



The Relationship Between Quality of Work Life and Organizational Effectiveness Among Hospital Nurses

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Abstract

Background and Aim: Organizational effectiveness is the main goal of organizational development and excellence. Improvement of staff's quality of work life may improve organizational effectiveness. The aim of this study was to analyze the relationship between quality of work life and organizational effectiveness among hospital nurses.

Methods: This descriptive-analytical study was conducted on 225 hospital nurses who worked in teaching hospitals affiliated to Birjand University of Medical Sciences, Birjand, Iran. Nurses were recruited through random multi-stage cluster sampling. Data were collected using a demographic questionnaire, Brooks and Anderson quality of nursing work life questionnaire, and parsons organizational effectiveness questionnaire. SPSS software (v. 16.0) was used for data analysis via Mann-Whitney U, Kruskal-Wallis, and independent-sample t tests, one-way analysis of variance, and Pearson and Spearman correlation analyses.

Results: From 225 nurses, 201 completely filled out their questionnaires. The mean of their work experience in nursing was 7.87 ± 7.62 years. Nurses' organizational effectiveness was significantly correlated with their quality of work life ($P < 0.001$) and working ward ($P = 0.04$). The work context subscale of quality of work life was a significant predictor of nurses' organizational effectiveness in which, each one-point increase in quality of work life was associated with a 0.66-point increase in organizational effectiveness.

Conclusions: Nurses' quality of work life is significantly correlated with their organizational effectiveness. Therefore, improving nurses' quality of work life can improve their organizational effectiveness.

Keywords: Quality of Work Life, Organizational Effectiveness, Nurse

1. Background

Organizational effectiveness (OE) is one of the most important issues in most organizations, including healthcare organizations (1). It is a destination all organizational efforts aim to reach (1). Despite the importance of OE in organizational theories and the diversity of organizational models and approaches, there is no clear consensus over its contributing factors and no well-accepted theory about it (1).

OE is the ability of an organization to achieve its goals or to cope with environmental conditions. In fact, the aim of establishing an organization is to achieve a series of goals through effective behaviors. Therefore, all organizational efforts aim to encourage and reinforce behaviors that are productive for the organization, and satisfactory and rewarding for its staff (2).

One of the potential factors behind OE in healthcare settings is nurses' quality of work life (QWL). QWL is a criterion for meeting nurses' essential and personal needs and

achieving organizational goals (3). It is described as "the interaction of nurses' work life with their home life along with the design and context of their work, the relationship with the work world, and how these facets interact to affect healthcare productivity measures such as cost, quality, and patient outcomes" (4). Some studies reported that nurses' higher QWL is associated with lower healthcare costs, greater organizational commitment, greater client satisfaction, and higher service quality (5).

Improving nurses' QWL in healthcare settings can affect their morale, job satisfaction, productivity, and care quality (6, 7). However, despite the importance of QWL, studies show that most nurses have a poor QWL (8) and dissatisfactory QWL (7). Factors such as job specifications, adequate payments, strong human relationships, and staff development opportunities can potentially affect QWL and OE (9). Moreover, QWL improvement may improve OE (10). However, our literature search in online databases (such as Google Scholar, Scopus, PubMed, Scientific Informa-

tion Database, and Magiran) using the keywords of “QWL”, “nurse”, and “OE” revealed the lack of scientific evidence respecting OE-QWL relationship. Therefore, the present study was undertaken to analyze the relationship between QWL and OE among hospital nurses.

2. Methods

This descriptive-analytical study was undertaken on hospital nurses who worked at teaching hospitals affiliated to Birjand University of Medical Sciences, Birjand, Iran. The hospitals were located in Birjand, Ferdows, Qaen, and Tabas, Iran. From 550 nurses who worked in the hospitals, 225 eligible nurses were recruited through random multi-stage cluster sampling. Accordingly, given the total number of nurses in each hospital, a proportionate sample of nurses was recruited from different work shifts of the given hospital. The sample size was calculated using Krejcie and Morgan Eligibility Eligibility criteria were a work experience of one year or more, permanent, or conditional official employment, and an associate or higher degree in nursing. Nurses who were not willing to stay in the study were excluded.

Data were collected using a demographic questionnaire, Brooks and Anderson quality of nursing work life questionnaire, and parsons organizational effectiveness questionnaire.

The quality of nursing work life questionnaire (QNWLQ) consists of 42 items in four subscales, namely work life/home life, work design, work context, and work world. Item scoring is performed on a five-point Likert scale from 1 (“Completely disagree”) to 5 (“Completely agree”). Total score of QNWLQ is 42 - 210 which is categorized and interpreted as follows: 42 - 83: poor QWL; 84 - 125: moderate QWL; 126 - 167: good QWL; and 168 - 210: excellent QWL (1). The work life/home life subscale contains seven items and has a total score of 7 - 35. The work design subscale deals with the composition of nursing work and the actual work nurses perform. This subscale has ten items and a total score of 10 - 50. The work context subscale pertains to nurses’ workplace environment and shows the effects of environment on nurses and patients. The number of items and the total score of this subscale are 20 and 20 - 100, respectively. Finally, the work world subscale assesses nurses’ social status and job satisfaction by five items with a total score of 5 - 25. The Cronbach’s alpha values of the different subscales of the English and the Persian QNWLQ were reported to be 0.56 - 0.88 (4) and 0.75 - 0.93 (11), respectively.

OE assessment was done using the Parsons organizational effectiveness questionnaire (OEQ). This questionnaire was developed for OE assessment based on the four

components of Parsons Effectiveness Model. The components of the model are adaptation (or innovation), goal attainment (or commitment), integration (or job satisfaction), and latency (or organizational health). OEQ includes 28 items which are scored on a five-point scale from 5 (“Very much”) to 1 (“Very little”), resulting in a total OEQ score of 28 - 140. The score is categorized into three categories, namely 28 - 64, 65 - 101, and 102 - 140 that are interpreted as low, moderate, and high OE, respectively. Each of the four OEQ subscales contains seven items and has a total score of 7 - 35. Malekinia et al. reported a high reliability for the questionnaire with a Cronbach’s alpha of 0.95 (1).

In total, 225 questionnaires were distributed among 225 nurses, from which 24 were filled out incompletely and thus were excluded; therefore, data analysis was done on the data retrieved from 201 completely filled out questionnaires. The SPSS software (v. 16.0) was used for data analysis. Normality was tested via the Kolmogorov-Smirnov test. Except for the scores of the adaptation and the integration subscales of OEQ, the other variables of the study had a normal distribution and thus, they were analyzed using the independent-sample t test and one-way analysis of variance. The scores of the adaptation and the integration subscales of OEQ were analyzed through the Mann-Whitney U and Kruskal-Wallis tests. Moreover, the Pearson and Spearman correlation analyses were conducted to analyze the relationships of QWL and OE with nurses’ demographic characteristics. Stepwise multiple regression analysis was also employed to evaluate the effects of QWL on OE. The significance level was set at below 0.05.

The ethics committee of Birjand University of Medical Sciences, Birjand, Iran, approved the study with the code of IR.BUMS.REC.1394.404. Official permissions for the study were obtained from the same university. Moreover, informed consent was obtained from all nurses and they were ensured about the confidential handling of their data.

3. Results

Participants ranged in age from 23 to 52, with a mean of 30.58 ± 7.69 . The mean of their work experience in nursing was 7.87 ± 7.62 years. Moreover, 23 nurses had a managerial work experience of 7.43 ± 7.12 years. The majority of participants were female (66.6%) and worked in general hospital wards (74.6%). In addition, 89.1% of them held bachelor’s degree, while the others held associate (7.9%) and master’s or higher degrees (3.0%).

Table 1 shows the mean scores of OE and QWL and their subscales. Most nurses had moderate QWL (75.1%), while 13.4% and 11.5% of them had good and poor QWL, respectively. Moreover, 67.7% of the participants had moderate

OE, 24% had low OE, and 8.3% had good OE. The mean scores of QWL and all its subscales were positively correlated with the mean scores of OE and all its subscales ($P < 0.001$; Table 2).

Table 1. The Mean Scores of Nurses' QWL and OE

Variables		Mean \pm SD
OE	Adaptation	21.2 \pm 4.96
	Goal attainment	21.7 \pm 4.89
	Integration	20.2 \pm 4.70
	Latency	20.2 \pm 5.13
	Total	63.9 \pm 13.96
QWL	Work life	19.6 \pm 4.52
	Work design	31.3 \pm 5.70
	Work context	62.4 \pm 13.75
	Work world	14.0 \pm 3.38
	Total	127.4 \pm 23.25

The results of the independent-sample t test illustrated that the mean score of OE among critical care nurses was significantly greater than that of the nurses who worked in general hospital wards ($P = 0.04$). However, these two groups of nurses did not significantly differ from each other respecting the mean scores of OE subscales ($P > 0.05$). Moreover, OE was not significantly associated with nurses' gender and educational status ($P > 0.05$; Table 3) even though the mean score of OE was slightly lower among nurses with master's or higher degrees than in other nurses.

Stepwise multiple regression analysis was employed to predict the score of OE based on the scores of QWL and its subscales. The results indicated that the score of the work context subscale of QWL solely explained 44% of the total variance of OE (Table 3). The results of the regression analysis for the other subscales of QWL were not statistically significant and therefore were removed from the regression model (Table 4).

4. Discussion

This study sought to analyze the relationship between QWL and OE among hospital nurses. Study findings revealed a significant positive relationship between QWL and OE. Moreover, all subscales of QWL were positively correlated with all subscales of OE.

Our literature search revealed that no study had yet been conducted to analyze QWL-OE relationship among nurses. However, a study used the Walton Quality of Work

Life Questionnaire and reported a positive QWL-OE relationship among faculty members (1). Nayak et al. also found the positive effects of QWL on organizational effectiveness and healthcare quality (12). Moreover, Dehghan-Nayeri et al. and Salamzadeh et al. found a positive relationship between nurses' QWL and their productivity (13), denoting that higher QWL is associated with higher organizational productivity. Good working conditions are a prerequisite to staff empowerment (3) and empowered staff can positively affect organizational outcomes and effectiveness.

The results of the present study also illustrated that most nurses (86.5%) had a poor-to-moderate QWL. Salamzadeh et al. also reported the same finding, while Fallahi-Khoshknab et al. reported that QWL among their participating nurses was higher than the moderate level. This contradiction can be related to the fact that they conducted their study on psychiatric nurses while none of our participants was a psychiatric nurse.

Study results also revealed low OE among hospital nurses. Navidian et al. also analyzed the relationship of job satisfaction (a component of OE) and QWL and reported that 80% of their participating nurses had moderate-to-low job satisfaction (14). Similarly, Shahbazi et al. reported a moderate job satisfaction among nurses (15). However, a literature review revealed that nurses had great job satisfaction (16).

The results also showed that critical care nurses had higher OE compared to their counterparts in general hospital wards. The immediate culture and environment can affect nurses' motivation, performance, retention in the profession, QWL, and OE (16). Koushki et al. also found that nurses' QWL was significantly related to their work environment and condition (17).

Regression analysis in the present study indicated that among different subscales of QWL, just the work context subscale was a significant predictor of OE. However, Malekinia et al. reported that different components of QWL, including growth and security opportunities, lifespan, safe and healthy environment, and social integration were the predictors of OE. This contradiction is probably due to the difference in the data collection tools of these two studies so that we used the four-subscale QNWLQ while Malekinia et al. used an eight-subscale QWL questionnaire.

4.1. Conclusions

Nurses' QWL is significantly correlated with their OE. Moreover, most nurses have a poor-to-moderate QWL. Therefore, healthcare managers are recommended to adopt effective strategies for the improvement of nurses' QWL, job satisfaction, and OE. Moreover, more studies are

Table 2. The Correlations of QWL and Its Subscales with OE and Its Subscales

OE	QWL				
	Work Life	Work Design	Work Context	Work World	Total
Adaptation	0.412 ^a	0.501 ^a	0.649 ^a	0.374 ^a	0.445 ^a
Goal attainment	0.356 ^a	0.409 ^a	0.598 ^a	0.340 ^a	0.579 ^a
Integration	0.417 ^a	0.473 ^a	0.642 ^a	0.476 ^a	0.646 ^a
Latency	0.408 ^a	0.472 ^a	0.645 ^a	0.460 ^a	0.647 ^a
Total	0.421 ^a	0.503 ^a	0.684 ^a	0.431 ^a	0.681 ^a

^aSignificant at less than 0.001.**Table 3.** The Relationships of Nurses' Demographic Characteristics with Their OE and Its Subscales^a

Characteristics	OE				
	Adaptation	Goal Attainment	Integration	Latency	Total
Gender					
Male	5.79 ± 20.59	5.43 ± 20.95	5.05 ± 19.47	5.48 ± 19.74	20.49 ± 80.75
Female	4.51 ± 21.61	4.58 ± 22.1	4.52 ± 20.63	4.99 ± 20.54	17.05 ± 84.90
	P = 0.26; z = 1.11	P = 0.12; t = 1.56	P = 0.98; P = 0.3	P = 0.3; t = 1.04	P = 0.13; t = 1.5
Educational degree					
Associate	5.66 ± 21.92	6.90 ± 21.0	5.76 ± 20.07	5.54 ± 19.46	22.63 ± 82.64
Bachelor's	4.79 ± 21.36	4.70 ± 21.79	4.56 ± 20.36	5.03 ± 20.44	17.63 ± 83.96
Master's or higher	8.03 ± 18.83	6.25 ± 21.66	4.72 ± 20.26	7.72 ± 17.0	27.99 ± 65.17
	$\chi^2 = 0.18$; P = 0.91	F = 0.86; P = 0.42	$\chi^2 = 1.043$; P = 0.48	F = 1.41; P = 0.25	F = 0.86; P = 0.50
Working ward					
General wards	4.92 ± 20.85	4.95 ± 21.34	4.64 ± 19.48	4.94 ± 19.95	17.87 ± 81.98
Critical care units	4.94 ± 22.49	4.58 ± 22.82	4.72 ± 21.43	5.62 ± 21.19	18.81 ± 87.94
	z = 1.64; P = 0.10	t = 1.88; p = 0.06	z = 1.57; P = 0.12	t = 1.50; P = 0.14	t = 2.03; P = 0.04

^aValues are expressed as mean ± SD.**Table 4.** The Results of Regression Analysis

Variables	Unstandardized Coefficients		Standardized Coefficients Beta	T	P Value	Correlation Coefficient	Explained Variance
	B	Standard error					
Constant	21.77	3.44		6.33	< 0.001		
Work context	0.67	0.05	0.66	12.55	< 0.001	0.66	0.44

needed to determine the most effective interventions for improving nurses' QWL.

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