Assessment of quality of life in Turkish patients with cancer

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ABSTRACT

We evaluated Quality of Life (QOL) in cancer patients by using the Turkish version of Multidimensional Quality of Life Scale-Cancer 2. Data were analysed for 188 consenting individuals with mean age 49.7 (SD=15.9) years, most of whom were male, married, primary school educated and treated by combined therapy. The interesting finding of this study was that sociodemographic factors rather than cancer-related factors could contribute to poorer QOL. In this study we showed that duration of the disease and type of cancer, presence of metastasis, and type of treatment had no effect on QOL. However, age, educational level, and hospitalization were associated with particular domains of QOL. Subjects with older age reported lower QOL in all subdimensions. Significant differences existed in subscales of QOL and total QOL among the patients who had different educational level. Illiterate patients had the lowest QOL scores except nutrition. Hospitalized patients had lower QOL scores than patients treated on an outpatient-basis. In conclusion, health workers who work with cancer patients need to determine the underlying reasons of the patient’s QOL and evaluate the impact of sociodemographic variables. [Turk J Cancer 2003;33(2):96-101]

INTRODUCTION

Cancer is one of the most important health concerns of today. According to the 2001 statistics of World Health Organization, 10 million people are diagnosed as cancer—most of which are in developing countries—and 6 million people die of cancer every year around the world. Within the next 20 years, the number of cancer victims is estimated to rise to 10 million from 6 million. Cancer covers 12.6% of overall deaths around the world and takes the second rank of death-causes in developed countries. Although reliable data on cancer registry in Turkey are lacking, cancer rates are typical of an industrialized country, with a high incidence of, and mortality from, breast cancer among women, and lung cancer among men (1). Due to the incurable nature of cancer, patients suffer from some negative side effects including pain, anorexia and fatigue, which not only shorten life but also decrease the quality of life (QOL) (2).

Despite the expansion and application of the QOL concept in daily practice and different sciences, no precise definition of the concept exists. Because of its subjective nature there are different definitions. Walker (3) describes it as a concept embracing a wide range of physical and psychological characteristics and limitations that describe an individual’s ability to function and derive satisfaction.
from doing so. Calman (4) proposes a definition of QOL: “the extent to which our hopes and ambitions are matched by experience”. Many other definitions of QOL have been attempted, frequently emphasizing components of happiness and satisfaction with life (5). Although different sciences will focus on relevant aspects of QOL representing their own discipline, within medicine and nursing sciences the focus is QOL in relation to different degrees of health, symptoms, illnesses and treatments because these are the domains of the health care professionals (6).

The goal of palliative care is to improve the QOL of people living with a life-threatening illness and that of their families (7). In order to achieve this aim, we need, firstly, to evaluate QOL and affecting factors. Constant and routine assessment of the QOL and factors that affect it may help as a guide to health care personnel dealing with cancer patients.

Although a further wave of articles on QOL exploring with different disease groups, a limited number of studies have evaluated QOL in cancer patients (8-16) in Turkey. We decided, therefore, to carry out a study that would allow us to evaluate the QOL and affecting factors on it.

**MATERIALS AND METHODS**

**Setting and sample**

The study was conducted at the outpatient and inpatient Oncology Clinics of the Lütfi Kirdar Teaching and Research Hospital in Istanbul, Turkey. The hospital is, a 750-bed hospital, located in the Anatolian part of the Istanbul. Because of its location it usually serves to people who come from neighbor cities such as Bursa, Adapazarı and İzmit.

Selection criteria required for patients were 1) 18 years and older; 2) had at least 6 months duration of cancer, 3) able to understand Turkish, and 4) had no other serious debilitating co morbidity. There were 200 patients with cancer who met selection criteria between January 1 and March 30, 2003. Twelve patients (6%) refused and 188 (94%) patients accepted to participate.

**Instruments**

The instruments completed by patients included a demographic questionnaire, and the Multidimensional Quality of Life Scale-Cancer 2 (MQOLS-CA2) (17-18).

The demographic questionnaire was a self-administered questionnaire that obtained information related to age, gender, marital status, educational level, financial status, and employment status. A medical record review form facilitated documentation of the type and duration of cancer, current treatment, and metastasis.

The MQOLS-CA2 is a self-report questionnaire developed to evaluate the patient’s perception on QOL (17-18). After its first development, it has been revised several times (2, 17-18). It includes 33 items, which assess five QOL dimensions: psychological well-being (PSY), general physical well-being (PHY), nutrition (NUT), symptom management (SYM), and interpersonal well-being (INT). The MQOLS-CA2 uses 100 mm linear analogue scales to elicit responses. Participants are instructed to make an “X” along a 100 mm line of the visual analogue scale to indicate their responses about their disease and QOL. A total or subscale scores are obtained by summing the items in the total scale or in each of the subscales and dividing by the number of items in the total scale or relevant subscale. This provides a score from 0 to 100; the higher the score is the greater the QOL is (18). Test-retest reliability coefficients for the MQOLS-CA2 have been reported as r=0.60, internal consistency coefficients were reported as alpha=0.80, 0.93 for total and 0.65 to 0.89 for subscales (2,19). Consensus by a panel of experts in oncology and pain management supports the content validity of MQOLS-CA2 (2). The MQOLS-CA2 was validated to Turkish population with cancer previously. In that study, test-retest reliability coefficients for the five subscales in Turkish version of MQOLS-CA2 ranged from 0.56 to 0.91. The Chronbach alpha for scales was calculated as alpha=0.76 (20). In the present sample, the coefficient alpha for the total scale was 0.84.

**Procedures**

Approval for the study was obtained from the hospital’s Institutional Review Board for the Protection of Human Subjects in Research. After informed consent was obtained,
patients completed instruments. Sixty-three subjects, who were illiterate, completed the instruments with some assistance from the researcher. Researcher read the same things what was written, didn’t change the items, and didn’t make any additional explanation. Patients completed the questionnaires in the office setting. We reviewed medical records to get information on duration and type of cancer, type of treatment, and metastasis.

**Data analysis**

Data were analyzed using the Statistical Package for Social Sciences (SPSS), and presented as percentage and mean±SD where appropriate. Independent paired t tests were used for two-group comparisons of QOL scores. We used one-way analysis of variance to determine if differences in any of the QOL scales existed among the three or more different groups, Pearson’s correlation coefficient to examine associations between two continuous variables. Significance for all analyses was taken at the 5% level.

**RESULTS**

**Sample demographics**

One hundred and seventy-six patients (93.6%) were outpatient and the rest of the patients were inpatient. One hundred were male (53.2%), and 88 were female (46.8%). The mean age of the participants was 49.73±15.94 years. Sixty-three patients, (33.5%), were illiterate, 88 (46.8%) had primary school (5 years education), 28 (14.9%) had secondary (8 years education) or high school (11 years education), and 9 (%4.8) had university level education.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Sociodemographic variables and QOL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PSY r:-0.186 p:0.011*</td>
</tr>
<tr>
<td>Age</td>
<td>Gender</td>
</tr>
<tr>
<td>Female</td>
<td>63.4±15.5 64.7±18.5 70.0±19.3 67.9±15.2 66.1±14.0 65.8±12.3</td>
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<tr>
<td>Male</td>
<td>63.7±16.7 66.2±15.9 67.3±16.5 71.5±15.0 63.9±14.4 66.4±12.0</td>
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<tr>
<td>Financial Status</td>
<td>p:0.881 p:0.568 p:0.104 p:0.281 p:0.288 p:0.715</td>
</tr>
<tr>
<td>Poor</td>
<td>62.2±15.8 64.6±16.4 68.1±18.0 70.1±15.1 63.2±14.1 65.1±11.9</td>
</tr>
<tr>
<td>Standard</td>
<td>64.6±16.4 66.1±17.7 68.8±17.8 69.6±15.3 66.2±14.2 66.4±12.0</td>
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<tr>
<td>p:0.334 p:0.548 p:0.861 p:0.814 p:0.145 p:0.332</td>
<td></td>
</tr>
<tr>
<td>Financial Status</td>
<td>Marital status</td>
</tr>
<tr>
<td>Married</td>
<td>62.8±16.4 65.3±17.6 67.4±18.8 73.1±15.4 65.2±13.5 65.8±12.4</td>
</tr>
<tr>
<td>Single</td>
<td>70.0±15.6 72.4±14.2 71.8±10.7 73.0±11.5 65.6±14.3 74.6±13.8</td>
</tr>
<tr>
<td>Divorced/widow</td>
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</tr>
<tr>
<td>p:0.222 p:0.116 p:0.178 p:0.185 p:0.574 p:0.248</td>
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<tr>
<td>Education</td>
<td>Education</td>
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<tr>
<td>Illiterate</td>
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<td>Primary school</td>
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<td>Secondary/high school</td>
<td>67.8±16.4 72.1±12.6 71.3±14.8 75.4±12.4 68.0±10.8 70.4±10.2</td>
</tr>
<tr>
<td>University</td>
<td>72.7±11.6 69.2±13.8 71.4±16.3 79.1±13.7 69.6±13.4 72.9±9.3</td>
</tr>
<tr>
<td>p:0.025* p:0.004* p:0.769 p:0.022* p:0.409 p:0.013*</td>
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</table>

* Statistically significant
Most patients were married (n= 151, 80.3%), only 17 (9.1%) were single, and 20 (10.6%) were widowed or divorced. Most of them were working (n=103, %54.8) full-time or part-time, 72 patients (38.3%) were housewife, 13 (6.9%) had no job. Eighty-one (43.1%) of them described their financial situation as poor, and 107 (56.9%) as standard.

The sample included the following diagnoses: 56 (29.8%) gastrointestinal system (stomach and colon) cancer, 51 (27.1%) lung cancer, 23 (12.2%) breast cancer, 19 (10.1%) gynecological cancers, 16 (8.5%) Hodgkin’s lymphoma, 9 (4.8%) head and neck cancer, and 14 (7.5%) other cancers. The mean duration of cancer was 12.15 months, with a standard deviation of 14.26 months. At the time of the study 45 patients (23.9%) were undergoing chemotherapy, 36 (19.2%) radiation therapy, and 107 (56.9%) overlapping treatment modalities including chemotherapy, radiation therapy and surgical interventions. Thirty-nine patients (20.7%) had metastasis.

### Quality of life scores

Subdimensions’ score of the MQOLS are as follows: PSY, 63.38 (SD: 16.11); PHY, 65.48 (SD: 17.14); NUT, 68.55 (SD: 17.87); SYM, 69.79 (SD: 15.15); INT, 64.90 (SD: 14.19), and TQOL, 66.20 (SD: 12.14).

### Differences in QOL scores due to sample demographics

The QOL scores did not show any difference due to gender, financial status, and marital status. There was a significant negative correlation between age and PSY (p<0.05), PHY (p<0.001), NUT (p<0.05), SYM (p<0.05)
and TQOL (p<0.05). As summarized in Table 1, significant differences were found in all the QOL subscale scores, except nutrition and interpersonal well-being, and in the total QOL score among patients who had different educational level.

There was negative nonsignificant correlation between duration of cancer and all QOL subscales and TQOL except PSY. QOL was not different according to type of cancer. But patients with lung cancer had the lowest QOL scores except INT in whole group. Furthermore QOL was not different due to presence of metastasis and type of cancer treatment. PSY (p<0.01), PHY (p<0.001), SYM (p<0.05), INT (p<0.05) and TQOL (p<0.05) were lower in people who were hospitalized than people who were treated at outpatient clinic (Table 2).

**DISCUSSION**

In this study we failed to show any effect of gender, financial status, marital status, duration and type of cancer, presence of metastasis, and type of treatment on QOL. However, age, educational level, and hospitalization were associated with particular domains of QOL.

The first important finding is the significant negative association between QOL and age; all of the subscales of the QOL instrument (except interpersonal well-being) showed a negative correlation with age. In other words, older age was associated with poorer psychological, physical, nutritional well-being, symptom management, and overall QOL. Our result is in contrast to some previous studies among cancer patients, but in agreement with Yıldız’s study (16) that found age was related to physical well-being (15, 21-23). In contrast to the present study, some researchers (15, 21, 23) did not find a relation between age and QOL, while Redeker et al (22) found that older age was associated with better QOL (15, 21,23).

The second important finding is that significant differences existed in subscales of QOL and TQOL among patients who had different educational level. Illiterate patients had the lowest QOL scores except nutrition, university educated patients had the highest QOL scores except physical well-being. The increase in QOL according to educational level is consistent with one study (15), but inconsistent with other studies (16, 23).

Our third significant finding is that patients who were hospitalized had lower QOL scores than patients treated on an outpatient-basis. This is because these patient subgroups had additional problems for hospitalization such as medical problems requiring medical help, as well as unfamiliar environment, and separation from family member. We are not aware that any other studies in the literature have pursued this topic in cancer patients.

Given the numerous factors that affect QOL (e.g. severity of the cancer, adherence to medical advice, social support), it is difficult to demonstrate the effect of any specific variable. Many studies showed conflicting results on QOL. A number of points could account for the differences: the age of the subjects, the size of the sample, QOL instruments which were analogous but not similar, lack of prospective, longitudinal studies. Additional factors contributing to account the differences in the findings between the studies in literature and our data are that our study recruited a group of patients with different type and stages of cancer. However, the disparity could also be due to cultural factors characterizing the different populations. These contrasting findings show that there is some value in conducting further targeted prospective longitudinal researches on this subject.

**CONCLUSION**

The interesting finding of this study is that sociodemographic factors contribute more strongly than cancer-related factors on QOL. So health services should be planned keeping in mind an entire life perspective rather than just the cancer-focused approach. Health workers, dealing with cancer patients need to understand the underlying factors in the patient’s QOL, and need to consider the impact of sociodemographic factors in each patient.

**ACKNOWLEDGEMENT**

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References