



**International Journal of Biology, Pharmacy
and Allied Sciences (IJBPAS)**

'A Bridge Between Laboratory and Reader'

www.ijbpas.com

**INVESTIGATING THE RELATION BETWEEN QUALITY OF WORK LIFE AND
WORK ABILITY AMONG NURSES: A CASE STUDY IN EDUCATION AND
TREATMENT CENTERS OF TEHRAN UNIVERSITY OF MEDICAL SCIENCES, 2011-
2012**

**ZOHRE AZIMBEIK¹, EZZATJAFAR JALAL^{*2}, FARIDEH BASTANI³, AGHA
FATEMEH HOSEINY⁴**

¹MA in Public Health Nursing, Infection Control Super wiser, Sina Hospital, Tehran, Iran

^{2*} Academic member of Elders Group and management, Faculty of nursery and midwifery, Iran
University of Medical Sciences, Tehran, Iran

Email: ejalal2005@yahoo.com

³Academic member of Iran University of Medical Sciences, associate professor of Elders
Group and management, Tehran, Iran

⁴Academic member of Iran University of Medical Sciences, Faculty of Medical Management
and informatics, Statistics group

ABSTRACT

Quality of work life is a multi-dimensional concept in which individuals, their works and organization are studied. It seems that promoting the quality of work life among nurses is the main factor to achieve the higher care levels. As evident, promoting the quality of nursing work life leads to promote caring of patients in hospitals. The purpose of the present study is to investigate the relation between quality of work life and work ability among nurses working at education and treatment centers of Tehran University of medical sciences during 2011-2012. The research findings indicate that the nurses with higher quality of work life have higher work ability. Therefore, it is critical to educate nursing managers to promote the level of the life work quality among nurses and their work ability to enhance the level of caring patients in hospitals.

Keywords: Quality of work life, work ability, working nurses

INTRODUCTION

According to the studies conducted in Iran, the most of nurses are not satisfied with the components of their work life quality. Dargahi and their colleagues indicated that 74% of the nurses are not satisfied with the quality of their work life. They also referred increasing salary level improves the quality of work life among personnel while increasing age leads to decrease the quality of work life among them, based on a case study conducted in Australia. As noted by Khaghanizade et al. in their study, the quality of work life among 81% of the nurses is average. Salamzade et al. also asserted that the quality of work life among the nurses in Yazd is lower than average level. Rafat et al. also indicated the same results based on their study.

Seraji and Dargahi (2006) based on their study investigating personnel's view to their work life quality among 908 staffs working in 15 hospitals of Tehran University of medical sciences indicated that the quality of work life among the personnel is poor so that 89% of them claimed the managers do not support the, 78% expressed their distrust toward the managers and 62/5% believed they are not interested in their works.

The quality of work life is an important variable considered by many managers

intended to promote the quality of their human resources. The quality of work life is a complex issue consisting of work environment variables and indicates individuals' evaluation from their works. In fact, the quality of work life includes the effect of work place in work satisfaction, the satisfaction of non work related areas, the satisfaction of general life, personal happiness, and the mental welfare. Edgar and Budine consider the quality of work life as a set of actual conditions of work in organization. They also believe that the quality of work life indicates the staffs' attitude toward their work specifically.

METHODOLOGY

The present research is a cross-sectional study in which 150 nurses with nursing license degree and higher working at hospital internal and adults' general surgery wards located in the selected educational treatment centers of Tehran University medical sciences have been investigated. The sample has been selected through simple random sampling including Sina, Shafa, Amir Alam, HashemiNejad, Frouzgar, Imam Khomeini, Arash, Shariati, Baharlou, and Farabi selected using the table of random numbers. The data has been gathered using a three-part questionnaire. The first section of the

questionnaire includes personal information (age, gender, marital status, work experience, type of shift, type of hospital, type of ward, and type of employment, post, educations, accepting overtime, hours of overtime in a month). The second part includes work ability instrument of Ilmarine consisting of the following 7 items:

1. Person`s evaluation of his/her work ability compared to the highest work performance
2. Person`s work ability in relation with physical and mental desires of work environment depending on the type of work (mental or physical)
3. The number of patients diagnosed by the physician.
4. Person`s evaluation of work inability due to patients
5. Absence in work place due to a patient in the last year
6. Personal prediction regarding work ability after 2 years
7. Mental resources supporting person in daily life, activity and life spirit, spiritualities and hope for future

The third part involves Anderson and Brooks` questionnaire of the quality of work life with 42 items (7 items of work-family life, 10 items of work design, 20 items of work content, 5 items of work world)

evaluated based on 6-choice Likert scale (from do agree to do disagree). To assess the questionnaire reliability, test retest and observation method has been used so that the questionnaires were distributed among 20 nurses and after two weeks they completed the same questionnaires again. The calculated values of r for the quality of work life questionnaire and work ability questionnaire were 0/91 and 0/85, respectively.

Then, the questionnaires were completed by assuring the hospitals` heads to keep all the responses confidential. The gathered data was analyzed using descriptive and referential (Spearman correlation coefficient) statistics through SPSS software and $p < 0/05$ was considered as significant.

The statistical sample consists of 150 nurses including 19 male (12/7%) and 131 female (87/3%). Most of the subjects were between 22-23 years (62/7%), 53/3% was married, 94/7% had nursing license (table 1), and 62/7% had the work experience of 1-10 years.

RESULTS AND DISCUSSION

As the research results show, the quality of work life among 42/7% of the nurses is average ($m = 136/53$) and the work ability among 44/7% of the nurses is at the good level ($m = 38/53$).Based on the results of

Spearman correlation coefficient test, it can also be concluded that there is a linear positive and significant between the quality of work life and work ability among nurses working in selected centers of education and treatment of Tehran University of medical sciences ($p = 0/01$ and $r = 0/264$). In other words, high quality of work life among nurses will increase their work ability. There is also a positive and significant relation between education level and work ability enhancement. In other words, the nurses with higher education show higher work ability ($p = 0/003$). Moreover, there is a linear significant relation between the number of patients diagnosed by physician and

decreased work ability among the nurses ($p < 0/001$) indicating that the more the number of the patients diagnosed by physician is, the more work ability will be decreased in the nurses. The findings also indicates that there is a linear positive and significant relation between the quality of work life and the satisfaction to do overtime ($p = 0/024$) and overtime hours ($p = 0/004$) which can be due to economic problems. The other finding is that there is a negative and significant relation between satisfaction to do overtime and work ability ($p = 0/038$) ($r = - 0/127$). That is, the more the personnel want to do overtime (due to economic status and like that), the less their work ability will be.

Table 1- frequency distribution of demographic features of the nurses working in the selected education and treatment centers of Tehran University of medical sciences in 2011-2012

Demographic features		Number	percentage
Age	22-32	94	62/7
	33-43	40	26/7
	44-54	16	10/7
	Total	150	100
Gender	Male	190	12/7
	Female	131	87/3
	Total	150	100
Education	Bachelor	142	94/7
	Master	8	5/3
	PhD	-	-
	Total	150	100

Table 2- frequency distribution of demographic features of the nurses working in the selected education and treatment centers of Tehran University of medical sciences in 2011-2012 based on the scores obtained from work ability questionnaire

Work ability	Frequency	Percentage
Weak 2-27	6	4
Average 28-36	45	30
Good 37-43	67	44/7
Excellent 44-49	31	20/7
No response	1	0/7
Total	50	100

Mean	38/53	
Standard deviation	± 5/97	

Table 3- frequency distribution of demographic features of the nurses working in the selected education and treatment centers of Tehran University of medical sciences in 2011-2012 based on the scores obtained from the quality of work life questionnaire

Quality of work life scores	Frequency	Percentage
42-87	11	7/3
88-128	36	24
129-169	64	42/7
170-210	34	22/7
211-250	3	2
No response	2	1/3
Total	150	100
Mean	38/53	
Standard deviation	± 5/97	

Table 4- mean of total score of the quality of life and work ability among nurses working in the selected education and treatment centers of Tehran University of medical sciences in 2011-2012

Index	Mean	Standard deviation
Quality of work life	136/53	± 3/262
Working ability	38/53	± 5/97
Range of the quality of work life scores	At least 42	At least 252
Range of work ability	At least 7	At least 49

As the research results showed, the mean of the quality of work life among the nurses participating in the study was 136/53, i.e. it was at the average level. In the research done by Rastegari et al. in the hospitals of Isfahan, the quality of work life among 57/6% of the nurses was at the average level. DehghanNiri et al. also measured the quality of work life among the nurses as average. Mohamadi et al. based on their study evaluated the quality of work life among 57/3% of the nurses as low in terms of fair payment and average in terms of other aspects. Khaghani et al. reported the quality of work life among 81% of the nurses as average as well. Based on the study conducted by Salamzade et al. in Yazd, the mean of the quality of work life among the nurses was reported as average. Falahi et

al., (2006) also indicated that the quality of work life among the nurses was higher than average and no nurse was placed in low quality group of work life. The findings of the present study are consistent with the results obtained by falahi et al, maybe due to various facilities available in Tehran relative to other cities.

Almaleki et al. based on their study conducted in Saudi Arabia indicated that more than 80% of the nurses were unsatisfied with the lack of work hour's adjustment with their life. Also, 70% of them were unsatisfied with not having enough energy after their shift hour end; 58% of the nurses complained about not having the possibility to balance the work life with their family; 65% of them complained about lack of support from their

managers; 75/5% of them believed that community has the an incorrect image of their job; and 61% complained about insufficient salary. In findings of the present study are consistent with the findings of Almaleki except the result obtained regarding the lack of accordance between work and family highly which can be due to the presence of the nurses immigrated from other countries to Arabia.

In the present study, the research results indicated that 79/3% of the nurses are not satisfied with their salary; 18/7% is not satisfied with the balance between work and family; 57/7% are not satisfied with the lack of growth and promotion; and 57/3% are not satisfied with the lack of job security. There was no question about the place of work and life in the study, indicating that the subjects were satisfied with the possibility to establish the balance between work and family.

Additionally, the mean score obtained regarding work ability of the subjects equals with 38/53 which is evaluated at the good level. Milosevic et al. based on their research conducted in Croatia, concluded that satisfying work ability (≥ 37) is considered as the main factor predicting high quality of life among the nurses in all life contexts and the nurses obtained greater score have a higher quality of life. In the recent study, the nurses

obtained the greater score have higher work ability as well and it is consistent with the findings of the research conducted by Milosevic.

CONCLUSION

According to the results, mean of work life quality scores of nurses participated in this research was of 136/53. In other words, the mean of work life quality of the nurses was in the average level. In a study conducted by Rastegari et al in Esfahan hospitals, the work life quality of nurses was of %57/6 and in average level (8). In a study conducted by Dehghannayeri et al., the work life quality of nurses was in average level and just One-tenth of nurses reported a desirable work life quality (1).

In a study conducted by Mohamadi et al., conducted in Emergency section of a hospital, the work life quality of %57/3 of nurses were in low level of just payment, and in average level of other factors (9). In a study conducted by Khaghanizadeh et al., in selected hospitals of armed forces the work life quality of 81% of nurses reported in average level (5).

In a study conducted by Salamzadeh et al., in ShahidSadughi hospital of Yazd, the mean of work life quality of nurses reported below average level (10). Results of the research conducted by Falahi et al., in 2006 showed

that the work life quality of nurses was above the average level and none of them was belong to the low quality of work life (11). Results of the present study aren't consistent with that of above study which may be due to different facilities of Thran.

A study conducted by Khodayarian et al., in the two hospitals of Yazd city in the C.C.U, showed that the work life quality of nurses was in average level and after execution of the program of enhancement of clinical competency the work life quality improved (12). Khani et al., in a study conducted in Esfahan hospitals paid to the work life quality of nurses. The results showed that 82% of nurses in this study believed that they are in work pressure, 95% was unsatisfied with their wages, 63% was unsatisfied with their job, 54% believed hadn't enough time for doing works, 79% was unsatisfied with lack of independence, 80% with lack of energy after work, 76% with unbalance between work and family, 69% with their work program, 35% felt support from the side of the manager, 29% felt they are participated in decision making, 62% believed there wasn't a true picture of the job in the society and 62% stated the job had no future (13). In the present study, the obtained figures included 90/6%, 79/3%, %38, 66/65, 45%, 62/1%, 18/75, 18/4%, 49/4%, %84,

67/4%, 57/7% which the findings of the present study isn't consistent with that of conducted by Khani and Jafarpour, because the nurses in the present study were more satisfied with balancing between work and family and participation in decision making which can be due to application of proper management in the under study sections by head-nurses. Findings of the present study are consistent with that of study conducted by Khani and Jafarpour in other cases.

A study conducted by Almaleki et al., in Saudi Arabia showed that more than 80% of nurses were dissatisfied with match between the work hours and their life, 70% with lack of energy after work, 58% were dissatisfied with lack of balance between their work life and family life, 65% with lack of enough support from managers, 75/5% of nurses believed that society doesn't have a true picture of the job, 61% were dissatisfied with the wage (14). The present study showed a significant difference between lack of match between work and family which can be due to immigrant nurses in Saudi Arabia. The findings are consistent with that of study of Almaleki in other cases.

A study conducted by Gorziwakz in America showed that half of nurses experience interference of work in their family life at least in one to three days a month, and 11%

felt that of family life in their work, and 81% experienced very low percent of interference of family life with their work (15). Findings of the present study showed that 79/3% of the nurses are dissatisfied with their wage, 18/7% with imbalance of work and family, 57/7% with lack of possibility of advancement, 57/35 with lack of job security. There is no question about residency and work which the present study show that nurses in the present study were more satisfied with possibility of balance between work and family life.

In this study the mean of score obtained for work ability of nurses participated in this research is 38/53 which according to the table of approximation of work ability it is in an acceptable level. In a study conducted by Milosevic et al., in Croatia, results showed that satisfying work ability (higher and equal to 37) is the most predictor factor of high life quality of nurses in all of life areas and nurses with higher scores had higher life quality (16). In the recent research also nurses with higher score of life quality had also more work ability which is consistent with the study of Milošević.

In the present study there wasn't any direct relation between age and work ability of the nurses but the study conducted by Rotenberg et al. in Brazil, noting from Koojala, stated

about the work ability matched with age of nurses that among 19-34 years old nurses, score below 40 indicate lack of enough work ability, and for nurses above 35 years old, score below 37 indicates lack of enough work ability (17). Average of age of Subjects of this study was 32 years old and their work ability mean was 38/53 which according to the classification of work ability by Koojala et al. this score indicates lack of enough work ability.

In the present study there is a significant linear correlation between the numbers of diagnosed illness by physician and decreased of work ability of the subjects ($p < 0/001$), which means that the more diagnosed illness, the less the work ability among the subjects. Results of the study by Estreen-Behar et al., showed that lack of rest and exercise among the nurses led to decline of their work ability. They cited from Higneet that physical work along with work pressure led to some problems such as backache in nurses which declined their work ability (18).

This research showed a positive and significant relationship between educational level and increase of work ability meaning that nurses with higher education had more work ability ($p = 0/003$). The study conducted by Gloubic et al. in Croatia about the relation between educational level and work ability of

nurses showed that nurses without university education experienced less stress compared to educated nurses which led to their decreased work ability (19) which results of the study is consistent with that of Gloubic et al.

In the present study there is a negative and significant relation between desire for overtime and work ability ($r = -0/172$) ($p = 0/038$). It means that the more the personnel desire for overtime (because of some reasons such as economic condition and livelihood problems) the less their work ability was. A study conducted by Rotenberg et al. about relation between working hours and work ability showed that there is a specific correlation between high work hours and lack of enough work ability (for men ($r = 0/181$) ($p = 0/029$) and women ($r = 0/245$) ($p < 0/001$)). These findings are consistent with that of Rotenberg et al., (22). In the present study there is a positive and significance linear relationship between work life quality and desire for overtime ($p = 0/024$) and overtime hours ($p = 0/004$) which can be due to livelihood problems of nurses. According to the reports of nursing association of Canada, increase of working hours (voluntarily or involuntarily) may result to decrease of ability of taking care of patients which then results to depression in

nurses or even a disturbing relation between nurse and patient (20).

Based on the results of Spearman correlation coefficient test, it can also be concluded that there is a linear positive and significant between the quality of work life and work ability among nurses working in selected centers of education and treatment of Tehran University of medical sciences ($p = 0/01$ and $r = 0/264$). In other words, high quality of work life among nurses will increase their work ability. The present finding is consistent with that of found by Rastegari et al. in 2010 in a study under the title of working life quality of nurses and its relation with job tasks in Esfahan. In the study conducted by Rastegari et al., there was a positive and significant relation between these two variables ($r = 0/512$), ($p < 0/05$). It means that the more the working life quality of nurses, the more their level of job performance (8). Heidarrafat and Enayatinowin far et al. in their study conducted in 2010 under the title of The relationship between working life quality and job satisfaction on nurses of Medical Sciences of Tehran University, found a positive and significant relationship between working life quality and job satisfaction ($p = 0/01$). It means that the more the life quality of nurses, the more their job

satisfaction (5). Findings of the present study are consistent with that of above mentioned one.

A cross-sectional study on the relationship between working life quality and work force efficiency in the hospital of ShahidSadughi of Yazd in 2007, conducted by Salamzade et al., showed that there is a positive and significance relationship between working life quality and nurses efficiency ($p=0/02$). It means that the more the working life quality the more the efficiency of nurses (4). Dehghannayeri et al. (1) in their study in 2008 found a similar result in regard of relationship between working life quality and efficiency of nurses ($p<0/001$).

Finally according to the findings of the study it seems that with improvement of working life quality, the level of working ability of nurses also increase which in turn leads to a more desirable level of taking care of patients. Nursing management should be aware of how of working life condition of nurses in hospitals to be able to improve the ability of nurses through enhancement of their working life quality in different areas such as providing enough support of nurses in the work environment, or improvement of suitable physical condition like providing rest room for nurses (one of dissatisfaction factors of nurses in this study) or creating

strategies for offer a better image of the job, and increase of wages.

REFERENCE

- 1- DehghanNayeri N, Salehi T, Ali AsadiNoghabi A. Clinical nurses Quality of Work Life and Productivity and relationships between them. Contemporary Nurse. 2011;39(1)(persian)
- 2- Brooks BA, Anderson MA. Defining quality of nursing work life. Nursing economic\$. 2005;23(6):319.
- 3- Dargahi H, Gharib M, Goodarzi M. Quality of work life in nursing employees of Tehran University of Medical Sciences hospitals. Hayat. 2007;13(2).(Persian)
- 4- Khaghanizadeh M., Ebadi A., Ciratinair M., Rahmani M. The study of relationship between job stress and quality of work life of nurses in military hospitals. Journal of Military Medicine.[Research]. 2008;10(3):175-84.(persian)
- 5-Heidarrfat A, EnayateeNovinfar A, Hedayatee A, Relation between quality of work life and job satisfaction of nurses in Tehran Medical Science. Denna Scientific Journal.2010;5(20):3-4.(Persian)

- 6- Saraji GN, Dargahi H. Study of quality of work life (QWL). Iranian journal of public health. 2006;35(4).(persian)
- 7- Ilmarinen J, Tuomi K. Work ability of aging workers. Scandinavian journal of work, environment & health. 1992:8-10.
- 8- Rastegari M, Khani A, Ghalriz P, Eslamian J. Evaluation of quality of working life and its association with job performance of the nurses. Iranian Journal of Nursing and Midwifery Research. 2010;15(4):224.(persian)
- 9-Mohammadi A , Sarhanggi F ,Ebadi A ,Daneshmandi M, Raiisifar A , Amiri F , Hajamini Z ,Relationship between psychological problems and quality of work life of Intensive Care Units Nurses.Iranian Journal of Critical Care Nursing.2011;4(3):135-140.(persian)
- 10- Salam Zadeh Y, Mansoori H, Farid D. Study of the relation between quality of work life and productivity of human resources in health care institutes-a case study among nurses in shahidsadughi hospital in yazd. Journal of Urmia Nursing and Midwifery Faculty. 2008;6(2):60-70.(persian)
- 11-Fallahee Khoshknab M, Karimloo M, Rahgoy A , Fattah Moghaddam L. Quality of life and factors related to it among psychiatric nurses in the university teaching hospitals in Tehran. Hakim Research Journal.2007;9(4):24-30.(Persian)
- 12- Khodayarian M, Vanaki Z, Navipour H, Vaezi A. Assessment of the effects of a clinical competency-based advancement program on the nurses' QWL working in ICUs. Daneshvar; 2008;15(75):15-26.(persian)
- 13- Khani A, Jaafarpour M, Dyrekvandmogadam A. Quality of nursing work life. Journal of Clinical and Diagnostic Research. 2008;2(6):1169-74
- 14- Almalki MJ, FitzGerald G, Clark M. Quality of work life among primary health care nurses in the Jazan region, Saudi Arabia: a crosssectional study. Human Resources for Health. 2012;10(1):30.
- 15- Grzywacz JG, Frone MR, Brewer CS, Kovner CT. Quantifying work-family conflict among registered nurses. Research in nursing & health. 2006;29(5):414-26
- 16- Milosevic M, Golubic R, Knezevic B, Golubic K, Bubas M, Mustajbegovic J. Work ability as a major determinant of clinical nurses' quality of life. Journal of clinical nursing. 2011;20(19-20):2931-8.
- 17- Rotenberg L, Griep RH, Fischer FM, de Jesus Mendes Fonseca M, Landsbergis

P. Working at night and work ability among nursing personnel: when precarious employment makes the difference. *International archives of occupational and environmental health*. 2009;82(7):877-85.

18-Estryn-Behar M, Kreutz G, Le Nezet O, Mouchot L, Camerino D, Salles R, et al., editors. Promotion of work ability among French health care workers—value of the work ability index. *International Congress Series*; 2005: Elsevier

19- Golubic R, Milosevic M, Knezevic B, Mustajbegovic J. Work-related stress, education and work ability among hospital nurses. *Journal of advanced nursing*. 2009;65(10):2056-66

20-Canadian Federation of Nurses Unions (nd)A position statement on mandatory overtime Retrieved from <http://www.nursesunions.ca>