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Evaluation of the quality of nursing work life and its association with job burnout in Isfahan University of Medical Sciences

Original article

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ABSTRACT

Background and aims: Nurses are particularly susceptible to burnout. Nursing staffs are in face to a relatively stressful work environment, high mental and physical pressure, irregular scheduling or shifting, limited job promotion, and socio-emotional pressures in connection with the patients and partners. This study aimed to assess the quality of work life (QWL) and its association with "job burnout" of the nurses in an Iranian province.

Methods: This is a descriptive-correlation survey which included 120 nurses of Isfahan University of Medical Sciences in Iran in 2008. Data were collected using a questionnaire and subjects were selected by stratified random sampling from the hospitals related to Isfahan University of Medial Sciences.

Results: According to the findings, dimension of quality of nursing working life was moderate. Nurses reported moderate levels of burnout in their workplaces. There was a significant relationship between job burnout subscale and quality of working life in all aspects.

Conclusions: This study evaluated the QWL in some Iranian nurses using a valid instrument. Higher levels of quality of working life were associated with lower levels of burnout. These findings suggest that if quality of working life is effective. Then, nurses are likely to report lower levels of burnout.

Keywords: Nurses, Quality of work life, Burnout.

INTRODUCTION

One important future challenge of health care system is providing high quality services to meet the changing needs of society and the health care workers.[1] In recent years, "Quality of Working Life" (QWL) has had an important and key role to increase working labor productivity in many large companies and organizations.[2] In fact, productivity methods and QWL have been considered to be important and popular. So, they may be called as ideological movement.[3] In addition, interest to work and organizational psychology related to the QWL, has been increased.[4] QWL is indeed a fundamental element of a multi-dimensional process in relation to workplaces and

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organizations. It seems that the relationship between QWL and the degree of the nurses' participation in their job is a key variable to achieve the high levels of quality of care.[5, 6] Moreover, previous studies indicated that the most important reason for long-term job leaving is depression, caused by exhaustion and job burnout.[7] On the other hand, due to the high levels of stress, nurses are susceptible to burnout. It has also been reported in European countries that the effect of burnout on nurses might be about 25%.[8]

Nursing staff are challenging with relatively stressful work environment including high mental and physical pressure, irregular scheduling or shifting, limited job promotion, and socio-emotional pressures related to the patients and partners everyday.[9] They are often dissatisfied from their job and going to to have an optimal working environment.[10] Nurses indeed believed that they have not been given enough reward to their difficult work experiences; for example, their morale is low, there is not diversity in their professional skills and they do not have enough time for implementing their tasks.[11]

Based on one research, among 130 studied jobs in the society, nursing has obtained 27th rank for referring to the physicians for mental health problems.[12] According to American Association of Employment (AAE), the displacement rate of the nurses was 32 percent while the rate of leaving their job was 40 percent; in fact, about 1 in every 10 nurses quitted his/her job per year.[13] Brooks and Anderson (2004) in a study on QWL of 1500 ICU nurses in the U.S. found that the job satisfaction, displacement, workload, personnel issues, multiple skills, communication, option, rewards, empowerment and human force shortages were the remained problems.[14] Johnson (1999) in a study conducted on 500 American companies found that the companies with higher QWL, have gained better profitability and high growth compared to other companies.[15] They indicated that there was a positive association between QWL and job performance.[15] Reason for maintaining nurses in their jobs in a survey of nurses in North Carolina was having good colleagues, resilient scheduling, satisfactory payment, good interests, and positive relationships with physicians.[16] In fact, an emphasis on the tangible and objective factors in the work environment may strengthen the theory that increasing these factors can raise the human resource productivity.[17] Furthermore, considering QWL and productivity usually means an emphasis on the methods of transforming the organization. So, increasing job satisfaction and productivity of the staff, could increase their involvement in work and their performance, and may decrease mental pressure, job burnout and absenteeism. It seems that these golas can simultaneously be achieved.[18]

Nursing forces who were employed in the health and treatment centers with their own potential capabilities can be considered as well which could also play an important and crucial role in achieving health development and community health. Taking into account of the importance of providing health and treatment services by hospitals and essential nursing role. The aim of this study was to evaluate the quality of working life and its association with job burnout among nurses of the educational hospitals affiliated to Isfahan University of Medical Sciences, Isfahan, Iran in 2008.

METHODS

This is a descriptive-correlation survey that performed in Isfahan University of Medical Sciences (Iran) in 2008. The study was approved by the university Ethics

Committee. The participants included employed nurses of hospitals affiliated to Isfahan University of Medical Sciences. Data were collected from nine teaching hospitals of Isfahan. The whole population was 1188 persons. Sample size was 120 nurses. Sampling method was two-phase stratified random sampling. The hospitals were classified according to the type of hospital (in terms of quality of life aspects). Then, using simple random sampling, the required samples were selected from the list of nursing staff in each hospital. The inclusion criteria included having BSc or MSc degree in nursing, at least having one year work experience, and being employed in one of the hospitals affiliated to Isfahan University of Medical Sciences.

Data were collected using a questionnaire consisted of three parts. The first part included demographic data of participants. The second part included 48 questions related to measuring the quality of working life of the nurses which were developed according to the questionnaires of Hsu and Kernohan (2006)[5] and Brooks and Anderson (2005).[6] This questionnaire assessed 12 dimensions of QWL of the nurses as the following: adequate and fair payment (3 questions), safety and healthy working environment (4 questions), continuous progression and safety in nursing profession (5 questions), law abiding in the organization (5 questions), satisfaction from the organization policy (2 questions), work balance and total living space (4 questions), suitable workload (4 questions), development of human capabilities (5 questions), social cohesion in the labor organization (5 questions), appropriate communications (4 questions), participation (3 questions) and social importance of the nursing carrier (3 questions). The questions were scored based on Likert scale, ranged from "very low" (score 1) to "very high" (score 5). The total score of 48 to 112 indicated low QWL, 112.1 to 176 indicated average QWL and 176.1 to 240 indicated high QWL.

The third part of the questionnaire included Maslach Burnout Inventory (MBI) questionnaire.[19] Maslach Burnout Inventory is a 22-item measurement tool of three subscales: emotional exhaustion [(EE), 9 items] depersonalization [(DP), 5 items] and personal accomplishment [(PA), 8 items]. The Maslach Burnout scale previously has been used with the Iranian researchers.[20, 21] The questions were scored based on Likert scale, ranged from "never" (score 0) to "every day" (score 6). For the EE and DP subscales, high mean scores reflect high levels of burnout, while for the PA subscale, low scores reflect high levels of burnout. The acceptable reliability for all subscales (EE = 0.90, DP = 0.79, and PA = 0.72) have been reported.[22]

While validity of the questionnaire was determined by content validity, the reliability of both questionnaires were assessed using Cronbach's alpha test. The reliability of nurses QWL questionnaire was 0.93 and job burnout questionnaire was 0.83 which were approved. The alpha reliability coefficients were 0.87, 0.72 and 0.70 for the EE, DP and PA subscales, respectively. The data were analyzed using software SPSS 16. The mean were calculated and frequency distribution was determined. For assessment of association between nurses QWL variables and job burnout, Spearman test was used ($P \leq 0.05$).

RESULTS

The nurse's levels of EE, DP and PA were moderate (M= 22.64, SD= 11.54; M= 7.60, SD= 4.35; M= 33.24, SD= 5.30; respectively) (Table 1). The most common categories in the study subjects were related to the age group ≤ 30 (45%), females (74.2%), married ones (66.7%), those with

BS degree (98.3%), work experience between 1 to 5 years (36.6%) and rotating work shift (80.8%). The frequency of responses to the questions in the questionnaires in Quality of Working Life, have been depicted in (Table1).

Table 1: Mean value and SD for instrument scale and subscale

Scale & subscale (QWL & Burnout)		n	Mean±SD
QWL	1. Adequate and fair payment	120	5.4 ±2.1
	2. Safety and healthy working environment	120	8.4±2.8
	3. Continuous progression and safety in nursing profession	120	11.5±3.1
	4. Law abiding in the organization	120	11±3.5
	5. Satisfaction from the organization policy	120	4.2±1.5
	6. Work balance and total living space	120	8.4±2.9
	7. Suitable work volume	120	9.2±2.6
	8. Development of human capabilities	120	13±3.4
	9. Social cohesion in the labor organization	120	12.5±3.3
	10. Appropriate communications	120	15.5±3.1
	11. Participation	120	7.5±2.3
	12. Social importance of the nursing carrier	120	9.3±1.8
	Total QWL	120	115.9±23.2
Burnout	Emotional exhaustion subscale (EE)	120	22.64±11.54
	Depersonalization subscale (DP)	120	7.60±4.35
	Personal accomplishment subscale (PA)	120	33.24±5.30

QWL: Quality of Working Life; Score range & Cut-points: 1, 11, 12 : (3-15), low (3-7), middle (7.1- 11), high (11.1-15); 2, 6, 7 : (4-20), low (4-9.3), middle (9.4- 14.7), high (14.8-20); 3, 4, 8,9,10 :(5-25), low (5-11.6), middle (11.7-18.4), high (18.5-25); 5 (2-10) ; low (2-4.6), middle (4.7- 7.4), high (7.5-10); Total QWL (48-240), low (48-112), middle (112.1- 176), high (176.1-240); Score range: EE (0-54), DP (0-30), PA (0-48); Cut-points: EE: low (0-16),middle (17-26), high (27≤); DP : low (0-6), middle(7-12), high (13≤); PA: low (0-31), middle (32-38), high (39≤).

The most frequent characteristics of QWL of the nurses were as follows: adequate and fair payment 73.3%, safety and health working environment 62.5%, continuous progression and safety in nursing profession 55%, law abiding in the organization 56.6%, satisfaction form organized policy 54.2%, work balance and total living space 62.5%, and suitable work volume 53.3% which were all related to the low performance rate; and development of human capabilities with 62.5%, social cohesion in the labor organization 54.2%, appropriate communications 74.2%, participation 60% and social importance of the nursing carrier 81.7% which were related to the average performance rate; and the total QWL 56.7% which was related to the average performance rate (Table 2).

Table 2: Distribution of subscale QWL

QWL subscale	Low QWL	Average QWL	High QWL
	n (%)	n (%)	n (%)
Adequate and fair payment	88 (73.3%)	31(25.8%)	1(0.8%)
Safety and healthy working environment	75(62.5%)	45(37.5%)	0.00
Continuous progression and safety in nursing profession	66(55%)	53(44.2%)	1(0.8%)
Law abiding in the organization	68(56.6%)	51(42.5%)	1(0.8%)
Satisfaction from the organization policy	65(54.2%)	53(44.2%)	2(1.6%)
Work balance and total living space	75(62.5%)	44(36.7%)	1(0.8%)
Suitable work volume	64(53.3%)	55(45.8%)	1(0.8%)
Development of human capabilities	40(33.3%)	75(62.5%)	5(4.2%)
Social cohesion in the labor organization	52(43.3%)	65(54.2%)	3(2.5%)
Appropriate communications	14(11.6%)	89(74.2%)	17(14.2%)
Participation	43(35.9%)	72(60%)	5(4.1%)
Social importance of the nursing carrier	7(5.8%)	98(81.7%)	15(12.5%)
Total QWL	50(41.6%)	68(56.7%)	2(1.6%)

QWL: Quality of Working Life.

There were significant negative correlations between the total QWL score and the emotional exhaustion (EE) subscale (r=-0.57, P<0.001), depersonalization subscale (r=-0.49, P<0.001) and positive correlation between the personal accomplishment subscale and total QWL (r=0.55, P<0.001) (Table 3). Emotional exhaustion had a strong negative relationship with the adequate and fair payment subscale (r=-0.56, P<0.001), safety and healthy working environment, (r=-0.54, P<0.001), work balance and total living space and suitable work volume (r=-0.48, P<0.001). Depersonalization (DP) had a strong negative relationship with the adequate and fair payment subscale (r=-0.53, P<0.001), work balance and total living space(r=-0.46, P<0.001), safety and healthy working environment, and suitable work volume (r=-0.43, P<0.001). Personal accomplishment (PA) had a strong positive relationship with the adequate and fair payment subscale (r=0.55, P<0.001), development of human capabilities (r=0.52, P<0.001) participation (r=0.48, P<0.001), continuous progression and safety in nursing profession and social importance of the nursing carrier (r=0.46, P<0.001).

Table 3: Correlation between overall QWL and Burnout Subscale

QWL variable	EE	DP	PA
Adequate and fair payment	-0.56	-0.53	0.55
Safety and healthy working environment	-0.54	-0.43	0.35
Continuous progression and safety in nursing profession	-0.42	-0.42	0.46
Law abiding in the organization	-0.35	-0.42	0.34
Satisfaction from the organization policy	-0.33	-0.35	0.36
Work balance and total living space	-0.48	-0.46	0.31
Suitable work volume	-0.48	-0.43	0.41
Development of human capabilities	-0.43	-0.38	0.52
Social cohesion in the labor organization	-0.41	-0.33	0.41
Appropriate communications	-0.42	-0.40	0.43
Participation	-0.37	-0.34	0.48
Social importance of the nursing carrier	-0.41	-0.43	0.46
Total QWL	-0.57	-0.49	0.55

QWL: Quality of Working Life; PA: Personal accomplishment; DP: Depersonalization; EE: emotional exhaustion.

Correlations between the QWL subscales and the MBI subscales are presented in Table 3. There was a significant negative correlation between age and depersonalization ($r=-0.28$, $P<0.05$), and a significant association between depersonalization and gender ($P<0.05$). Those nurses who were younger and were males had higher burnout for depersonalization.

DISCUSSION

This study conducted using the QWL and job burnout concepts of the nurses. All dimension of quality of nursing working life was moderate. Nurses reported moderate levels of burnout in their workplaces. There was a significant relationship between job burnout subscale and quality of working life in all aspects.

The findings of present study are correspondent with previous research.[23-27] Considering fair and adequate payment, more than two thirds of the nurses believed that their salary was low and had strong negative relationship with EE, DP and positive Correlation with PA. This was in accordance with the study of Lee and colleagues (2004)[28] and Hegney (2006).[11] While in the study of Brook and Anderson (2004), 57% of the U.S. nurses agreed that they have appropriate wages,[14] Yin and Yang (2002) found that payment and side benefits were the strong variables related to nursing turnover in hospitals.[29] Another study indicated that the nurse's salaries differ and pay is a stimulus for their retention in the nursing profession.[5] Abu Alrub in Jordan showed that underpayment is one of the common reasons for the nurse's dissatisfaction and job leaving the nursing profession.[30] The wages of nurses in the last decades have not been increased and are not appropriate with increased responsibilities.[14] Underpay was one of the main reasons of dissatisfaction, job burnout and quitting the job[30]. No organization can indeed keep working with low salaries in long-term. The nurses' salary should be increased along with shift work and job's difficulty payments.

More than half of the nurses believed that they are working with stressful working environment, weak safety and hygiene and strong negative relationship to EE and DP. The difficulties of the work condition could include compressed working hours, multiple working shifts, rotation shifts and nigh shifts. Excess working hours and comfort in the workplace are the health and environmental factors which may cause complications such as neurological and physical disorders, family stress and ultimately job burnout. Reducing working hours of the staff is a human goal which is observed and done in all the countries. Such a principle may cause more employment, reduce unemployment, and ultimately increase the quality of working life.

Moreover, more than two thirds of the nurses believed that the balance between work and the total life environment was low and had a strong negative relationship with EE, DP. In the study of Asghari and colleagues, 96% of the respondents believed that nursing had resulted in family problems.[31] Their results were in accordance with the present study. That's why the programs which could enable the nurses to make a balance between job and family needs, or can reduce nursing shifts and give them rewards as daily rests are so important.[32] In London hospitals, among nurses and midwives, Flexible working conditions and shift work were found as important factors of job dissatisfaction.[33]

Participants in the current study, believed that workload was heavy and had strong negative relationship with EE, DP. Hegney and colleagues (2006) showed that nursing workload was high and the most

nurses were not able to do their duty in the given time and workload was one of the most important factors for nurses leaving their profession and also job burnout.[11] Nurses believed that there were not enough nurses in their workplace. Research suggests that there is an association between low staffing with low level of care and prolonged hospitalization.[34] For each additional patient per nurse is associated with a 23% increase of nurse burnout and a 15% increase of job dissatisfaction.[35] Workload, understaffing and inappropriate staffing can cause job burnout and turnover.

In the present study, the nurses were moderately satisfied with cooperation with the partners, physicians and managers. In addition, nurses' group communications with other health staff can affect on their job satisfaction and can also have positive effects on patients, nurse and the physician. In the participation dimension, the nurses believed that they had average participation as well as a strong positive relationship with PA which was in accordance with the studies of Norouzei Nejad and colleagues[36] and Brooks and Anderson.[14] It is recommended that nursing managers use the behaviors to encourage the nurses to participate more, and if already done, make it more palpable for the nurses. In addition, the nurse's collaboration with other health care workers can influence their job satisfaction and job burnout. Collaboration of nurses with colleagues is important for their professional development and quality of care.[11] Moreover, cultures that focus on building trust encourage participatory decision making and open communication between managers and employees are associated with a higher level of job satisfaction.[37]

Respondents also indicated that their work settings did not provide career advancement opportunities, and skill mix was often inadequate and had a strong positive relationship with PA. Rout concluded that nurses have not opportunity for their job development, and reported lower job satisfaction.[38] The recognition and growth have been identified as important motivators in nursing job. Ways to strengthen the nurses' professional situation and personal upgrades should be used to improve the quality of nurses' life.[28] Skill mix is an important variable affecting the nursing practice. Hegney and colleagues (2006) concluded that employer numbers and skill mix are factors impacting on patient Security, duration of stay and patient care.[11]

In terms of social importance of the nursing carrier, the majority of the nurses believed that this was moderate. The study results of Chung and colleagues (2003) in the public hospitals of Taiwan confirmed that there was a significant association between job satisfaction and work motivational conditions such as job's social rank and status.[39] The weak social status of nursing in Iran such as parameters is affecting the nursing profession.[33] Poor public image of the nursing profession can be effective in recruitment and the nurse's attitudes towards job.[40] The cultural background of people should be enhanced about nursing profession through interviewing with the patients who had gained their health because of nurses' good and effective services in addition to medical services and asking media cooperation for increasing the knowledge of nursing role among people is also effective.

This study indicated that more than half of the nurses believed to have low law abiding in the organization. When in an organization, regardless of the organizational hierarchy, all the staff authentically feels that they are all equal at the same individual level and all of them are considered equally important, and also in the meetings, all the official and organizational

posts are ignored. So, they can discuss freely and with no limitation, their job satisfaction would significantly be increased. This study revealed the importance of improving the nursing work environment. Most of dissatisfaction among nurses in this study was due to payment. These findings indicate that the increase in salaries and benefits can enhance the quality of nurses' work life. Implementation and developing the program of human resources can improve the work life of nurses. Methods to reward and recognize the nurse's contribution to patient care are also needed.

CONCLUSION

Increasing quality of working life would not be achieved without qualitative and quantitative improvement. The causes of low productivity, performance and high job burnout in some of the organizations are lack of understanding of organizational managers and leaders from the current community and cultural context and existing organizational culture, not meeting the staff requirements systems, lack of collective participatory and organizational democracy, and leadership of an organization that is affected by narcissistic personality disorder and mania. Considering the QWL and nurses' problems and solving them can improve job burnout of this group and can cause the patients' satisfaction and providing services.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interests.

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