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The Relationship Between Quality of Life and Quality of Work-Life of Nurses Working in Neuropsychiatric Hospitals Affiliated to Shiraz University of Medical Sciences

Zahra Kavosi[1], Narjes Alsadat Nasabi[2], Shima Bordbar[3], Ali Reza Yusefi[4]*

1- Professor, Health Human Resources Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
2- PhD, Management of Organizational Development and Administrative Transformation, Shiraz University of Medical Sciences, Shiraz, Iran
3- PhD Candidate, Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran
4- Assistant Professor, Faculty of Health, Jiroft University of Medical Sciences, Jiroft, Iran

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Corresponding Author:
Ali Reza Yusefi

Email:
alirezayusefi67@gmail.com

Address:
Faculty of Management and Medical Information Sciences, Shiraz University of Medical Sciences, Qasr Dasht Street, Shiraz, Iran

Tel/ Fax: +987132340778

Abstract

Background: The quality of life and quality of work-life are among the most remarkable determinants affecting the performance of employees and nurses particularly in health service organizations. These factors can interact with each other. This study aimed to determine the relation between the quality of life and the quality of work-life among nurses.

Methods: This descriptive-analytic study was conducted using a cross-sectional design in two neuropsychiatric hospitals in Shiraz in 2019. The research population included nurses working in these hospitals. The participants were 123 nurses who were selected via random sampling. The data in this study were collected through Walton's Quality of Work-Life Questionnaire and the World Health Organization Quality-of-Life Scale (WHOQOL-BREF). The collected data were analyzed using independent samples t-test, Pearson correlation coefficient, and multivariate linear regression analysis in SPSS23 software.

Results: The mean of quality of life was 89.22 ± 16.55 (out of 120) and the mean of the quality of work-life was 100.71 ± 24.05 (out of 170). There was a positive and significant correlation between the nurses' quality of life and their quality of work-life (P<0.001). Physical health (P<0.001), living environment (P= 0.007), and social relationships (P=0.02) were identified as predictors of the quality of work-life. The results of the study also showed a significant relation between the quality of life and marital status (P=0.03).

Conclusion: There was a positive and significant correlation between the nurses' quality of life and their quality of work-life, suggesting that strengthening or weakening one factor will be accompanied by improving or weakening the other. Accordingly, it is recommended that hospital officials take action to improve the quality of staff's work-life and consequently their personal life.

Keywords: Quality of life, Quality of work-life, Nurses

Introduction

Quality of life is one of the most important and fundamental aspects of every person's life (1). As a result, this concept is closely related to satisfaction, purposefulness in life, and personal growth (2). Evidence suggests that people's quality of life is affected by many personal, social, and environmental factors, and one of the most important factors is their job (3, 4). Furthermore, medical professions and medical services, especially nursing, are among the occupations that have potential risk factors, such as excessive workload, which pose a serious threat to people's well-being, comfort and their quality of life (5). Nurses as members of the largest group of health service providers must simultaneously play their role in health care, hygiene and community education, health system management, patient care, and improving their quality of life. Additionally, there are problems such as lack of nursing staff, high workload, and long working hours that make service delivery more difficult for nurses. Doing tasks according to job descriptions and in the best possible way by nurses, along with workplace challenges, illustrate to some extent the effect of the type and volume of work of this group on their quality of life (6). Studies conducted in Iran have reported a moderate quality of life among nurses (7, 8). However, it should be noted that low quality of life can lead to frustration, lower levels of job motivation, and reduced social, economic, cultural, and health activities, and also has a deeper impact on a country's social and economic development (9). Therefore, measuring nurses' quality of life and wellbeing and identifying factors negatively affecting their wellbeing will help to make effective plans to reduce their problems (6).

Currently, the quality of work-life has become one of the most important organizational issues. Therefore, it has been considered by many managers who seek to improve the quality of life of their organization's human resources (10). In the current situation, the quality of work-life is of particular importance due to its significant impact on increasing organizational efficiency and, is one of the foundations of organizational development (11). Besides, quality of work-life is considered one of human resources' priorities required by health systems (12). Thus, organizations that pay attention to their employees' quality of work-life will benefit from a capable and high-quality workforce characterized by the willingness to cooperate with managers to improve the performance of the workforce (13). Several studies have shown the positive effect of the concept of quality of work-life on improving working conditions, organizational effectiveness, reducing absenteeism in the organization (14), increasing job satisfaction, creating a balance between personal life and working life (15), creating useful and constructive competitions among staff, and trust in senior managers (16). In organizations providing health services, quality of work-life is one of the factors affecting the performance of employees, especially nurses, which in turn affects the quality of services (17). However, some studies indicate that employee's quality of work-life in large organizations such as hospitals is not favorable (18). For instance, Dargahi et al. showed that 47.5% of nurses are dissatisfied with their quality of work-life and thus there is a need for rapid and serious interventions (19). Neuropsychiatric hospitals are among the centers providing health services. They are sensitive places that receive a large number of mental patients around the world and due to the special conditions of these patients, the staff in these centers have a difficult job and some events may threaten their lives and somehow affect their quality of life (20). Therefore, nurses are one of the most important elements of the treatment sectors and they have to perform important tasks, and these tasks will not be performed effectively, if nurses do not have peace and well-being. Accordingly, the present study aimed to assess the quality of life and quality of work-life and the relation between these two important factors in nurses working in neuropsychiatric hospitals affiliated to Shiraz University of Medical Sciences.

Methods

This descriptive-analytical cross-sectional study was conducted in two neuropsychiatric hospitals in Shiraz, Ostad Moharari Hospital and Ibn-e-Sina Hospital, in 2019. The research population included nurses working in the mentioned hospitals with a total of 179 persons. The sample size was estimated to be 123 persons based on the Morgan table.

The participants in the research were selected using cluster sampling based on the number of nurses working in each hospital using the nurses' personnel codes and table of random numbers. The inclusion criteria were the willingness to participate in the study and working in different clinical wards of the

studied hospitals. The exclusion criterion was working in non-clinical wards such as administrative and financial divisions of the hospitals.

The data were collected through three instruments: A demographic information form was used to assess the participants' demographic characteristics including age, sex, marital status, education, and service records. Moreover, the World Health Organization Quality-of-Life Scale (WHOQOL-BREF) was administered to the participants to measure their quality of life. This scale contains 24 items and 4 subscales including Physical Health (7 items), Mental Health (6 items), Social Relationships (3 items), and Environment (8 items). The validity and reliability of the scale (in Persian) were confirmed by Nejat et al. (21).

The third instrument used in this study was Walton's Quality of Work-Life Questionnaire. The reliability of the questionnaire was confirmed in Persian with a Cronbach's alpha coefficient of 0.91 in a study by Mehdizadeh Ashrafi et al. (22). The questionnaire contains 34 items categorized into 8 subscales, including adequate and fair compensation (4 items), safe and healthy working conditions (6 items), the opportunity to use and develop human capacities (5 items), the opportunity to growth and security (4 items), social integration in the work organization (4 items), constitution in the work organization (4 items), work and total life span (3 items), and social relevance of work-life (4 items).

The items in both questionnaires are scored on a 5-point Likert scale (very dissatisfied=1, dissatisfied= 2, neither satisfied nor dissatisfied= 3, satisfied=4, very satisfied=5). However, the items with negative statements are scored reversed. The respondents' quality of life was categorized as excellent (score 97-120), good (score 73-96), average (49-72), and poor (24-48). Furthermore, the quality of work-life is measured as excellent (137-170), good (103-136), moderate (69-102), and poor (34-68).

Participation in the study and completing the questionnaires were voluntary for the participants. First, the objectives of the study were explained to the participants and they were ensured that their data would be kept confidential. Besides, verbal consent was obtained from the participants. Afterward, the questionnaires were distributed among them and they were asked to fill them out anonymously. Then the questionnaires were completed self-administered and after completing and returning the questionnaires, the collected data were entered into SPSS software (version 23) and analyzed using t-test, Pearson correlation coefficient, and multivariate linear regression at the significance level of 0.05 ($\alpha = 0.05$). This study was conducted based on a research project approved by Shiraz University of Medical Sciences with ethics code 20448-34-01-98.

Results

The participants' mean age was 33.94±8.44 years and a majority of them (41.47%) were at the age range of 30-40 years. The nurses' average work experience was 11.82±6.84, with most of whom (24.39%) were working for 15-20 years. Most of the respondents were female (52.85%), married (73.99%), and with a bachelor's degree (78.04%). Table 1 shows the participants' demographic characteristics.

Table 1. The participants' demographic characteristics (n = 123)

Variable		Number	Percentage
Gender	Female	65	52.85
	Male	58	47.15
Marital status	Single	32	26.01
	Married	91	73.99
Age	20-30	30	24.39
	31-40	51	41.47
	41-50	34	27.64
	51-60	7	5.69
	> 60	1	0.81
Education	Diploma	4	3.25
	Associate's degree	4	3.25
	Bachelor's degree	96	78.04
	Master's degree and higher	19	15.46
Service records (year)	< 5	21	17.07
	5-10	29	23.58
	11-15	30	24.39
	16-20	23	18.70
	21-25	14	11.38
	26-30	6	4.88

The participants' total quality of life score was 89.22±16.55 (out of 120), indicating that the quality of life in the studied hospitals was favorable. Besides, the participants' mean score of total quality of work-life was equal to 100.71±24.05 (out of 170), suggesting that the nurses were experiencing a moderate quality of work-life (Table 2).

Table 2. The descriptive statistics for the participants' quality of life and quality of work-life

Variable	Subscales	Score range	Mean ± SD
Quality of life	Physical health	5-1	3.65±0.66
	Psychological health		3.38±0.80
	Social relationships		3.41±0.86
	Living environment		3.21±0.93
	Total	120-24	16.55±89.22
Quality of work-life	Work and total life span	5-1	2.91±0.95
	The opportunity to use and develop human capacities		3.02±0.81
	The social relevance of work-life		3.26±0.80
	Constitution in the work organization		2.85±1.02
	Adequate and fair compensation		2.76±0.77
	Social integration in the work organization		3.09±0.76
	Opportunity to growth and security		2.91±0.90
	Safe and healthy working conditions		2.91±0.88
	Total	34-170	100.71±24.05

The results showed a positive and significant correlation between the quality of life and its subscales with quality of work-life as was reported by the nurses (P<0.001). A comparison of the subscales of quality of work-life showed that the opportunity to growth and security had the highest correlation (r=0.636) with the quality of life. Besides, of the subscales of quality of life, work and total life span showed the highest correlation (r=0.670) with quality of work-life (Table 3).

Table 3. The correlations between the participants' quality of life and quality of work-life

Subscales		Subscales of quality of life				The overall quality of life
		Physical health	Psychological health	Social relationships	Living environment	
Subscales of quality of work-life	Work and total life span	r= 0.511 p<0.001	r= 0.371 p<0.001	r= 0.404 p<0.001	r= 0.549 p<0.001	r= 0.584 p<0.001
	Opportunity to use and develop human capacities	r= 0.477 p<0.001	r= 0.377 p<0.001	r= 0.410 p<0.001	r= 0.572 p<0.001	r= 0.587 p<0.001
	Social relevance of work life	r= 0.454 p<0.001	r= 0.421 p<0.001	r= 0.447 p<0.001	r= 0.556 p<0.001	r= 0.596 p<0.001
	Constitution in the work organization	r= 0.394 p=0.001	r= 0.304 p=0.001	r= 0.356 p<0.001	r= 0.479 p<0.001	r= 0.487 p=0.001
	Adequate and fair compensation	r= 0.521 p<0.001	r= 0.357 p<0.001	r= 0.392 p<0.001	r= 0.516 p<0.001	r= 0.562 p<0.001
	Social integration in the work organization	r= 0.502 p=0.002	r= 0.482 p=0.001	r= 0.474 p<0.001	r= 0.545 p<0.001	r= 0.627 p<0.001
	Opportunity to growth and security	r= 0.545 p<0.001	r= 0.420 p<0.001	r= 0.476 p<0.001	r= 0.600 p<0.001	r= 0.636 p<0.001
	Safe and healthy working conditions	r= 0.508 p<0.001	r= 0.352 p<0.001	r= 0.514 p=0.002	r= 0.551 p<0.001	r= 0.586 p<0.001
	Overall quality of work-life	r= 0.597 p<0.001	r= 0.467 p<0.001	r= 0.524 p<0.001	r= 0.670 p<0.001	r= 0.712 p<0.001

The results of multivariate linear regression analysis to determine the effect of different components of the participants' quality of life and demographic variables on the quality of work-life showed that the significant variables in the model determined using Enter method were the importance of physical health, living environment, and social relationships, respectively. The values of β of the influential variables indicate their strength of effect on the quality of work-life as shown in Table 4. The participants' demographic variables were not significant and therefore are not presented in Table 4. It was also shown that the adjusted coefficient of determination (R^2) is equal to 0.51, indicating that 51% of the variances in the quality of work-life score can be explained by the variables in the model (Table 4).

Table 4. Variables affecting the nurses' quality of work-life based on linear regression analysis

Variable	Non-standardized coefficients		Standardized coefficient B	t	Sig. (P-value)
	B	Standard error			
Constant	0.448	0.271	-	1.646	0.001
Physical health	0.333	0.065	0.438	5.084	<0.001
Living environment	0.265	0.073	0.247	2.731	0.007
Social relationships	0.099	0.093	0.121	1.365	0.02

The results of the univariate analysis showed a significant relation between the quality of life and marital status, and the married nurses had a higher quality of life compared to single nurses (P = 0.03) (Table 5).

Table 5. The relation of the demographic variables with quality of life and quality of work-life

Demographic variables	Main variables	Test and significance level	
		Pearson correlation coefficient (r_p)	P-value
Age	Quality of life	0.138	0.14
	Quality of work-life	0.098	0.30
Service records (year)	Quality of life	0.122	0.19
	Quality of work-life	0.107	0.25
		Mean (SD)	P-value Independent samples t-test
Gender	Women's quality of life Men's quality of life	91.62(36.14) 86.82(17.08)	0.57
	Women's quality of work-life Men's quality of work-life	101.88(19.72) 99.54(17.08)	0.16
Marital status	Quality of life (single) Quality of life (married)	82.36(14.36) 96.08(17.08)	0.03
	Quality of work-life (single) Quality of work-life (married)	98.31(14.36) 103.11(17.08)	0.08

Discussion

The present study showed that the nurses' quality of life was desirable but their quality of work-life was at a moderate level. Besides, a significant correlation was observed between these two variables. A comparison of the subscales of quality of life showed that the highest score was reported by the nurses for physical health and the lowest score was given to their living environment and mental health. The living environment is one of the factors affecting the quality of life and thus should receive special attention. In fact, to have a high-quality life, one must consider improving all aspects of it. Accordingly, Sammarco suggested that quality of life is derived from an individual's satisfaction with various aspects of life and includes health, work, economic, social, psychological, and family conditions (23). Azizi et al. showed that the highest and lowest mean scores on the aspects of quality of life were related to physical health and environmental health, respectively (24), which confirmed the results of the present study. Moreover, Chang et al. showed that nurses experienced a normal level of physical health, but their mental health was lower than normal in the Australian society (25).

The present study also showed a significant relation between the nurses' quality of life and variables of marital status and education. Javadi et al. found that the quality of life scores had no significant relation with gender, marital status, and education (26). However, Saberipour et al. showed a significant relation between type of ward, employment, and shift work with nurses' quality of life (27). The reason for the conflicting results in different studies can be due to differences in different work environments and cultures in the cities of Iran. Studies have shown that economic status, religion, age of marriage, and education are the factors affecting nurses' and paramedics' quality of life and marital satisfaction. Each of these factors can negatively affect nurses' life and ultimately reduce the quality of life (28).

According to the results of this study, the average score of total quality of work life was estimated to be average. Moreover, the social relevance of work-life and social integration in the work organization gained the highest scores, while adequate and fair compensation and constitution in the work organization gained the

lowest scores. Mohammadi et al. showed that about 57% of nurses received low payments and experienced a moderate quality of work-life (29). The results of another study in Kerman showed that the nurses' quality of work-life was moderate to low and only 3.6% of them were satisfied with the quality of their jobs (9), and another study by Saber et al. reported that nurses' quality of life in Kerman was at a moderate level (30). The quality of work-life and job satisfaction of Bangladeshi nurses was also reported to be low (31).

The findings of this study implied medical staff, especially nurses, do not have a very good quality of work-life, especially in terms of their basic needs. Accordingly, hospital managers and officials should pay special attention to different aspects of quality of work-life and provide optimal workplace conditions so that employees feel satisfied with their work and consequently experience a high-quality work life. Lillydahi and Singell found a positive and significant relation between paying fair and adequate remunerations as one of the dimensions of quality of work-life and job satisfaction (32). Krueger et al. surveyed employees in Canada and concluded that support from colleagues and supervisors, teamwork and communication, engagement in the decision-making process, and good payments and benefits have a significant effect on improving employees' quality of work-life. (33). Other studies have shown that factors such as salary reduction, lack of transparency in job prospects, and increasing job stress have contributed to nurses' dissatisfaction with their quality of work-life (34).

The present study found a positive and significant correlation between all aspects of nurses' quality of life and their quality of work-life. Previous studies have indicated that the quality of work-life can affect various aspects of personal, work, and social life. It is believed that work life and personal life have reciprocal and compounding effects on each other and a person who has multiple problems in these two areas may experience problems with professional focus, job satisfaction, workplace vitality, and organizational productivity (35). Hesam et al. showed that quality of work-life is one of the main predictors of the tendency to leave the nursing profession so that various components of the quality of work-life can significantly reduce the tendency to leave the nursing profession (36).

This study was conducted with some limitations. For example, since this study was done as a cross-sectional study, it was not able to determine the causal relation between research variables. Besides, the data in this study were collected only through questionnaires; therefore, it is suggested that subsequent studies collect longitudinal data through different data collection techniques. In addition, the nurses' busy schedule and their heavy workload, and time restrictions for completing the questionnaires were other limitations of the present study.

Conclusion

The present study showed a positive and significant correlation between the nurses' quality of life and quality of work-life. Thus, strengthening one factor can be accompanied by improving another. As a result, hospital officials should create a suitable work environment to strengthen the sense of belonging and social cohesion in employees and improve the quality of work-life of nurses as the largest group of health care providers. This goal can be fulfilled by creating a fair and equitable payment system, paying attention to rules and regulations, and developing a work environment focused on teamwork, respect, and participatory decisions.

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Conflict of interest

The authors declared no conflict of interest.

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