

JOB ROTATION APPROACH AMONG NURSES: A COMPARATIVE STUDY

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ABSTRACT

Objectives: to compare the perceived levels of job rotation, job satisfaction, and job conflict between two groups of nurses in Jordan, and to explore the differences between them. Moreover, several demographic factors were examined to investigate their association with job rotation approach in nurses who previously had job rotation experience.

Method: a cross-sectional design with a total of 244 nurses: 122 nurses had experienced job rotation while 122 nurses never had experienced job rotation. The study was examined between January and February in the year of 2020. Job rotation scale, job satisfaction scale, and job conflict scale were used to assess the three variables. Independent t-test and one-way analysis of variance test were used to analyze significant differences between both selected groups.

Results: statistical analysis indicated that nurses who underwent job rotation had significantly higher perceived levels of job rotation, job satisfaction, and lower level of job conflict compared to other nurses who did not experience job rotation. Moreover, gender, experience, and educational level were significantly associated with the perceived level of job rotation among nurses who had job rotation experience in Jordan. Job rotation was not found to be associated with marital status.

Conclusions: job rotation approach is necessary to improve job satisfaction and reduce job conflict. Nursing directors should cooperate to apply nurses' rotation approach at hospitals in order to increase job satisfaction and decrease the level of job conflict.

DESCRIPTORS: Cross-training. Job satisfaction. Occupational Stress. Nurses. Comparative study.

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ROTATIVIDADE NO TRABALHO DE ENFERMEIRAS: UM ESTUDO COMPARATIVO

RESUMO

Objetivos: comparar a rotatividade no trabalho, o nível de satisfação e de conflito entre dois grupos de enfermeiros na Jordânia e explorar as diferenças entre eles. Vários fatores demográficos foram examinados para investigar a associação de conflito e satisfação com a rotatividade no trabalho.

Método: delineamento transversal com um total de 244 enfermeiros: 122 enfermeiros experimentaram rodízio de funções e 122 enfermeiros nunca experimentaram rodízio de funções. O estudo foi examinado entre janeiro e fevereiro do ano de 2020. Escala de rotação de trabalho, escala de satisfação no trabalho e escala de conflito de trabalho foram utilizadas para avaliar as três variáveis. O teste t independente e o teste de análise de variância unilateral foram usados para analisar diferenças significativas entre os dois grupos selecionados.

Resultados: a análise estatística indicou que os enfermeiros que realizaram rodízio de trabalho apresentaram níveis percebidos de rotação de trabalho, satisfação no trabalho e menor nível de conflito de trabalho significativamente maiores em comparação com outros enfermeiros que não passaram por rodízio de trabalho. Além disso, gênero, experiência e nível educacional foram significativamente associados ao nível percebido de rotação de empregos entre enfermeiros que tiveram experiência de rotação de empregos na Jordânia. A rotação de funções não foi associada ao estado civil.

Conclusões: a abordagem de rotação de trabalho é necessária para melhorar a satisfação no trabalho e reduzir os conflitos de trabalho. Os diretores de enfermagem devem cooperar para aplicar a abordagem de rotação dos enfermeiros nos hospitais, a fim de aumentar a satisfação no trabalho e diminuir o nível de conflito de trabalho.

DESCRITORES: Capacitação de Recursos Humanos. Satisfação no trabalho. Estresse no local de trabalho. Enfermeiros. Estudo comparativo.

ENFOQUE DE ROTACIÓN DE TRABAJO EN ENFERMERAS: UN ESTUDIO COMPARATIVO

RESUMEN

Objetivos: comparar los niveles percibidos de rotación laboral, satisfacción laboral y conflicto laboral entre dos grupos de enfermeros en Jordania y explorar las diferencias entre ellos. Además, se examinaron varios factores demográficos para investigar su asociación con el enfoque de rotación laboral en enfermeros que anteriormente tenían experiencia en rotación laboral.

Método: diseño transversal que contó con un total de 244 enfermeros: 122 enfermeros habían experimentado rotación laboral mientras que 122 enfermeros nunca habían experimentado rotación laboral. El estudio se examinó entre enero y febrero del año 2020. Se utilizaron la escala de rotación laboral, la escala de satisfacción laboral y la escala de conflicto laboral para evaluar las tres variables. Se utilizaron la prueba t independiente y la prueba de análisis de varianza unidireccional para analizar las diferencias significativas entre ambos grupos seleccionados.

Resultados: el análisis estadístico indicó que las enfermeras que se sometieron a rotación laboral tenían niveles significativamente más altos de rotación laboral, satisfacción laboral y menor nivel de conflicto laboral en comparación con otras enfermeras que no experimentaron rotación laboral. Además, el género, la experiencia y el nivel educativo se asociaron significativamente con el nivel percibido de rotación laboral entre los enfermeros que tenían experiencia en rotación laboral en Jordania. No se encontró que la rotación de trabajos estuviera asociada con el estado civil.

Conclusiones: el enfoque de rotación laboral es necesario para mejorar la satisfacción laboral y reducir los conflictos laborales. Los directores de enfermería deben cooperar para aplicar el enfoque de rotación de enfermeros en los hospitales a fin de aumentar la satisfacción laboral y disminuir el nivel de conflicto laboral.

DESCRITORES: Desarrollo de Personal. Satisfacción laboral. Estrés en el trabajo. Enfermeras. Estudio comparativo

INTRODUCTION

Job rotation approach has received much attention in recent years due to its important benefits for hospitals. Job rotation has many possible uses in nursing profession to decrease job burnout, reduce job conflict, and has been investigated as a potential source of job satisfaction¹⁻². Psychological burnout is a common problem that nurses generally experience in workplace³⁻⁴. Hence, more studies on job rotation are needed to be used globally in order to improve nurses' performance, productivity, and optimize patient care.

Job rotation approach is also understood as cross-training and it can be defined as a scheduled process of replacing nurses from one department to another²⁻⁵. Despite the difficulty to hospitals, job rotation was eventually found to improve interpersonal relationships, increase knowledge, move skills, create a team network, raise awareness, better psychological health, minimize conflict, and boost job security⁶⁻⁸.

Much research has focused on job satisfaction among nurses⁹⁻¹². It is widely recognized that job satisfaction is directly correlated to four areas in workplace namely organizational factors, environmental factors, nature of work, and personality factors¹³. Moreover, job satisfaction is positively correlated with employee performance¹⁴. A study conducted in Sri Lanka showed that job rotation had a positive effect on job satisfaction⁷, and more recently in Jordan, they found that applying job rotation approach among nurses, raised commitment, which indicates that commitment plays a significant role in the job rotation approach².

Job conflict can be defined as an issue that occurs when something unusual happens in the workplace. Job conflict develops between nurses as well as in their managers in order of job rotation. Accordingly, this refers mainly to misunderstanding of the goals of job rotation, miscommunication, unclear policies, and lack of psychological educational programs dealing with job conflicts among nurses in hospitals¹⁵. The present study presents a solution set for job conflicts among nurses based on job rotation approach.

Job rotation among nurses neither effects on their professional status nor their self-evaluation. One attempt to improve our understanding is the study of job rotation to describe the perceived level of job satisfaction and job conflict between two different groups; nurses who had job rotation experience and nurses who never had job rotation experience. A little attention has been paid to the effect of job rotation on job satisfaction among nurses¹⁶⁻¹⁷ and most related studies are centered on nurses' opinions generally toward job rotation approach. On the other hand, this study will fill the gap in the previous literature by providing more insight into perceptions of nurses who did not experience job rotation and nurses who had experienced job rotation approach. However, the main aim of this study is to compare the perceived levels of job rotation, job satisfaction, and job conflict between two groups of nurses in Jordan, and to explore the differences between them. Moreover, several demographic factors were examined to investigate their association with job rotation in nurses who previously had job rotation experience.

METHOD

This study adopted a cross-sectional design and followed the strengthening reporting criteria of observational studies to explore the perceived level of job rotation, job satisfaction, and job conflict among both groups of nurses and to discover the differences between them.

We conducted this population based on a convenience sampling method in a tertiary hospital in Amman, Jordan. This hospital was chosen because of the large number of nurses that performed job rotation approach and it is readily accessible for researchers. Exclusion criteria included nurses with less than 1 year of experience. Inclusion criteria were nurses with a diploma degree, bachelor's

degree, or postgraduate degree, experienced job rotation or did not experience in the different departments, and consent to take part in this study.

The total number of nurses in the selected hospital is estimated to be approximately 600 nurses, half of them have experienced job rotation. Thus, the study sample was divided into two major groups according to stratified procedure. Then, a total of 150 nurses who had job rotation experience were selected (at least three months) to represent the first group. On the other hand, a total of 150 nurses who never had job rotation experience were selected to represent the second group. Out of 150 nurses in each group, 122 participants in group one and 122 participants in group two completed the questionnaire with a response rate of 81%. The study was examined between January and February in the year of 2020. The hospital research ethics board approved this study. A written consent form was obtained, and the participants were assured that their identity would remain anonymous and confidential.

Study tools

Job rotation scale

Job Rotation Scale was used to measure the perceived level of job rotation among both participating nurses in this study. This scale consisted of 9 items and has been used according to previous studies of ^{2,18} Correlation coefficients ranged between 0.61 and 0.91. Regarding the reliability of the job rotation scale, internal consistency achieved the required level of Cronbach's alpha and was 0.85.

Job satisfaction scale

It has been used to measure the level of job satisfaction among both participating groups in this study. This scale consisted of 8 items adapted from^{2,18}. The Cronbach's alpha of job satisfaction scale was 0.87, indicating the appropriateness of the reliability. Correlation coefficients ranged between 0.69 and 0.89.

Job conflict scale

Job conflict scale was used to evaluate the level of job conflict among both participating groups of nurses. This scale consisted of 7 items, and it was used according to^{2,15}. The Cronbach's alpha of job conflict scale was 0.79 and the correlation coefficients ranged between 0.54-0.84. A high mean score indicates a higher level of job conflict among nurses.

All scale items were evaluated on a 4-point Likert-type scale as follows: 4 "Strongly Agree", 3 "Agree", 2 "Disagree", 1 "Strongly Disagree" for the positive items, while the negative items were assessed in a reverse order. The following standards have been illustrated as a low average score ranged between (1.00-2.50); the high average score ranged between (2.51-4.00).

Data have been analyzed using statistical package for social science (SPSS. v22). The level of statistical significance was set at $P \leq 0.05$. Normal distribution was checked before data being used. Frequencies and percentages were described. Means, standard deviations, and overall levels were calculated for the studied variables. Independent t-test was used to evaluate the differences between two groups of nurses in favor of job rotation, job satisfaction, and job conflict. A t-test was used for factors comprising two variables (i.e., gender and marital status), whereas one-way analysis of variance test was used for factors comprising more than two variables (i.e., experience and educational level). Finally, the post-hoc Scheffe comparison test was used to illustrate the differences between factors that emerged as statistically significant.

RESULTS

Demographic factors for both selected groups in this study are presented in Table 1.

Table 1 shows that more than half of the participants in both selected groups were female (68.9%, 70.5%), predominantly married (79.5%, 68.9%), had a bachelor's degree (73.8%, 71.3%), and had more than or equal to 11 years of work experience (26.2%) among nurses who never had job rotation and had precisely 59% for nurses who had job rotation. These results are discussed in detail according to the research aims.

To explore the perceived levels of job rotation, job satisfaction, and job conflict between two different groups; means, standard deviations, t-test, and overall levels were presented in Table 2.

Table 2 illustrates the overall perception level of job rotation, job satisfaction, and job conflict among both groups of selected nurses in this study. Accordingly, the scores for job rotation and job satisfaction were the highest in nurses who had job rotation experience (group 1). The level of job conflict among nurses who never had job rotation experience (group 2) had a higher level compared to (group 1). Additional detailed results (means, frequencies, and percentages) regarding the items of job rotation scale among both selected groups were given at appendix A2 Table.

Table 1 - Demographic factors of nurses' study sample. Amman, Jordan, 2020. (n=244).

Variables	Descriptive	Nurses had job rotation (122)		Nurses never had job rotation (122)	
		n	%	n	%
Gender	Male	38	31.1	36	29.5
	Female	84	68.9	86	70.5
Marital status	Single	25	20.5	38	31.1
	Married	97	79.5	84	68.9
Experience (Year)	1-5	11	9	28	23
	6-10	39	32	62	50.8
	≥11	72	59	32	26.2
Educational level	Diploma	23	18.8	20	16.4
	Bachelor	90	73.8	87	71.3
	Postgraduate	9	7.4	15	12.3

Table 2 - Means, standard deviations, and differences between two groups of nurses in terms of rotation level, satisfaction level, and conflict level. Amman, Jordan, 2020. (n=244).

Variables	Groups*	Mean	SD†	Level	t-test	DF‡	Sig.
Job rotation	Group1	2.78	0.36	High	2.83	242	0.01**
	Group2	2.64	0.41	High			
Job satisfaction	Group1	2.87	0.39	High	11.30	242	0.01**
	Group2	2.33	0.37	Low			
Job conflict	Group1	2.34	0.31	Low	9.14	242	0.01**
	Group2	2.69	0.30	High			

*Group1: experience job rotation (122), Group2: never experience job rotation (122); †SD: Standard deviation; ‡DF: Degree of freedom; *significant at the 0.05 level. **significant at the 0.01 level.

In Table 2, there were statistically significant differences $P < 0.01$ between two selected groups in all studied variables for group one who had experienced the process of job rotation. The association of demographic factors including gender, marital status, experience, and educational level with job rotation approach among nurses are shown in Table 3.

Gender was found to be associated with job rotation approach. While marital status was not found to be associated with job rotation. However, there were differences in job rotation based on experience level and educational level. To recognize these differences, post-hoc Scheffe comparison test has been measured and Table 4 and 5 shows the results.

Table 4 shows that there were statistically significant differences between the length of experience (1-5 years, ≥ 11 years) and (6-10 years, ≥ 11 years). Conversely, there was no statistically significant difference between the length of experience to (1-5 years, 6-10 years).

Table 3 - Association of demographic factors on job rotation among nurses. Amman, Jordan, 2020. (n=122).

Factors	Descriptive	N (%)	Mean	SD*	t/F†	DF‡	P-value
Gender	Male	38 (31.1)	2.90	0.35	2.58	120	0.01**
	Female	84 (68.9)	2.72	0.36			
Marital status	Single	25 (20.5)	2.80	0.25	0.16	120	0.87
	Married	97 (79.5)	2.78	0.39			
Experience	1-5 Years	11 (9)	3.02	0.32	6.30	120	0.01**
	6-10 Years	39 (32)	2.87	0.36			
	≥ 11 Years	72 (59)	2.69	0.34			
Educational level	Diploma	23 (18.8)	2.40	0.26	23.05	120	0.01**
	Bachelor	90 (73.8)	2.85	0.31			
	Postgraduate	9 (7.4)	3.03	0.24			

*SD: Standard deviation; †: T-test; F: F-test; ‡DF: Degree of freedom; *Significant at the 0.05 Level.

**Significant at the 0.01 level.

Table 4 - Post-hoc Scheffe multiple comparison among nurses in terms of job rotation and experience. Amman, Jordan, 2020. (n=122).

(I) Experience		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1-5 Years	6-10 years	0.146	0.119	0.47	-0.149	0.440
	≥ 11 years	0.327	0.113	0.01†	0.047	0.607
6-10 Years	1-5 years	-0.145	0.119	0.47	-0.440	0.149
	≥ 11 years	0.182	0.069	0.03*	0.010	0.353
≥ 11 Years	1-5 years	-0.327	0.113	0.01†	-0.607	-0.047
	6-10 years	-0.182	0.069	0.03*	-0.353	-0.010

*Significant at the 0.05 Level; †Significant at the 0.01 level.

Table 5 - Post-hoc Scheffe multiple comparison among nurses in terms of job rotation and educational level. Amman, Jordan, 2020. (n=122).

(I) Educational level		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Diploma	Bachelor	-0.457	0.073	0.01†	-0.637	-0.276
	Postgraduate	-0.641	0.122	0.01†	-0.944	-0.337
Bachelor	Diploma	0.457	0.073	0.01†	0.276	0.637
	Postgraduate	-0.184	0.109	0.24	-0.453	0.085
Postgraduate	Diploma	0.641	0.122	0.01†	0.337	0.944
	Bachelor	0.184	0.109	0.24	-0.085	0.453

*Significant at the 0.05 Level; †Significant at the 0.01 level.

Table 5 demonstrates that there were statistically significant differences between educational levels (diploma/bachelor) and (diploma/postgraduate). On the other hand, there were no statistically significant differences between the educational level of bachelor's degrees and postgraduate degrees.

DISCUSSION

This study provides information on job rotation approach and illustrates differences between both selected groups of nurses in the perceived level of job satisfaction and job conflict. Differences between both groups of nurses were seen in relation to job rotation approach on job satisfaction and job conflict.

Our first results indicate that job rotation approach helps nurses to expand their knowledge and skills, reduce work pressure, lessening financial costs of training, accomplish new responsibilities and tasks, provides creativity, motivation, visibility, and decreases the level of conflicts. In contrast, the results showed that nurses who never had job rotation experience were less motivational, more challenged to accept the idea of job rotation, less competitive, and felt that they would lose their friends if they rotated to other departments. This result is in agreement with several previous studies which informed the high perceived level of job rotation among nurses^{2,8}.

Specifically, we found that job satisfaction among nurses who have undergone the process of job rotation is higher than that of nurses who have not undergone job rotation, and this difference is statistically significant. This can be explained by many nurses reporting their satisfaction with reducing the level of conflict among them, as well as with reducing their anxiety levels, improving interpersonal relationships with other hospital staff, and new workplace challenges. Likewise, this result agrees with those of previous studies¹⁹⁻²⁰.

It is noteworthy to mention that job rotation and job satisfaction have been recognized in previous studies among nurses. In Taiwan, a study was conducted and found that the job rotation approach is an effective strategy to increase job satisfaction among nurses²¹. Studies suggest that job rotation approach has a direct effect on skills, knowledge, and influence among nurses^{8,22}.

As for the high level of conflict among nurses who had never experienced job rotation, most participants, have indicated low level of job satisfaction⁸. This result can be explained by the fact that nurses frequently deal with the same situations and colleagues, same patients' cases, and they usually

feel have not achieved their career goals regarding to same workplace routine. We found that the job rotation approach is an effective strategy for reducing conflict among nurses in workplace. This result endorses by a study conducted in Brazil which indicated that nurses who have not undergone the process of job rotation are inclined to more conflict in workplace⁸. However, satisfaction levels were seen to be the lowest among nurses in Croatia who had experienced shift rotation²³.

Nurses in hospitals reported a greater number of workloads due to a lack of resources²⁴, higher patient-to-nurse ratios²⁵, and lower level of communication and cooperation from peers²⁶. Potential clarifications for higher levels of burnout among nurses include personal beliefs and greater existential vacuum²⁷. However, the significant differences between the two groups of nurses are presented in job conflict. Previous studies have found that job rotation practice has a positive effect on job satisfaction and motivation^{19,28}.

Male nurses accept the job rotation approach more than female nurses. They accept to work in any department at a hospital, acquire new colleagues, or it refers to the social gender roles of males. On the other hand, female nurses are afraid of losing their friends in the same department, they are emotionally attached with the place, and this can be related to the changing process in general. This result disagrees with previous studies of²⁹⁻³⁰. Single and married nurses have the same perceptions toward job rotation since we found no significant differences in job rotation based on nurses' marital status. Moreover, nursing staff with at least five years of experience want to receive more knowledge and skills, which are most important for a nurse's career success. Surprisingly, nurses with postgraduate degrees have the highest perception levels toward the job rotation approach. The higher the educational level of a nurse the more prone he/she is to the job rotation approach. This result is in agreement with a study by³⁰, and disagreement with the study of²⁹.

Our quantitative study presented some limitations that could be handled in future studies. Sample size in each group (122 nurses), one selected hospital, and self-reported surveys.

CONCLUSION

A job rotation approach in a planned manner will achieve benefits for all nurses as well as their organization. The results of this study showed that the nurses who experienced job rotation were far more satisfied and less conflicted than other nurses who did not experience job rotation. However, statistically significant differences were discovered between the two groups of nurses in terms of job rotation, job satisfaction, and job conflict. Moreover, the study revealed that gender, experience, and educational level were significantly associated with the perceived level of job rotation among nurses who had job rotation experience. Job rotation was not found to associated with marital status. Our recommendations are to apply a job rotation approach among nurses, mainly those who are fresh graduates and postgraduates, in different hospitals in Jordan to decrease the level of job conflict and to increase job satisfaction. Moreover, job rotation must be assessed in different types of hospitals to explore the effect of the job rotation approach among nurses on job satisfaction, job conflict, and other factors.

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NOTES

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