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ORIGINAL ARTICLE

Quality of life of physicians and nurses working in an oncology clinic

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Summary

Purpose: *The objective of this study was to determine possible differences in the perception of quality of life (QoL) between physicians and nurses working in an oncology clinic in Turkey.*

Methods: *Seventy-seven physicians and 67 nurses participated in this study. All participants provided information such as the working hours per day and the number of years working in an oncology clinic. The European Organization for Research and Treatment of Cancer (EORTC) QLQC30 questionnaire was used during face-to-face interviews by trained interviewers.*

Results: *The mean age of physicians and nurses were 32±0.8 and 29,9±0.9 years, respectively ($p>0.05$). Forty-four percent of physicians and all nurses were women. Fifty-three percent of physicians and 57% of nurses were single. Mean working hours per day and number of working years were similar between physicians and nurses. The physical, emotional, and cognitive function scales of physicians were better and statistically significant compared with nurses ($p<0.0001$, $p<0.0006$, and $p<0.0127$, respectively). Global health score was also better in physicians but without statistical significance.*

In physicians, a significant negative correlation with working hours and emotional, cognitive, role, and social function scales was found. A significant positive correlation with the number of working years and emotional function scale and also with age and role, emotional, cognitive, and social scales was found. Global health showed significant negative correlation with working hours, and positive correlation with age, number of working years, physical, role, emotional, cognitive, and social function scales.

Conclusion: *It is important to recognize that oncology workers, particularly nurses, have poor QoL. There are many factors adversely affecting the QoL of oncology workers in Turkey, therefore systems should be developed to provide better support and conditions for them.*

Key words: nurses, oncology, physicians, quality of life

Introduction

QoL is defined as an individual's perception of his/her position in life in the context of the cultural and value system in which he/she lives and in relation to his/ her goals, expectations standards and concerns [1]. Physicians and nurses working in an oncology clinic have described their work as both stressful and satisfying [2-5]. Health care professionals looking after cancer patients may be subjected to work-related stress, dissatisfaction, and exhaustion [6]. Numerous variables influence the performance of health care professionals working with cancer patients such as individual, organizational, and extra organizational stressful stimuli in Turkey [2].

Health care professionals caring for cancer patients are working under difficult conditions because of the patient overload and inadequate working environment in Turkey. A previous study reported that nurses rate their physical, social, and psychological QoL lower than industrial workers [7]. There are many articles in the literature related to burnout, work stress, and job satisfaction of health care professionals [2,7-11]. However, there is very limited information concerning the effects of providing care to patients with cancer on the QoL of physicians. Working life is an important part of a person's daily life. Lack of job satisfaction and burnout can adversely affect his/her perception of QoL. This becomes an important issue in our country where working

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conditions include very heavy patient assignments and lack of protective measures in the procedures of preparation and administration of cancer treatments.

In Turkey health care workers, including nurses and physicians, have many environmental factors which affect negatively their QoL, such as working conditions, duty, patient overload, unclear job definition, and responsibility.

The aim of this study was to determine the QoL of oncology nurses and physicians in Turkey. To this purpose the EORTC QLQ-C30 (version 3) questionnaire was utilized [1]. This questionnaire was developed to assess the QoL of cancer patients. It is a multidimensional questionnaire consisting of functional and symptom scales or items, global health status, and financial concerns.

Methods

The study was performed from January to March 2006. The sample of the study individuals included oncology professionals (physicians, nurses) from Dokuz Eylul University, Division of Medical Oncology. The QLQ-C30 (version 3) questionnaire was used to determine the QoL of the participants, as well as their marital status, working hours per day and working years in the oncology clinic [12]. The Turkish version of the QLQ-C30 contains the 30 original items. It has been previously tested for validity and reliability by Guzelant et al. [13]. Its 30 items are grouped into 5 functional domains (physical, role, cognitive, emotional, and social), 3 symptom domains (fatigue, pain, nausea, and vomiting), 5 single symptom items (dyspnea, insomnia, anorexia, diarrhea, and constipation), 1 item dealing with financial concerns, and 2 items of global health domain. It uses 28 4-point response scales (not at all - a little - quite a bit - very much) and 2 7-point response scales for the global health and QoL domains. For items related to symptoms, a higher score represents a higher level of symptoms. For scales related to function, a higher score represents a higher level of functioning. We used only 5 functional domains and global health status in this study.

Statistical analysis

All data were entered on an Excel (Microsoft, Redmond, Washington) spreadsheet and analysed using SPSS for Windows, version 10.0 (SPSS Inc., Chicago, IL, USA).

Differences in QoL scores between physicians and nurses were determined. T-test or One-Way Analysis of Variance (ANOVA) were used to compare categorical variables and QLQ-C30 subscales between groups. Pearson's correlation coefficients were estimated and tested for significance between continuous covariates of QoL scores, daily working hours, working years, and age. Findings were accepted as statistically significant with a p-value <0.05.

Results

The characteristics of physicians (n=77) and nurses (n=67) are shown in Table 1. The mean age of physicians and nurses was 32±0.8 and 29.9±0,9, respectively ($p>0.05$). Forty-four percent of physicians and all of the nurses were women. Fifty-three percent of physicians and 57% of the nurses were single. Mean working hours per day, and working years in physicians and nurses were 9.84±1.9, 5.32±5.5 and 10.4±1.9, 5.7±5.1, respectively (p=0.091 and p=0.651, respectively).

The physical, emotional, and cognitive function

Table 1. Demographic characteristics of the participants

Characteristics	*Physicians* *Number*	*%*	*Nurses* *Number*	*%*	*p-value*
Age (years)					0.234
20-36	56	72.7	55	82.1	
≥ 37	21	27.3	12	17.9	
Gender					0.001
Female	34	44.2	67	100	
Male	43	55.8	–		
Marital status					0.738
Married	36	46.8	29	43.3	
Never married	41	53.2	38	56.7	
Years in oncology unit (mean±SD)	5.32 ± 5.5		5.7 ± 5.1		0.651
Working hours (hours/day) (mean±SD)	9.84 ± 1.9		10.4 ± 1.9		0.091

SD: standard deviation

scales of physicians were better and statistically significant compared to nurses ($p<0.0001$, $p<0.0006$, and $p<0.0127$, respectively). The global health score of physicians was also better but not statistically significant.

We found a significant negative correlation with working hours and emotional, cognitive, role, and social function scales (r=0.359, r=0.464, r=0.449, r=0.319) in physicians (Table 2). On the contrary, a significant positive correlation with working years and emotional function scale (r=0.299) and also with age and role, emotional, cognitive, and social scales (r=0.365, r=0.410, r=0.366, r=0.368) was found. Global health showed a significant negative correlation with working hours (r=0.400), and a positive correlation with age, working years, physical, role, emotional, cognitive, and social function scales (r=0.501, r=0.362, r=0.479, r=0.670, r=0.569, r=0.632, r=0.643, respectively; Table 2).

No statistically significant correlation with working hours, working years, age and global health was found in nurses.

Discussion

In this study the mean scores obtained from physical, emotional, and cognitive domains were better and statistically significant in physicians compared to nurses. This constitutes a reason to assume that longer working hours and shorter experience in oncology could be associated with higher stress, poorer lifestyle, burnout, and lower QoL. Providing nursing care to patients with cancer has been described as both stressful and satisfying job. Current literature indicates that oncology nurses experience more stress than nurses working in other specialties, owing to the disturbing effect of cancer patients and their families [7,8,10].

In physicians, a negative correlation with daily working hours and emotional, cognitive, role, and social domains was found, as a result of global health. Increasing working hours led to worse QoL in physicians in our study. Ergun et al. reported that oncology nurses working longer than 40 hours per week, under unsafe conditions, being 40 years of age or older, having lower education and being divorced or widowed had significantly poorer QoL, particularly in the psychologic and social relations domains [8]. Alacacioglu et al. also reported that burnout was relatively higher among Turkish physicians and nurses working in oncology departments compared with previous studies in this domain [11].

The lower QoL in physicians may be associated with burnout or job stress. Many studies have documented the high incidence of burnout and/or clinically significant anxiety or depression in health care professionals [11,14-17].

We found a positive correlation with working years, emotional domain and global health status of QoL in physicians. Longer working years could be associated with a higher score of emotional domain and global health status of QoL. It is reasonable to hypothesize that –according to our study– the longer working years indicate that an increase in the experience of the health care workers concerning the care of cancer patients leads to better QoL.

Age was also a significant factor of job stress. Studies have shown that the younger health care professionals had greater difficulty in dealing with patients, experienced more workday stress and patient overload [11,16]. It was found that age was positively correlated with emotional, cognitive, role and social domains, and also global health in physicians. Older age is connected with better QoL than younger age in physicians. In our previous study [11] similar findings were observed where burnout was significantly higher in younger physicians. On the contrary, a Finnish study has shown that age does not protect against burnout [18]. Age, gender, marital status, having children and work experience in oncology are important factors affecting work life and job stress. Older-age oncology professionals might

Table 2. Correlation between QoL domains and demographic variables in physicians

	Age	*Working hours/day*	*Years in oncology unit*	*Physical function*	*Role function*	*Emotional function*	*Cognitive function*	*Social function*	*Global health*
Age	1								
Working hours/day	-,304*	1							
Years in oncology unit	,877*	-,191	1						
Physical function	,205	-,135	,168	1					
Role function	,365*	-,449*	,211	,604*	1				
Emotional function	,410*	-,359*	,299*	,540*	,617*	1			
Cognitive function	,366*	-,464*	,247*	,365*	,612*	,610*	1		
Social function	,368*	-,319*	,264*	,365*	,619*	,532*	,709*	1	
Global health	,501*	-,400*	,362*	,479*	,670*	,569*	,632*	,643*	1

*Significant correlation at the 0.01 level (2-tailed)

avoid cancer patients owing to reluctance, or younger-age professionals might spend more time with patients owing to job satisfaction. However, our results must be interpreted with caution because of the relatively small number of the participants.

The current study may not represent all the oncology nurses in Turkey. We attempted to describe the current status of QoL in a reference University hospital in the Aegean region of Turkey, and all participants were working in the same oncology clinic with homogeneous confounding factors such as job environment. In this study we used the cancer specific QOL-C30 questionnaire, therefore evaluated were only some domains. This is a limitation of our study. We did not evaluate the psychological status such as anxiety, depression, burnout, and job satisfaction. We also did not evaluate the socioeconomic status that included items related to demographics in detail, level of education, and work-related or social life stress. The study by Dougherty et al. evaluated the factors associated with work stress and professional satisfaction in oncology staff [19]. They surveyed 60 persons working in an oncology inpatient unit and palliative care unit. Their findings showed high levels of self-reported stress, with 63% reporting that they experienced a great deal of work-related stress.

The small number of the participants and the lack of control groups working in different clinics other than an oncology clinic may be another limitation in our study. In nurses, we did not find statistically significant correlation with working hours, working years, age and global health. However, the mean scores of their QoL were worse, although not statistically significant, compared with physicians. These findings are consistent with the relevant literature.

In conclusion, health professionals working in an oncology clinic have poor QoL. This is especially true for oncology nurses. There are many factors adversely affecting the QoL of oncology professionals. A good description of the difficulties that oncology nurses face could possibly provide clues for measures to be taken in order to improve the working conditions. We hope that this study raises awareness about the hard working conditions of oncology nurses in Turkey. Future research in this area should describe the QoL of oncology workers in rural areas in Turkey using a general questionnaire for the assessment of their QoL.

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