

Received 2016-10-03
Revised 2017-02-05
Accepted 2017-02-15

DOI: 10.22086/GMJ.V6I2.772

Job Satisfaction and Stress Levels of Nurses Working in Oncology Wards; A Multicenter Study

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Abstract

Background: Oncology nurses work in a stressful environment. Subsequently, stress cause job dissatisfaction and mental exhaustion. The aim of our study was to determine the most important factors that affect satisfaction and stress levels among the nurses in the oncology ward. **Materials and Methods:** This descriptive cross-sectional study has been performed on 156 working nurses of three Iranian Universities of Medical Sciences (Hormozgan, Zahedan, and Shiraz) during a period of 3 months from January to March in 2015. The values of satisfaction and stress levels were assessed by a modified translated version of McCloskey/Mueller Satisfaction Scale questionnaire. **Results:** The highest percentage of dissatisfaction (unsatisfied and very unsatisfied) was respectively in the field of income (87.8%), occupational safety in nursing profession (78.2%), work environment and facilities (75.6%) and the relation between nursing and personal life (72.4%). The main areas of stress (very high and high) respectively wherein the field of impact of stress on personal life (84%), communication with patients (83.3%), stressful environment (82.7%) and using safe equipment in the workplace (74.4%). **Conclusion:** Based on our results, the most common issues related to stress and dissatisfaction of nurses of oncology ward were determined as financial issues, occupational safety, stressful environment, and the impact of their work on the personal life. Managers and healthcare providers should be noticed in this regard and take into account these important issues by implementing appropriate interventions. Considering stress-reduction program, regular visits by psychologists and more vacation can also help to relieve their stress. [GMJ.2017;6(2):128-35] DOI: 10.22086/GMJ.V6I2.772

Keywords: Job Satisfaction; Nursing; Occupational; Oncology; Safety

GMJ

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Introduction

Stress is defined as an external signal that threatens the equilibrium of a person [1]. Intensity and frequency of stress experienced by nurses are influenced by different variables including their duties, responsibilities, type of working unit, anxiety level and sociodemographic factors [2]. Special wards of hospitals generate more work related stress for nurses; such as intensive and coronary care units [3, 4] and oncology wards. Subsequently, stress cause job dissatisfaction and mental exhaustion [5].

The nurses, having management and supervisory posts, are responsible for monitoring and control of nursing functions, identification, and assessment of their problems and services. Therefore, the nurse should have good communication skills, appropriate behavior and a great deal of patience. Nurses must also be able to withstand the pressures of work under all circumstances and should be compassionate and empathize with patients. Some experts rank this job in second place among difficult jobs [6]. Nurses deal with physical or mental patients and are also exposed to various diseases. Despite the workload, long working hours, high stress and low wages are also other problems in this job [7, 8].

Working with cancer patients brings special concerns because thinking about cancer still induces a feeling of special fear in almost everyone. Many of the staff's stresses are unique to cancer, including the intrinsic nature of the disease, the nature of the treatment and its side effects, the necessity for palliative care, the ambiguity of decision-making, dealing with the patient's response to the cancer diagnosis, the staff member's personal reactions to cancer, and the social isolation of staff members [7].

Registered nurses (RNs) constitute the largest proportion of the nursing population and play a significant role in providing direct patient care. The shortage of RNs is a problem faced by several countries. This situation is also termed as a nursing shortage in which the demand for RNs exceeds supply. They assess patient's conditions, administer treatments and medications, monitor symptoms and side

effects, document nursing care, and interventions, educate and provide support to patients and their families [8-10]. Also, their collaborative roles between other healthcare professionals and patients cannot be overlooked. Considering the importance of the role of RNs in the healthcare system, it is important to investigate the reasons behind the poor recruitment and retention rates of RNs [9].

Different measures have been utilized which include the evaluation of nurse to patient ratio, unfilled nursing positions, the number of overtime hours. Current evidence derived from these measures suggests that the nursing shortage is widespread across countries and medical specialties [9-11]. Oncology nursing is one area that has been affected by the shrinking nursing workforce [12-14]. Moreover, projections from the world cancer report show that cancer rates may increase up to 50% to 15 million new cases by the year 2020.

Also, nurses in oncology ward work in an environment that involves the management of complex pathologies with poor prognosis, medical advances and close encounters with patients who are in pain, distress, and approaching death [15-17]. According to data from existing studies, these factors have significantly contributed to the job dissatisfaction, stress, and burnout of oncology nurses. In this study, we aimed to evaluate job dissatisfaction and stress levels in oncology nurses.

Material and Methods

In this descriptive cross-sectional study, a total of 170 oncology nurses from oncology wards of three Iranian Universities of Medical Sciences (Hormozgan, Zahedan, and Shiraz) were enrolled during a period of 3 months from January to March in 2015. All participants had a duration of work between 5 and 10 years. Nurses who had a mental or psychiatric problem were excluded from the study.

This study was approved by the Ethics Committee of Shiraz University of Medical Sciences (code No. 715). Modified Persian version of McCloskey/Mueller Satisfaction Scale [18] that measures nurses' job satisfaction in 8 domains (include job security, salary, working

environment, relationship with colleagues, job status, supervisory, managerial policy, and personal life) was used to evaluate job satisfaction and stress levels. This questionnaire originally developed for use with hospital staff nurses. Also, demographic and occupational factors such as age, sex, educational level, employment status, professional status, marital status and numbers of years of experience were collected.

Satisfaction field contained 11 questions, and stress field contained 8 questions. Three related experts approved the validity of the questionnaire. Also, the internal consistency of satisfaction and stress questionnaires were evaluated (Cronbach's alpha was $r=0.864$, and $r=0.741$, respectively).

Both satisfaction and stress questions were answered using a 4 point-Likert scale format ranging from the grade of one to four. In satisfaction questionnaire, very satisfied has grade 4, satisfied has grade 3, somehow satisfied has grade 2, and dissatisfied has grade 1. In stress questionnaire, scores ranged from low to very high. Then total score for both satisfaction and stress fields was calculated by summation of all scores for each participant. It ranged from 8 to 32 for stress and from 11 to 44 for satisfaction part. After completing the questionnaire and peer review, all questionnaires were coded, registered and analyzed accordingly. Some of the questionnaires were extracted due to incomplete information. Finally, 156 questionnaires were studied.

Statistical analysis was performed using SPSS software (version 21, Chicago, Illinois, USA) and analyzed using descriptive statistics and cross tabulation. Descriptive data were expressed by frequency, mean and standard deviation (SD).

The association of the total score in each of the two areas of stress and job satisfaction with demographic and occupational factors was compared by Student t-test in case of two groups and ANOVA test among 3 or more subgroups. Then paired comparisons were performed using Bonferroni test. Pearson correlation test was used to determine the correlation between quantitative variables. A P-value less than 0.05 was considered statistically significant.

Results

One hundred forty-six (93.6%) nurses were female, and 10 (6.4%) were male. Regarding the age, 119 (76.3%) were less than 35 years, and 37 (23.7%) were 35 years and higher. From 156 nurses, 39.7% were single, and 60.3% were married.

The level of nurse's education lower than Bachelor of Science (BS) degree, BS and higher was 11.5% and 88.5%, respectively. The employment status of nurses was contract based nurses (34%); official staff (19.2%), compact staff (33.3%), and new student graduate (13.5%). Regarding the professional status, 137 (87.8%) nurses were staff and assistant, and 19 (12.2%) nurses were head nurses and supervisors.

The overall average satisfaction score was calculated as $24.3\% \pm 5.3$ (maximum 44 and minimum 11), and the average score of stress was $22.8\% \pm 4.2$ (maximum 31 and minimum 12).

The relationships between total scores of stress and job satisfaction of nurses with demographic and occupational variables were also assessed (Table-1). There was a significant relationship between job satisfaction and education level and professional status. As nurses with education level lower than BS degree were more satisfied than others ($P=0.008$). On the other hand, the supervisors and head nurses had more job satisfaction than staff and assistants ($P=0.033$). Considering employment status, compact personnel had significantly lower satisfaction compared to others ($P=0.034$). The nurse's stress had an inverse correlation with age; it means that younger nurses had a higher stress level ($P=0.002$).

The status of job satisfaction in nurses working in oncology wards shown in Table-2. The maximum satisfaction status (satisfied and very satisfied) can be seen in the relationship between the colleagues and communication in the medical group (73.1%) and communication with nursing managers (55.8%).

Across all domains, the highest percentage of dissatisfaction (unsatisfied and very unsatisfied) was respectively in the field of income (87.8%), occupational safety in nursing pro-

fession (78.2%), work environment and facilities (75.6%) and the relationship between nursing and personal life (72.4%). The stress level among nurses working in oncology wards was also shown in Table-3. The maximum stress level (very high and high) were in the field of impact of stress on personal life (84%), establishing an emotional connection with patients (83.3%), stressful environment (82.7%) and lack protective equipment for health in the workplace (74.4%).

Discussion

In this study, we evaluated job satisfaction and stress level among oncology nurses and determined the most areas of dissatisfaction and stress level in this population. Job satisfaction among workers, especially nurses, has become a critical issue for healthcare organi-

zations due to the impact on their quality of life and care of patients and associated costs. Veličković *et al.* [8] revealed that positive professional identification has a positive effect on nurses' job satisfaction. In Mirzabeygi *et al.* study, one-third of the nurses were satisfied overall with their job [9]. Nolan *et al.* showed that 85% of nursing staff know their job is interesting and they are satisfied with their jobs [10]. In Kaddourah *et al.* study, 79.3% of nurses were significantly satisfied in their current jobs [11]. Rice *et al.* also found that nearly half of nurses are satisfied with their job [12].

In our study, satisfaction level showed a significant relationship with nurse's education. Nurses with lower than BS degree were more satisfied than others. It might be related to less amount of expectation of this group in comparison with the higher educated nurses.

Table 1. Comparison of Stress Levels and Total Satisfaction Scores in Subgroups of Nurses in Oncology Ward Regarding the Demographic Data and Job Factors

Variable	Number	Stress level		Satisfaction score	
		mean \pm SD	P-value	mean \pm SD	P-value
Sex					
Female	146	22.7 \pm 4.2	0.3	24.2 \pm 5.4	0.22
Male	10	24.2 \pm 4.2		26.4 \pm 3.1	
Age					
\leq 35 years	119	23.3 \pm 4.1	0.002*	23.9 \pm 5.5	0.1
>35 years	37	20.8 \pm 3.9		25.6 \pm 4.4	
Marriage status					
Single	62	23 \pm 4.2	0.62	23.3 \pm 6.1	0.09
Married	94	22.6 \pm 4.2		24.9 \pm 4.7	
Education					
Lower than BS	18	21.9 \pm 3.2	0.38	27.8 \pm 5.3	0.008*
BS and higher	138	22.8 \pm 4.3		24.1 \pm 5	
Employment status					
Contractual personnel	53	22 \pm 3/8	0.2	25.1 \pm 6.1	0.034*
Official personnel	30	22.4 \pm 3.9		25.2 \pm 4.2	
Compact personnel	52	23.8 \pm 4.3		22.4 \pm 5.1	
Personnel are subject to the plan	21	22.7 \pm 4.8		25.5 \pm 4.1	
Professional code					
Staff	137	22.9 \pm 4.2	0.22	23.9 \pm 5.3	0.033*
Head nurses and supervisors	19	21.6 \pm 4.1		26.9 \pm 4.8	

* Statistically significant

BS: Bachelor of Science

Table 2. Job Satisfaction in Nurses Working in Oncology Wards

Domains	Satisfaction	Very unsatisfied N (%)	Unsatisfied N(%)	Satisfied N(%)	Very satisfied N (%)	Not answered N(%)
Work environment and facilities		23 (14.74)	95 (60.90)	34 (21.79)	4 (2.56)	0 (0)
Medical staff communication		9 (5.77)	33 (21.15)	104 (66.67)	10 (6.41)	0 (0)
Nursing managers communication		18 (11.54)	51 (32.69)	79 (50.64)	8 (5.13)	0 (0)
Management of nursing managers		21 (13.46)	65 (41.67)	59 (37.82)	5 (3.21)	6 (3.85)
Relation between nursing and personal life		35 (22.44)	78 (50)	33 (21.15)	8 (5.13)	2 (1.28)
Improvement in nursing profession		31 (19.87)	87 (55.77)	34 (21.79)	4 (2.56)	0 (0)
Occupational safety in nursing profession		41 (26.28)	81 (51.92)	28 (17.95)	5 (3.21)	1 (0.64)
Nursery duties		19 (12.18)	81 (51.92)	51 (32.69)	2 (1.28)	3 (1.92)
Income satisfaction		56 (35.90)	81 (51.92)	16 (10.26)	3 (1.92)	0 (0)
Social presentation of nursing		31 (19.87)	80 (51.28)	38 (24.36)	5 (3.21)	2 (1.28)
Satisfaction with working in oncology ward		36 (23.08)	44 (28.21)	58 (37.18)	18 (11.54)	0 (0)

Table 3. Different Aspects of Stress in Nurses Working in Oncology Wards

Domains	Stress level	Low N (%)	Intermediate N (%)	High N (%)	Very high N (%)	Not answered N (%)
Stressful environment		1 (0.64)	26 (16.67)	78 (50)	51 (32.69)	0 (0)
Impact of stress on personal life		5 (3.21)	20 (12.82)	70 (44.87)	61 (39.1)	0 (0)
Availability of safe equipment		37 (23.72)	79 (50.64)	30 (19.23)	8 (5.13)	2 (1.28)
Depression		13 (8.33)	32 (20.51)	33 (21.15)	77 (49.36)	1 (0.64)
Disappointment		(14.1) 22	34 (21.79)	56 (35.9)	44 (28.21)	0 (0)
Affectional communication with patients		5 (3.21)	21 (13.46)	75 (48.08)	55 (35.26)	0 (0)
Worry of violence due to work		36 (23.08)	33 (21.15)	56 (35.9)	30 (19.23)	1 (0.64)
Decreased affection due to work		74 (47.44)	48 (30.77)	23 (14.74)	11 (7.05)	0 (0)

These results are similar to Lu *et al.* study [13] that indicates factors such as level of nurse education, shift work and duties could affect job satisfaction so that the lower the education level related to the higher the satisfaction. On the other hand, the supervisors and head nurses in our study showed more job satisfac-

tion than staff and assistants. It was in contrast with the results of Toh *et al.* who came to the conclusion that nurses who had higher qualification and positions, who worked full-time and who worked in inpatient settings and non-magnet hospitals were more likely to attribute staffing inadequacy as one of the main

contributing factors for their job dissatisfaction, stress, and burnout [14]. The cause of this discrepancy can be due to the establishment of more facilities and advantages in the group of supervisor and head nurses. As a result, they will be more satisfied. From different types of the employment status, compact personnel had significantly low satisfaction compared to other types.

Ullrich *et al.* assessed occupational stress among 91 nurses and 57 physicians and strong associations emerged between specific, situational stressors and reported psychosomatic complaints.

They concluded that lowest and highest emotional burnout was reported in young nurses and outpatient nurses, respectively. Also, job satisfaction was negatively correlated with emotional exhaustion and a desire to leave the oncology section [15].

Park *et al.* showed that compassionate competence was higher in oncology nurses than in nurses investigated in previous studies and positively correlated with work experience. Also, they revealed job satisfaction and organizational commitment in nurses might be improved through compassionate competence enhancement programs that employ a variety of experiences [16]. Hughes *et al.* revealed that work setting rather than nurse certification plays an important role in the difference in job perception which was the most positive in economic support for continuing education, and a high percentage of registered nurses [17]. In our study, the most causative factor for dissatisfaction was financial issues. In our study, the highest satisfaction was indicated in the field of communication with the members of the medical group (73.1%) and nursing managers (55.8%), which was 40.82% and 30% respectively in Mirzabeigi *et al.* study [9].

It indicates that more than half of nurses have a feeling of satisfaction with their managers.

In our research the, level of nurses' satisfaction regarding the salary and job-related benefits of nursing was 51.9 percent compared to Mirzabeigi *et al.* report which was 67.8 percent [9]. Shang *et al.* also showed that contract-based nurses who were dissatisfied with their salary and benefits were more like-

ly to intend to leave their current positions [19]. Another study revealed that all job satisfaction subscales except salary and nursing benefit subscale were significant predictors of overall job satisfaction [20]. Regarding this, some works have been done by policy institutions. We hope that payment status improves by continuing this. Also, 50% of our nurses were dissatisfied with the relationship between nursing and their personal life, compared with 64% dissatisfaction in another study [9].

Regarding improvement in professional nursing, 58.7 % of nurses are not happy. Zarsheenas *et al.* revealed that in nursing, sense of belonging and attention to professional identity could improve professional socialization. Factors such as educational experiences, internal motivation, role model, relatedness, tacit knowledge, and theory-practice incongruence are important factors in this respect [21].

In this regard, the provision of facilities for the education of health workers and nurses is essential because of the knowledge and skills of nursing staff to improve service quality and patient satisfaction, patient and nurse satisfaction out of hand.

Continuous education is not the only need; promote employment also results in an increase in salaries, benefits and job satisfaction. Another study showed that the opportunity for professional development and further education increased nurses' intention to stay in the organization [22].

Dissatisfaction from occupational safety in nursing profession and nursery duties was revealed in 78.2% of nurses. This result is similar to Tovey *et al.* study which also showed that a lack of job security is a factor in nurse's dissatisfaction [23]. Chu *et al.* also demonstrated a lack of transparency in the tasks associated with job satisfaction [24].

Among the important activities carried out in this context, the development of general and specialized nursing tasks can explain the role of nursing in the medical group.

Regarding social attitudes toward nursing jobs, the level of dissatisfaction of our nurses (51.2%) was significantly lower than another study (70.3%) [9].

In the present study, in evaluating the relationship of demographic factors with stress

level, only age showed a significant negative correlation with stress. Probably age and work experience make it easier to handle a stressful situation [25, 26]. Nurses deal with different patients physically and are also psychologically vulnerable to various diseases. Despite the workload, long working hours, high stress and low wages of these jobs are additional problems [27-29].

The results of this study showed most dissatisfaction with the level of income, job security, advancement and promotion opportunities, working environment and facilities, and communication with the personal life of the nursing profession.

In our country, few amenities for nurses schemed so this fact can limit their use.

Because there is much tension in this job, it is necessary to provide facilities. More attention to individual cases and trying to solve problems and improve the situation, especially in the group exposed to stressful working conditions, must be a priority regarding hospital management issues.

Due to the effects on the lives of nurses and patients, working with cancer patients raises concern especially regarding the job satisfaction of nurses, and particularly in the field of oncology. More stress for staff includes the nature of the illness, the nature of the treatment and side effects of treatment, the need for palliative care, the ambiguity of its decisions, responding to cancer patients about cancer diagnosis, response to the healthcare, and social exclusion of employees [30].

Our study was limited due to the lack of a con-

trol group of nurses from other hospital wards with a lower workload and lower stress for comparison of scores between two groups.

Conclusion

As a result, satisfaction is very important since it can psychologically prepare nurses to deal with stress and job burnout and better working conditions, especially in the fields of oncology leads to increased satisfaction and reducing the discomfort of psycho-somatic problems as well. In this study, the most common issues related to dissatisfaction and stress levels of oncology nurses were determined as financial issues, occupational safety, stressful environment, and the impact of their work on the personal life.

Managers and policy makers of the health ministry and hospitals should be noticed in this regard and take into account these important issues by implementing appropriate interventions to improve the quality of both work and life in nurses. Considering regular visits by psychologists as well as more vacation can help to relieve their stress.

Acknowledgments

Our sincere thanks go to Sheryl Nikpoor for improving the use of English in the manuscript.

Conflict of Interest

The authors declare that have no conflict of interests.

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