

RESEARCH ARTICLE

Hopelessness, Depression and Social Support with End of Life Turkish Cancer Patients

Zümrüt Akgün Şahin^{1*}, Mehtap Tan², Hatice Polat²

Abstract

Background: This study was performed to evaluate relationships between different demographic variables and hopelessness and depression in end of life Turkish cancer patients. This study was a descriptive survey with repeated measures conducted at a university hospital in the city of Erzurum, in the eastern part of Turkey. The study enrolled 216 patients undergoing palliative treatment at the hospital. **Materials and Methods:** Data were collected using questionnaires (demographic questionnaire, Beck Hopelessness Scale (BHS), Beck Depression Scale (BDS) and analyzed for demographic and disease-related variable effects on hopelessness and depression. **Results:** The hopelessness score was significantly high in female, illiterate, married, and living in rural areas cancer patients. Both hopelessness and depression scores were significantly higher with longer disease duration, receiving radiotherapy treatment, and having metastatic disease. **Conclusions:** These findings demonstrate the coexistence of the physical, psychological, and cognitive problems faced by patients with cancer. Nurses can conduct brief screening assessments to identify patients with probable distress and psychosocial support, as well as referrals to support services.

Keywords: Hopelessness - depression - social support - cancer - Turkey

Asian Pacific J Cancer Prev, **14** (5), 2823-2828

Introduction

Cancer is one of the most frequent causes of death in the world and receiving a diagnosis of cancer is an extremely stressful experience (Efficace and Marrone, 2002). Cancer can have major adverse physical, psychosocial, and economic consequences for both the individual with the illness (Lewis, 1986; Zabora et al., 1997; Todd et al., 2002). Patients with advanced cancer have to perform the hard work of living in the face of death (Grumann and Spiegel, 2003). Psychological distress is frequently observed in cancer patients during the clinical course of this disease. Patients are confronted with problems such as fear of death, unresolved issues, parting with family, and pain (Grumann and Spiegel, 2003; Song, 2003; Taylor, 2003). The prevalence of psychiatric disorders following a primary diagnosis of cancer has been reported to range from 14% to 38%. Feelings of depression is a common psychiatric disorder in cancer patients, while hopelessness has been associated with depression (Jones et al., 2003; Okamura et al., 2005). In the hopelessness theory of depression, Abramson hypothesized that when negative life events occur, a lack of social support may lead to increased hopelessness and, thereby, to the onset of a syndrome referred to as hopelessness depression (Abramson et al., 1989). Feelings of hopelessness are common reactions of patients as they approach the

terminal phase (Akech et al., 1998; Pessin et al., 2002).

Hopelessness is also characterized by persistently negative feelings and expectations about the future as well as loss of motivation. A sense of hopelessness seems to lead to increasingly negative evaluations of new situations and less effective coping strategies; thus, the perception is that one will not accomplish anything meaningful (Avci et al., 2009). Both depression and hopelessness are risk factors for suicidal ideation and suicide patients who are depressed may also have physical symptoms which are difficult to palliate and which may improve as their depression is appropriately treated. The reported incidence rates of depression in this patient group vary widely, and the reason for this may be the different criteria and methodology that authors use to diagnose depression (Lloyd-Williams, 2001; Kadan-Lottick et al., 2005).

It is estimated that between 20% and 30% of cancer patients will experience clinically significant depressive symptoms at any one time. However, physicians and nursing staff often underrecognize depression in oncology patients. A common mistake is to assume that depression represents nothing more than a natural and understandable reaction to an incurable illness (Scherer-Rath, 2001; Avci et al., 2009).

Social support has been defined in the literature as the assistance and protection given to others, especially to individuals. Support and assistance from family members

Department of Internal Medicine Nursing, ¹Kars Health School, Kafkas University, Kars, ²Faculty of Health Science, Ataturk University, Erzurum, Turkey *For correspondence: zumrut8136@hotmail.com

is helpful in aiding the patient cope with stress resulting from the disease and treatment. Scientists have for many years recognized a positive relationship between social support and health (Tan and Karabulutlu, 2005). Social support is well documented as one of the most popular and preferred modes of coping with hopelessness; indeed, this is also indicated in the general population (Scherer-Rath, 2001). There is apparent debate as to the relative importance of social support, including instrumental, emotional, and informational support, versus social networks, the ties through which support is provided to cancer survival. Social support, spiritual support, and disease-related factors like metastasis, performance status, and duration of cancer diagnosis need to be considered in nursing intervention in order to maintain a fighting spirit and to overcome feelings of hopelessness and depression in cancer patients (Pessin et al., 2002). Determining the perceived levels of social support from the family and the levels of hopelessness and depression of individuals with cancer is important in planning the care for these patients, in ensuring the contribution of families, and in increasing life quality, thereby increasing the quality of care. The purpose of the current study was to define the relationship between different demographic variables and hopelessness, depression, and social support.

As the number of the studies conducted in Turkey is very low. These writer (Tan and Karabulutlu, 2005; Avci et al., 2009; Yildirim et al., 2009; Pehlivan et al., 2012). However, there has been no study on hopelessness and depression and social support of patients during terminal phase in Turkey. Therefore we conducted this study to evaluate relationship between different demographic variables and hopelessness, depression and social support end of life Turkish cancer patients.

Materials and Methods

Design and sample

This study was a descriptive survey conducted at a university hospital in the city of Erzurum, at the eastern part of Turkey. The study enrolled 216 patients with cancer admitted to the Oncology and Hematology Department between July and November 2012. This research was conducted in a large hospital in eastern Turkey and almost all the patients with cancer in this region, particularly those living in the vicinity of Erzurum, receive cancer treatment and palliative treatment there. The patients had been in the terminal phase of the cancer, and have been receiving palliative treatment in the hospital. A cross-sectional and descriptive correlational design was used in this study. To be eligible, patients had to be 18 years of age or older, have no known psychiatric or neurological disorders that would interfere with completion of the measures, all participants were literate in Turkish.

Ethical considerations

Permission to undertake this study was gained from the ethical committee at the Atatürk University and informed consent was obtained from each participant. The patients were informed about the purpose of the research and were assured of their right to refuse the participation

into the study or to withdraw from the study at any stage. The anonymity and confidentiality of participants was guaranteed.

Data collection and tools

The questionnaires included a demographic questionnaire, the Beck Hopelessness Scale (BHS), and Back Depression Scale (BDS). Perceived Social Support from Family Scale (PSS-Fa).

Demographic Questionnaire: The demographic questionnaire was used to assess patients' basic information such as gender, age, marital status, education, family size, and place of residence. Medical information regarding cancer stage, the time passed since diagnosis, treatment, and duration of disease were recorded. The researchers contacted each patient and gave a verbal explanation of the study. Patients were given a questionnaire that they were asked to fill out independently. The patients were completed the questionnaires on his or her own. The questionnaires (demographic questionnaire, Beck Hopelessness Scale (BHS), Back Depression Scale (BDS) took approximately 45 min for participants to complete.

Beck Hopelessness Scale (BHS): The Scale, a 20-item questionnaire that assesses hopelessness by measuring participants' negative expectancies about future events. The response format for the BHS is true/false. Beck Hopelessness Scale scores can range from 0 to 20. Evidence indicating a coefficient α of .93 and a correlation of 0.74 between BHS scores and clinicians' hopelessness rating supports the reliability and validity of the BHS. The scale developed by Beck et al. (1974) was adapted for Turkey by Savaşır and Şahin, (1997). In this study, the alpha coefficients for patients were found as 0.80.

Beck Depression Inventory: The BDI was developed by Beck, (1961) and translated into Turkish by Hisli (1988). The BDI assesses depressive symptoms and is a 21-item, 4-point scale ranging from 0 (rarely or none of the time) to 3 (most or all of the time). The highest score is 63; 1-10 is considered normal, 11-16 indicates a mild mood disturbance, 17-20 indicates borderline clinical depression, 21-30 indicates moderate depression, 31-40 indicates severe depression, and more than 40 indicates extreme depression. The BDI has had high internal consistency, with alpha coefficients of 0.86 and 0.81 for psychiatric and non-psychiatric populations, respectively (Beck, 1961). Reported alpha coefficient for the BDI was 0.74 in a Turkish population (Hisli, 1988). In this study, the alpha coefficients for patients were found as 0.85.

The Perceived Social Support From Family Scales (PFS): The scale developed by Procidano and Heller (1983) were aimed to measure the extent to which an individual perceives his/her needs for support, information, and feedback that are fulfilled by family. Each scale consists of 20 statements, on each one of which the individual responds to three response alternatives: "Yes", "No", and "Do not know". For each item, the response indicative of perceived social support is scored as +1, i.e., scores range from 0, which indicates no perceived social support, to 20, which indicates maximum perceived social support as provided by family. The "Do not know" response category is not evaluated in scores. Eskin, (1993)

Table 1. Characteristics of Patients

Characteristics	n	%	
Gender	Female	79	36.5
	Male	137	63.5
Education	Illiterate	125	57.8
	Primary school	39	18/4
	High school	29	13/3
Marital status	University	23	10/5
	Married	167	77.4
Place of residence	Single	49	22/6
	City	43	20/2
	Town	75	34.1
Cancer site	Village	98	45.7
	Gastroenterologic	102	46.7
	Brest	52	24/4
	Lung	42	19/5
Stage of disease	Other	20	9/4
	Local	83	38.6
	Regional	62	28/2
Treatment	Metastatic	71	33.2
	Chemotherapy	155	72.2
	Radiotherapy	32	15/2
	Operation+Chemotherapy+Radiotherapy	27	12/6
Duration of disease	1 years	105	48.9
	1-3 years	56	26/3
	>4 years	55	24/8
Total	216	100	

documented test-retest reliability of 0.85 for the PSS-Fa. In this study, the alpha coefficients for patients were found as 0.84.

Results

The sociodemographic and medical characteristics of the patient are summarized in Table 1. The average age of the patients was 45.3 ± 1.3 (range= 23-86 years), majority of the patients were male (63.5%), and married (77.4%), 57.8% graduated from illiterate school and 45.7% place of village. The most common type of cancer was gastrointestinal cancer (46.7%), 72.2% of patient received chemotherapy, duration of disease 48.9% 1 years.

Relationship between sociodemographic characteristics and hopelessness

The mean score of hopelessness was also significantly gender, marital status, education, place of residence, stage of disease and treatment ($p < 0.05$) (Table 2).

Relationship between sociodemographic characteristics and depression

The mean score of depression was also significantly stage of disease, treatment, duration of disease ($p < 0.05$). No significant relationship was found between the gender, education, marital status, place of residence and depression score ($p > 0.05$) (Table 2).

Relationship between sociodemographic characteristics and perceived social support from family

The mean score of the cancer patients for perceived social support from family was high. No significant

Table 2. Categorical Demographic and Medical Variables on Depression, Hopelessness and Social Support

Characteristics	Depression Mean \pm SD	Hopelessness Mean \pm SD	Social support Mean \pm SD
Gender			
Female	19.43 \pm 2.27	8.21 \pm 1.08	13.08 \pm 0.23
Male	19.38 \pm 2.77	5.34 \pm 1.12	13.76 \pm 0.14
	t: 0.102, $p > 0.05$	t: 4.012, $p < 0.05$	t: 0.123, $p > 0.05$
Education			
Illiterate	18.57 \pm 2.51	8.65 \pm 1.87	14.27 \pm 0.34
Primary school	18.89 \pm 2.04	6.44 \pm 1.02	14.84 \pm 0.22
High school	18.66 \pm 2.71	5.20 \pm 1.33	14.53 \pm 0.34
University	18.07 \pm 2.16	5.01 \pm 1.11	14.67 \pm 0.45
	MWU: 1.123 df: 3, $p > 0.05$	KW: 5.675 df: 3, $p < 0.05$	MWU: 1.102 df: 3, $p > 0.05$
Marital status			
Married	27.44 \pm 2.84	7.56 \pm 1.65	12.34 \pm 0.12
Single	27.67 \pm 2.01	5.26 \pm 1.21	12.45 \pm 0.43
	t: 0.125, $p > 0.05$	t: 4.133, $p < 0.05$	t: 0.107, $p > 0.05$
Place of residence			
City	25.56 \pm 2.74	5.45 \pm 1.32	13.34 \pm 0.34
Town	25.75 \pm 2.84	7.23 \pm 1.28	13.22 \pm 0.23
Village	25.08 \pm 2.44	9.12 \pm 1.00	13.43 \pm 0.44
	F: 1.574 df:2 $p > 0.05$	F: 5.345 df:2, $p < 0.05$	F: 1.212 df:2, $p > 0.05$
Stage of disease			
Local	17.21 \pm 2.00	4.25 \pm 1.19	12.33 \pm 0.28
Regional	17.35 \pm 2.34	4.56 \pm 1.09	12.45 \pm 0.21
Metastatic	23.58 \pm 2.03	9.78 \pm 1.78	12.54 \pm 0.33
	F: 4.034 df:2, $p < 0.05$	F: 4.556 df:2, $p < 0.05$	F: 1.034 df:2, $p > 0.05$
Treatment			
Chemotherapy	17.34 \pm 2.73	4.12 \pm 1.34	12.23 \pm 0.37
Radiotherapy	26.08 \pm 2.77	8.34 \pm 1.65	12.34 \pm 0.45
Operation+Chemotherapy+Radiotherapy	16.38 \pm 2.88	4.55 \pm 1.88	12.45 \pm 0.56
	F: 4.743 df:2, $p < 0.05$	F: 4.663 df:2, $p < 0.05$	F: 1.120 df:2, $p > 0.05$
Duration of disease			
1 years	22.65 \pm 2.30	8.78 \pm 1.76	11.39 \pm 0.56
1-3 years	14.21 \pm 2.00	6.08 \pm 1.90	11.75 \pm 0.45
>4 years	14.76 \pm 2.46	6.54 \pm 1.88	11.45 \pm 0.66
	F: 4.782 df:2, $p < 0.05$	F: 4.807 df:2, $p < 0.05$	F: 1.145 df:2, $p > 0.05$

Table 3. Hopelessness, Depression and Social Support Relationship of the Patients

Variables	Social support	
	r	p
Depression	-0.345	$p < 0.001$
Hopelessness	-0.423	$p < 0.001$

relationship was found between age, gender, education, marital status, place of residence, cancer site, stage of disease, or treatment and perceived social support from family score ($p > 0.05$). Perceived social support from family level score was significantly lower if there was a cancer history in the family. A statistically significant inverse relationship was also observed between disease duration and perceived social support from family ($p < 0.05$) (Table 2).

Relationship between type of treatment and hopelessness, depression, and perceived social support from family

The correlation coefficients of hopelessness, depression and perceived social support from family are displayed in Table 3. While there was a statistically positive

relationship between hopelessness and depression, there was a statistically negative relationship between hopelessness, depression and perceived social support from family ($p < 0.05$) (Table 3).

Statistical analysis

The data were recorded and analyzed using SPSS for Windows version 13.0 software. Analysis of variance (ANOVA) was used to examine the impact of selected demographic and disease-related variables on hopelessness and social depression. Descriptive statistics (mean, standard deviation, percentage) were used to describe the sample. To test equivalence between categorical demographic and Medical variables parametric tests Student's t test, F and nonparametric test MWU used. For all the analyses, $P < 0.05$ was considered significant.

Discussion

Depression is the most common psychological problem encountered in patients with cancer, and effective coping strategies are to necessitate treatment and disease related psychological problem. Reactions and behaviors of patients are fundamentally determined by their perception and interpretation of their illnesses. The results indicated that depression and hopelessness were more strongly related to each other. The higher levels of depression were strongly related to higher levels of hopelessness. Our findings also suggest that hopelessness may play an important role in alleviating depressive symptoms in cancer patients;

It was determined in this study that 47.9% of BDI patients had moderate depression (23.03 ± 2.45). The rate of depression was reported to be 49% in the study conducted by Neron et al. (2007) and 45.5% in the study conducted by Jenkins, May, and Hughes, (1991). While, Miaskowski, (2004) determined in their study that 53.2% of cancer patients had depression, a study on patients with cancer and detected that 36% of them had depression (Güren et al., 2005). According to literature, the fear and uncertainty caused by the notion of cancer; the long duration of the treatment and its uncontrollable side effects; hopelessness, future anxiety, and negative thoughts constitute a risk factor in terms of depression and hopelessness (Lampic et al., 1996; Rusteen et al., 1998; Smith et al., 2003;).

Hope is an important component that drives cancer patients to continue treatment and that makes them feel better (Rustoen and Wiklund, 2000). In this study, statistically significant difference was found between hopelessness scores of women patients. While, there were no statistically significant difference in the mean hopelessness scores between men and women in another Turkish studies (Tan and Karabulutlu, 2005; Avci et al., 2009; Pehlivan et al., 2012). In researches another countries show that hopelessness is higher for women with cancer (Ballard et al., 1997; Jones et al., 2003). In general, women experienced more depression and anxiety than men. These findings are consistent with other research suggesting that women tend to report more distress and poorer adjustment in many domains than men (Irwin et al., 1987; Baider et

al., 1989; Hert, 1992).

There was statistically significant difference in the mean hopelessness scores between patients living in urban and rural areas, the mean hopelessness scores of patients from rural areas were higher than those of patients from urban areas. Rustoen and Wiklund (2000), Tan and Karabulutlu (2005), found the mean hopelessness scores of patients from rural areas were higher, This contradicted the results of previous studies (Neron et al., 2007; Smith et al., 2003). We can attribute this difference to various negative factors such as insufficiency of healthcare, social isolation, and difficulty intransport to a nearby city for treatment, all of which can negatively influence the coping abilities of patients and their families living in rural areas.

In our study, statistically significant difference was found between the hopelessness scores of married and single patients. The mean hopelessness scores of patients from married were higher than those of patients from single. In a study found that married patients with cancer experienced higher levels of hopelessness (Ballard et al., 1997). While, these studies found that there was no significant difference in the mean hopelessness scores between patients married and single patients (Hert, 1992; Tan and Karabulutlu, 2005; Yildirim et al., 2009; Pehlivan et al., 2012).

In this study, the mean hopelessness scores of patients from illiterate were higher than those of patients from high school and university. Rustoen and Wiklund (2000) reported that low education level patients with cancer had a significantly higher hopelessness score. Studies conducted in Turkey found no significant difference between hopelessness and education (Tan and Karabulutlu, 2005; Avci et al., 2009; Yildirim et al., 2009; Pehlivan et al., 2012).

There was a significant difference between the hopelessness and depression scores of the patients with metastatic disease and those with local and regional disease, signifying that the patient's disease stage affected their level of hopelessness and depression level. The hopelessness and depression score in patients who had metastatic disease was higher than in those with local and regional disease. This finding was consistent with reports in the literature (Mystakidou et al., 2009; Voigtman et al., 2010).

Patients who experienced high levels of psychosocial stress at the start of radiotherapy also displayed the same high level of stress during and after therapy, and required constant psychosocial support to improve their quality of life (Greer, 1992). In this study, statistically significant, patients who received radiotherapy experienced more hopelessness and depression compared to patients receiving other types of treatment.

There was significant difference between disease duration and both depression and hopelessness, scores have risen in parallel with the duration of treatment. This result also was consistent with those in previous studies (Jones et al., 2003; Tan and Karabulutlu, 2005). Denial is frequently used as a defense mechanism by cancer patients to reduce anxiety, and is encountered in the first year of diagnosis and treatment (Greer, 1992). This situation may have influenced the results.

We determined that no significant difference between social support from family and patients characteristics. Tan and Karabulutlu (2005) reported no significant difference between social support from family and patients characteristics. However, Nausheen and Kamal (2007) showed that familial social support was higher in younger than in older patients with cancer. When compared with the Eastern regions of the country, family relationships are much more stronger and supportive. The high levels of support can be explained by this sociocultural property. According to many studies, social support received from the parents, friends, and healthcare providers is the most important resource for adults with cancer (Tan and Karabulutlu, 2005; Avci et al., 2009; Yildirim et al., 2009; Pehlivan et al., 2012).

The correlation coefficients of hopelessness, depression and perceived social support from family are displayed in Table 3. While there was a statistically positive relationship between hopelessness and depression, there was a statistically negative relationship between hopelessness, depression and perceived social support from family. There was also a statistically inverse relationship between depression, hopelessness and perceived social support from family ($p < 0.05$).

Hopelessness score was also significantly higher in the women, illiterate, married, and living in rural areas cancer patients. Both Hopelessness and depression scores were also significantly higher in the disease duration, received radiotherapy treatment, metastatic disease patients. These findings demonstrate the coexistence of the physical, psychological, and cognitive problems faced by patients with cancer. Depression, hopelessness have a significant impact on the psychological condition of patients with cancer. Also, the need to evaluate ways to identify programs of care to patients who seem to be at risk for hopelessness and depression imperat.

References

- Abramson LY, Metalsky GI, Alloy LB (1989). Hopelessness depression: a theorybased of depression. *Psychol Rev*, **96**, 58-372.
- Akechi T, Kugaya A, Okamura H, et al (1998). Predictive factors for psychological distress in ambulatory lung cancer patients. *Support Care Cancer*, **6**, 281-6.
- Avci IA, Okanlı A, Karabulutlu E, Bilgili N (2009). Women's marital adjustment and hopelessness levels after mastectomy. *Eur J Oncol Nurs*, **13**, 299-303.
- Baider L, Perez T, De-Nour AK (1989). Gender and adjustment of chronic disease: a study of couples with colon cancer. *Gen Hosp Psychiatry*, **11**, 411-8.
- Ballard A, Gren T, Mca A, Logsdon MC (1997). A comparison of the level of hope in patients with recently diagnosed and recurrent cancer. *Oncol Nurs Forum*, **24**, 899-904.
- Beck AT, Lesker D, Trexler L (1974). The measurement of pessimism. the hopelessness scale. *J Consult Clin Psychol*, **42**, 861-5.
- Beck AT (1961). An inventory for measuring depression. *Arch Gen Psychiatry*, **4**, 561-71.
- Efficace F, Marrone R (2002). Spiritual issues and quality of life assessment in cancer care. *Death Stud*, **26**, 743-56.
- Eskin M (1993). Reliability of the Turkish version of the perceived social support from friends and family scales. *J*
- Güren E, Tekgöl S, Çimen P (2005). Changes in the level of anxiety and depression in patients with lung cancer. *İzmir J Chest Dis*, **11**, 9-13.
- Greer S (1992). The management of denial in cancer patients. *Oncol*, **6**, 33-6.
- Grumann MM, Spiegel D (2003). Living in the face of death: interviews with 12 terminally ill women on home hospice care. *Palliat Support Care*, **1**, 23-32.
- Hert K (1992). Abbreviated instrument to measure hope: development and psychometric evaluation. *JAN*, **17**, 1251-9.
- Hisli N (1988). Beck depresyon envanterinin geçerliliği üzerine bir çalışmsa. *Psikol Der*, **22**, 118-26.
- Irwin P, Kramer S, Diamond N et al (1987). Sex differences in psychological distress during definitive radiation therapy for cancer. *J Psychosoc Oncol*, **4**, 63-75.
- Jenkins PL, May VE, Hughes LE (1991). Psychological morbidity associated with local recurrence of breast cancer. *Int J Psychiatry Med*, **21**, 149-55.
- Jones JM, Huggins MA, Rydall AC, Rodin GM (2003). Symptomatic distress, hopelessness, and the desire for hastened death in hospitalized cancer patients. *J Psychosom Res*, **55**, 411-8.
- Kadan-Lottick NS, Vanderwerker LC, Block SD, et al (2005). Psychiatric disorders and mental health service use in patients with advanced cancer. *Cancer*, **104**, 2872-81.
- Lampic C, Peterson VW, Larsson G (1996). Anxiety and depression in hospitalized patient with cancer: agreement in patient-staff dyads. *Cancer Nurs*, **19**, 419-27.
- Lewis FM (1986). The impact of cancer in the family: a critical analysis of the research literature. *Patient Educ Couns*, **8**, 269-89.
- Lloyd-Williams M (2001). Screening for depression in palliative care patients: a review. *Eur J Cancer Care*, **10**, 31-5.
- Miaskowski C (2004). Gender differences in pain, fatigue, and depression in patients with cancer. *J Natl Cancer Inst Monogr*, **32**, 139-43.
- Mystakidou K, Tsilika E, Parpa E, et al (2009). Illness-related hopelessness in advanced cancer: influence of anxiety, depression, and preparatory grief. *Arch Psychiatr Nurs*, **23**, 138-47.
- Nausheen B, Kamal A (2007). Familial social support and depression in breast cancer: an exploratory study on a Pakistani sample. *Psychooncology*, **16**, 859-62.
- Neron S, Correa JA, Dajezman E, et al (2007). Screening for depressive symptoms in patients with unresectable lung cancer. *Support Care Cancer*, **15**, 1207-12.
- Okamura M, Yamawaki S, Akechi T, et al (2005). Psychiatric disorders following first breast cancer recurrence: prevalence, associated factors and relationship to quality of life. *Jpn J Clin Oncol*, **35**, 302-9.
- Pehlivan S, Ovayolu O, Ovayolu N, et al (2012). Relationship between hopelessness, loneliness, and perceived social support from family in Turkish patients with cancer. *Support Care Cancer*, **20**, 733-9.
- Pessin H, Rosenfeld B, Breitbart W (2002). Assessing psychological distress near the end of life. *Am Behav Sci*, **46**, 357-72.
- Procidano ME, Heller K (1983). Measures of perceived social support from friends and from family: three validation studies. *Am J Community Psychol*, **11**, 1-24
- Rusteen T, Wiklund I, Honestad R, Moum T (1998). Nursing intervention to increase hope and quality of life in newly diagnosed cancer patient. *Cancer Nurs*, **21**, 235-45.
- Rustoen T, Wiklund I (2000). Hope in newly diagnosed patients with cancer. *Cancer Nurs*, **23**, 214-7.
- Savaşır I, Şahin NH (1997). Cognitive-behavioral therapy

- evaluation: commonly used scales. Turkish Psychological Association Publishing, 38-40.
- Scherer-Rath M (2001). Living dead ends. Challenges for pastoral advise and assistance of people in life crises. Meunster: Lit Verlag 2001.
- Smith EM, Gomm SA, Dickens CM (2003). Assesssing the independent contribution to quality of life from anxiety and depression in patients with advanced cancer. *Palliat Med*, **17**, 509-13.
- Song M (2003). Effects of end-of-life discussions on patients' affective outcomes. *Nurs Outlook*, **52**, 118-25.
- Tan M, Karabulutlu E (2005). Social support and hopelessness in Turkish patients with cancer. *Cancer Nurs*, **28**, 236-40.
- Taylor EJ (2003). Spiritual needs of patients with cancer and family caregivers. *Cancer Nurs*, **26**, 260-6.
- Todd K, Roberts S, Black C (2002). The living with cancer education programme, I: development of an Australian education and support programme for cancer patients and their family and friends. *Eur J Cancer Care*, **11**, 271-9.
- Voigtmann K, Köllner V, Einsle F, et al (2010). Emotional state of patients in radiotherapy and how they deal with their disorder. *Strahlenther Onkol*, **4**, 229-35.
- Yildirim Y, Sertoş OO, Uyar M, Fadiloglu C, Uslu S (2009). Hopelessness in Turkish cancer inpatients: the relation of hopelessness with psychological and disease-related outcomes. *Eur J Oncol Nurs*, **13**, 81-6.
- Zabora JR, Blanchard CG, Smith ED, Susan C (1997). Prevalence of psychological distress among cancer patients across the disease continuum. *J Psychosoc Oncol*, **15**, 73-87.