



Investigation of the relationship between stress, burnout, job satisfaction of nurses working in oncology clinic

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General Note

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ABSTRACT

Objective: This descriptive and correlational study aims to identify stress, burnout and job satisfaction of nurses working in oncology clinics.

Methods: The sample of the study consist a total of 43 nurses working at oncology clinics at three University Hospital. The Sociodemographic Data Collection Form developed by the researcher based on the literature, Maslach Burnout Inventory (MBI), Job Stress Scale and Job Satisfaction Scale were used as data collection tools. Number percentage analysis, one-way analysis of variance and Spearman correlation analysis were used for statistical analysis of the data.

Results: It was found that Overall Job Satisfaction had a negative and strong correlation with "Job Role Uncertainty" sub-dimension ($r:-0.42$ $p\leq 0.05$), Maslach Burnout Inventory between General Job Satisfaction there was no significant relationship ($p<0,05$). A negative and significant correlation was found between Job Stress Scale overall score and Overall Job Satisfaction ($r: -0.411$, $p<0.05$).

Conclusion: According to the result obtained in our study, it can be said that job satisfaction of oncology nurses decreased as their job stress increased and their job satisfaction level and job satisfaction uncertainty decreased as their emotional exhaustion increased.

Key words: Cancer, Stress, Burnout, Hospital, Oncology Clinic, Turkey.

1. INTRODUCTION

Despite of great advances in technology in terms of diagnosis and treatment, cancer is still a source of stress for the health staff due to meanings and connotations with which it is associated and fear of death. Cancer, a chronic disease which symbolizes death and limited control over life, is also a source of unknown dangers, pain and suffering, guilt and shame, isolation and chaos. For these reasons, as well as being a medical physical disease, cancer leads to several psychosocial problems developing in patients as a result of compelling life events and these problems affect not only patients and their families, but also the health staff providing treatment and care⁽¹⁻³⁾.

Oncology units are one of those units where nurses experience a great deal of stress⁽⁴⁾. Factors in oncology clinics such as the nature of the cancer, mistakes in diagnosis and treatment, informing patients about the course of the disease, managing the treatment with serious side effects, problems related to addiction, anger and noncompliance to treatment of patients, seeing patients in pain and suffering, terminal care, stressful situations related to deceased patients, emotional difficulties experienced in relationships with patients, insufficient therapeutic communication, difficulties experienced in relationships with physically disfigured patients, ethical issues, conflicts within the staff cause stress. Diversity and effects of these stressors may lead to burnout in health staff⁽⁵⁻⁹⁾. Working with patients who have chronic and progressive diseases is one of the risk factors of burnout. Psychosocial problems which develop in cancer patients affect not only patients themselves and their families, but also the health staff providing treatment and care⁽¹⁰⁾. As one of the most important results of burnout, the quality of the service reduces⁽¹¹⁻¹²⁾.

Nurses, who spend more time with patients in oncology units, are known to experience stress and burnout more severely. Ulrich and Fitzgerald⁽¹³⁾ reports that nurses who work with cancer patients experience more stress compared to physicians. In a study performed with physicians and nurses working with oncology patients, Tel et al.⁽¹⁴⁾ found that nurses experienced more stress and had a lower level of job satisfaction⁽¹⁵⁾ Job satisfaction is an emotional response and behavioral manifestation that occurs with individual's evaluation of his/her job, working environment and working life. Satisfaction in working environment affects employee's physical and mental well-being positively. Job dissatisfaction, which is one of the factors leading to burnout, is seen more commonly

in certain professions. Health care providers working with oncology patients are in this risk group. Cancer patients are a difficult patient group since they have a heavy condition which may result in death and it is not always possible to provide an adequate level of care for this group, which may lead to job dissatisfaction when coupled with heavy workload⁽¹⁶⁾. Meeting requirements and expectations of health care providers is an important component of increasing the quality of care and service provided for cancer patients and researchers seem to focus on the care of the health staff. A higher quality service will be possible if necessary arrangements are made to minimize problems experienced by health care providers and meet their requirements^(17-19;33). In order to increase the quality of health services, it is very important to solve professional problems of nurses as an important part of the health staff providing these services and improve their working conditions, which will ensure increased job satisfaction and organizational commitment⁽²¹⁾.

The aim of this study is to investigate the relationship between stress, burnout and job satisfaction of oncology nurses.

2. METHODS

The study employs a descriptive and correlational design. The study was implemented in a university hospital in Turkey.

The sample of the study consist a total of 43 nurses working at oncology clinics of two education and research hospitals which name is Izmir Ataturk Education and Research Hospital, Tepecik Education and Research Hospital and Ege university hospital located in İzmir, in September 2014 and November 2014. All the nurses who participated in the research were nurses working under graduate degree and working with seizures. The average number of nurses working in the clinic was 2 years and more. Instead of sample selection from the population, 43 oncology nurses who agreed to participate in the study on a voluntary basis were included in the sample according to the power analysis with 95% confidence interval and 5% error margin.

The following data collection tools were used for the purposes of the study: "Sociodemographic Data Collection Form", "Maslach Burnout Inventory (MBI)", " Job Stress Scale", "Minnesota Job Satisfaction Scale". "Sociodemographic Data Collection Form" was developed by the researcher using the literature in order to obtain sociodemographic and professional information about oncology nurses included in the study. "Maslach Burnout Inventory (MBI)" was developed by Maslach⁽²²⁾ and its validity for Turkey was tested by Ergin. The inventory consists of 22 items and evaluates burnout in three sub-dimensions: Emotional Exhaustion (EX), Depersonalization (DPR) and Personal Accomplishment (PA). 9 items [1, 2, 3, 6, 8, 13, 14, 16, 20] are used for calculating the Emotional Exhaustion sub-dimension, 5 items [5, 10, 11, 15, 22] are used for calculating the Depersonalization sub-dimension and 8 items [4, 7, 9, 12, 17, 18, 19, 21] are used for calculating Personal Accomplishment sub-dimension. The 9-item Emotional Exhaustion sub-dimension measures feelings of being emotionally overextended and exhausted by one's work. The 5-item Depersonalization sub-dimension measures an unfeeling and impersonal response toward recipients of one's service⁽²²⁾. The 8-item Personal Accomplishment measures feelings of competence and successful achievement in one's work. The frequency of emotions experienced in relation to each sub-dimension of the inventory is evaluated as a likert-type scale ranging from '0' to '4'. The Cronbach's alpha coefficient of the original inventory is 0.90 for "Emotional exhaustion", 0.79 for "Depersonalization" and 0.71 for "Personal Accomplishment", whereas the Cronbach's alpha coefficient of this scale is for each scale is 0.86, 0.77, and 0.68 respectively.

"Job Stress Scale" was developed by Rizzo, House and Lirtzman in 1981 in order to determine job stress level of oncology nurses and adapted to Turkish by S. Güngör as a Master's Assertion in Psychology Department, Boğaziçi University. Job Stress Scale consists of 3 sub-dimensions: "Job Role Uncertainty", "Job Role Conflict" and "Responsibility of Job Role". The scale consists of 17 five point Likert-type items. The scale involves three sub-dimensions: "Job role uncertainty" (Cronbach's alpha=0.87), "Job Role Conflict" (Cronbach's alpha=0.81) and "Responsibility of job role" (15-17 arasındaki maddeler) (Cronbach alfa=0.61). A high score from all sub-dimensions indicate the presence of high job stress. The Cronbach's alpha coefficients in this study were 0.86, 0.77 and 0.59 respectively. "Job Satisfaction Scale" was developed by Davis et al. and adapted to Turkish by Baycan (1985). The scale consists of 20 items that identify internal and external satisfaction factors and each item is evaluated as a likert-type scale ranging from 1 to 5. It is possible to determine overall, internal and external satisfaction scores using the scale [23,24]. Cronbach's Alpha coefficient in this study was found to be 0.87.

Data collection

Data collection was conducted using a questionnaire for nurses, three university hospitals in Izmir in Turkey. When permission was obtained from the hospital and the university administration, one of the researchers visited the hospital to distribute the questionnaires. We asked that the questionnaires be completed by the participant. During the data collection period, the written consent and the answered questionnaires were treated separately so that the responses of the participants would not be exposed.

Data analysis

Data was performed with SPSS 20.0. Demographic data were presented percentage, mean and standard deviation. Mann-Whitney U test was used for non-parametric data involving two groups. Spearman analysis was used for correlations between non-parametric data. The verification of these analyses was performed by an expert statistician. Results were presented with 95% confidence interval.

Financial Resources & Ethical Guidelines

All the financial expenses of the research have been paid by the researchers. Before the data collection stage, permissions for conducting the research were obtained from the university administration and the hospital administration. The participants were informed before initiating the study, and their verbal consent was obtained. Additionally, written permissions were obtained from the authors for the measuring tools used in the study.

3. RESULTS

The distribution of personal characteristics, professional characteristics and working conditions of oncology nurses included in the study shows that 95.3% were female, 48.8% were between the ages of 34-41 (35.39 ± 5.77), 74.4% were married, 48.8% had a bachelor's degree, 32.7% had one child and 32.7% had two children. In addition 74.4% worked at an Education and Research Hospital; 55.8% had 13 years of professional experience or more (mean professional experience 14.13 ± 7.28); 51.2% worked at an oncology clinic for 2 years or less (mean professional experience 3.76 ± 3.25); 55.8% did not smoke; 37.2% did not consume alcohol; 60% found their monthly income insufficient; 44.2% considered changing their job, 46.5% were satisfied with their working environment; 88.4% found the number of nurses in the clinic insufficient.

Table 1 Examination of the Correlation between Job Stress Scale Sub-Dimensions and Overall Job Satisfaction in Oncology Nurses (N:43). Turkey, 2014

Job Stress Scale Sub-dimensions	Overall Job Satisfaction	
	r	p
Job role uncertainty	-.426	.002
Job role conflict	-.324	.017
Responsibility of job role	.270	.040

Overall Job Satisfaction had a negative and strong correlation with "Job role uncertainty" and "job role conflict" sub-dimensions ($r:-0.43$, $r:-0.32$ $p \leq 0.05$), "Job role uncertainty" and "job role conflict" decreased as overall job satisfaction increased. Overall Job Satisfaction had a positive and meaningful correlation with "Responsibility of job role" sub-dimension ($r:0.27$, $p > 0.05$) (Table 1).

Table 2 Examination of the Correlation between Maslach Burnout Inventory Sub-Dimensions and Overall Job Satisfaction in Oncology Nurses (N:43). Turkey, 2014

MBI sub-dimensions	Overall Job Satisfaction	
	r	p
Emotional exhaustion	-.501	.001
Depersonalization	-.251	.105
Personal accomplishment	.495	.01

Overall Job Satisfaction had a negative and strong correlation with "Emotional Exhaustion" sub-dimension ($r:-0.50$ $p \leq 0.05$), "Emotional Exhaustion" decreased as overall job satisfaction increased. No significant correlation was found between Overall Job Satisfaction and "Personal Achievement" and "Depersonalization" sub-dimensions ($p > 0.05$) (Table 2).

Table 3 Examination of the Correlation between Job Stress Level and Burnout Level in Oncology Nurses (N:43). Turkey, 2014

Job Stress Scale Sub-dimensions	Job role uncertainty		Job role conflict		Responsibility of job role	
	r	p	r	p	r	p
Emotional exhaustion	.395	.009*	.266	.084	-.268	.082
Depersonalization	.263	.089	.163	.296	-.239	.122
Personal accomplishment	-.408	.007*	-.067	.669	.12	.942

“Job Role Uncertainty” had a positive and strong correlation with “Emotional Exhaustion” sub-dimension ($r: -0.39$ $p \leq 0.05$), “Emotional Exhaustion” increased as “Job role uncertainty” increased. “Job role uncertainty” had a negative and significant correlation with “Personal Achievement” sub-dimension ($r: -0.40$ ≤ 0.05) and a positive and no significant correlation with “Responsibility of job role” sub-dimension ($p > 0.05$) (Table 3). Considering the correlations between burnout level determined with “Maslach Burnout Inventory” and Job Stress Scale sub-dimension scores and Job Satisfaction Scale sub-dimension scores of oncology nurses, it was found that “Job Role Uncertainty” had a positive and strong correlation with “Emotional Exhaustion” sub-dimension ($r: -0.39$ $p \leq 0.05$).

Table 4 Examination of the Correlations between Job Stress Level, Overall Burnout Level and Overall Job Satisfaction in Oncology Nurses (N:43). Turkey, 2014

Maslach burnout inventory (overall)	Job stress (overall)		Job satisfaction (overall)			
	r	p	r	p		
Maslach burnout inventory (overall)	1.00	-	.210	.175	-.216	.170
Job stress (overall)	.210	.175	1.00	-	-.411	.007
Job satisfaction (overall)	-.216	.170	-.411	.007	1.00	-

The correlations between job stress level, overall burnout level and overall job satisfaction of oncology nurses were examined with the Spearman test and no significant correlation was found between Maslach Burnout Inventory and Job Stress Scale overall scores ($p < 0.05$). A negative and significant correlation was found between Job Stress Scale overall score and Overall Job Satisfaction ($r: -0.411$, $p < 0.05$) (Table 4).

4. DISCUSSION

It was found that Job role uncertainty ($x=15.22 \pm 4.35$), Job role conflict ($x=22.88 \pm 5.03$) and Responsibility of job role ($x= 7.74 \pm 1.96$) mean scores obtained from Job Stress Scale were at moderate levels. Although scales other than the “Job Stress Scale” were used, findings similar to ours were obtained in other studies on job stress as well. In Tuna’s (2010) (26) study performed with oncology nurses, it was found that Job role uncertainty ($x=15.22 \pm 4.35$), Job role conflict ($x=24.88 \pm 5.58$) and Responsibility of job role ($x= 7.74 \pm 1.77$) mean scores obtained from Job Stress Scale were at moderate levels, which is similar to our findings. Onan⁽¹⁵⁾ conducted a study with oncology nurses using a different stress scale and found that stress symptoms total score was 65.00 ± 11.6 . The author noted that the minimum scale score was 38, while the maximum scale score was 152 and a high score indicated increased symptoms and the score obtained by the nurses in the study corresponded to a moderate level, which is similar to our findings. In a study conducted by Özet et al.⁽¹⁸⁾ stress scores were found to be at a moderate level for both the nurse group and the physician group. It was also mentioned in the study that the greatest reason of dissatisfaction in nurses was the high number of terminal patients and deaths and it was found in the job stress and burnout session of the training held within the scope of the study that patients with terminal diseases and their families were the most important source of stress in oncology, which is similar to our findings.

In Onan's ⁽¹⁵⁾ study performed with oncology nurses, the mean score from emotional exhaustion sub-dimension was 18.27 ± 7.2 , the mean score from depersonalization sub-dimension was 5.57 ± 4.2 and the mean score from personal achievement sub-dimension was 22.03 ± 4.6 , which indicate a moderate level of burnout similar to our study ⁽¹⁵⁾. This result may be interpreted as that nurses experience a moderate level of burnout. Nurses are not completely burned out due to their job or disheartened about their job. However, the fact that they cannot use their creativity and productivity in their profession show that their level of success is not on the desired level ⁽¹⁵⁾.

It is noted in the literature that providing care for cancer patients may enrich nurses' professional life and relationships established with cancer patients and their families may positively influence their professional and social relationships. On the other hand, working with patients and families who are suffering physically, emotionally and mentally may be emotionally exhausting. Identification of nurses with patients or nurses' feelings of sadness or inadequateness may indicate emotional exhaustion ^(27,31,32,33).

It was found that internal satisfaction of nurses was higher compared to their external satisfaction. It was determined that nurses had a high level of satisfaction related to 'requirements of the job' and 'the nature of the job' which refer to content and characteristics of the job, whereas they had a low level of satisfaction related to salary and organizational policies. The results of the study lead to the idea that organizations cannot meet certain expectations of nurses such as working conditions, salary and promotion opportunities. Also, considering that nursing is not a prestigious profession in Turkey, nurses cannot execute their independent functions on an adequate level and they still do not have the place that they deserve in the health care staff, it may be evaluated as an expected result that nurses do not have a high level of job satisfaction ⁽²⁴⁾. Oruç ⁽²⁸⁾ found that midwives and nurses had a neutral job satisfaction and their mean overall satisfaction score was $3.31 \pm .54$, mean internal satisfaction score was $3.59 \pm .56$ and mean external satisfaction score was $2.88 \pm .68$. A similar level of job satisfaction was found in our study as well. In a study conducted with oncology nurses, Eren's ⁽²⁹⁾ internal satisfaction assessment resulted in a score of 3.67, external satisfaction assessment resulted in a score of 3.16 and overall job satisfaction assessment resulted in a score of 3.47 ⁽²⁹⁾. Similar to our study, overall and internal job satisfaction was found to be at a moderate level.

A negative and significant correlation was found between Overall Job Satisfaction and Job Role Uncertainty ($r: -0.372$ $p \leq 0.05$), It was found that "Job Role Uncertainty" decreased as Overall Job Satisfaction increased (job stress increased as job satisfaction decreased and job stress decreased as job satisfaction increased). This finding validates our hypothesis that high job stress leads to a decrease in job satisfaction, but it does not validate the expectation of a low job satisfaction. Stress decreases as overall job satisfaction increases. This result is similar to those in the literature ⁽³⁰⁾. External and overall job satisfaction increase and job stress decreases as internal satisfaction increases. Internal and overall job satisfaction increase and job stress decreases as external satisfaction increases.

The findings show that overall job satisfaction decreased as emotional exhaustion increased and overall job satisfaction increased as personal achievement increased, which validates our hypothesis. Considering the correlation between job satisfaction and burnout, these concepts were found to be interrelated and one increased as the other increased and one decreased as the other decreased ⁽²⁾. Employees seem to lose their initial organizational commitment and job proficiency due to extreme stress and inability to cope with it and then experience job dissatisfaction and burnout ^(30,34). Similarly, nurses' overall job satisfaction decreased as their emotional exhaustion increased. Job satisfaction increased as personal achievement increased. However, no change was observed in depersonalization sub-dimension. It was seen in various studies as well that job satisfaction decreased as emotional exhaustion and depersonalization increased and job satisfaction increased as personal achievement increased ⁽²⁾.

Lopez-Castillo et al. ⁽²⁾ found a positive correlation between working conditions perceived as stressful and burnout. All of findings are consistent with the findings of our study.

5. CONCLUSION

In general, nurses constitute the largest employee group of every hospital and it is known that their job stress, job satisfaction and burnout levels and leading factors should be assessed periodically. In parallel, according to the results of this study, burnout levels increase and job satisfaction levels decrease as job stress levels of oncology nurses increase. In order to decrease burnout and stress levels, it might be helpful to make arrangements to pull weekly work time under 45 hours, take nurses' preferences related to their unit into account and support scientific activities in nursing.

LIMITATIONS OF THE STUDY

Nurses who had been working in the Oncology Clinic for more than one year were included in the study. For this reason, nurses who had started working in the oncology clinic within the last year were excluded from the study. Also, nurses who had worked in the

oncology clinic for many years but left the clinic after the study started were excluded from the study as well. This is a limitation for the study.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interests regarding the publication of this paper.

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