

Meaning in life of patients with cancer

BEHICE ERCI, PHD

Nursing Department, Malatya School Health, İnönü University, Malatya, Turkey

(RECEIVED November 16, 2012; ACCEPTED January 14, 2013)

ABSTRACT

Objective: The aim of this study was to evaluate meaning in life and its predictors in Turkish patients with cancer.

Methods: A convenience sample of 182 patients with cancer at a Turkish university hospital completed a structured questionnaire including demographic characteristics, disease/treatment characteristics, symptom level, and the meaning in life scale for patients with cancer in 2007. The researcher visited the oncology clinic five work days in every week and conducted interviews with the patients. In analysis of the data, correlation, *t*-tests, Kruskal-Wallis variance and regression analysis were used.

Results: In this study, the mean score of the total meaning in life showed that the patients tended to be undecided concerning meaning in life. Education level, age, and diagnosis duration of the independent variables were effective predictors of meaning in life. Together the independent variables explained 24.3% of the variance of the purpose subscale, 26.2% of the variance of the coherence subscale, 14% of the variance of the choice/responsibility subscale, and 44.1% of the total variance of the goal seeking subscale. Overall the independent variables explained 19.8% of the total variance of the total meaning in life.

Significance of results: The results in this study should increase the awareness of cancer care professionals about a range of the meaning in life and may help them to target particular patient groups for detail support interventions.

KEYWORDS: Cancer characteristics, Cancer treatment, Meaning in life, Demographic characteristics, Nursing

INTRODUCTION

In recent years, a growing body of research has been focusing on meaning of life, belief systems, life attitudes, and demoralization in the course of chronic or life threatening illness at the end of the life period (Baider et al., 1999; Holland et al., 1999; Kissane et al., 2001; Nelson et al., 2002; Thune-Boyle et al., 2006). A relatively large number of empirical studies have clearly demonstrated that meaning in life is an important variable in the maintenance and enhancement of physical, psychological, and mental health (Reker & Butler, 1990; Zika & Chamberlain, 1992; Reker, 1994, 1997; Nicholson et al., 1994; Fry, 2001). Many of these studies examined the correlates

of meaning, described the moderating, and mediating role of meaning (Reker & Fry, 2003). However, there was no adequate number of studies regarding meaning in life and its predictors in cancer patients. Issues of meaning in life are particularly important for patients given the threat of a serious illness, treatment measures, and the potential confrontation with the finiteness of their own lives (Saleh & Brockopp, 2001; Xuereb & Dunlop, 2003; Bower et al., 2005). Previous studies concluded that majority of cancer patients expressed their need for hope, sense, meaning and purpose in life, spirituality, and death and dying (Moadel et al., 1999; Jenkins et al., 2001). Cancer can challenge the experience of meaning in life and meaning of life. The diagnosis and consequences of a life-threatening illness such as cancer can demolish self-perceptions, life attitudes, individual assumptions, and value systems and can prevent the sense of meaning in life continuity and coherence

Address correspondence and reprint requests to: Behice Erci, İnönü Üniversitesi, Malatya Sağlık Yüksekokulu, 44280 Malatya, Türkiye. E-mail: behiceerci@hotmail.com

(Habermas & Bluck, 2000). Thus, cancer can block the maintenance of purpose and meaning in life (Kisane, 2000; Cohen & Block, 2004).

It may be that some people confronted with the diagnosis and treatment of cancer may be forced to change their former outlook on life, as it no longer gives enough direction to life. The threat to life can challenge people's beliefs about their life and sense of well-being. Positive moods may predispose them to feel that life is meaningful and may increase their sensitivity to the meaning relevance to a situation. Issues of meaning in life and spirituality are essential components of the experience of people facing serious illnesses (Folkman & Moskowitz, 2000; Breitbart et al., 2004; Folkman, 2008).

Determining meaning in life and its predictors could assist nurses in understanding meaning in life of patient with cancer. Therefore, nurses need to know meaning in life of patients with cancer so that this knowledge could be used in planning of health care services. No studies have investigated evaluating the meaning in life among Turkish cancer patients although Turkey health care professionals are becoming increasingly aware of the need for spiritual and palliative care. Despite a vast amount of research that has examined meaning in life in cancer populations, the relationships among meaning in life, symptoms experienced and demographic and disease/treatment characteristics of the participants are still not well understood. A thorough understanding of these relationships is critical for health care professionals to provide appropriate care management to patients with cancer. Therefore, this study focuses on how patients with cancer evaluate meaning in life, its predictors.

AIM

The aim of the study was to determine the meaning in life and its predictors in Turkish patients with cancer.

METHODS

Design

The design of the study was cross-sectional.

Participants

The participants were 182 patients with cancer at a university hospital medical oncology department in Turkey. G-Power software program for windows was used to determine sample size of the study. A sample size of 214 patients was estimated using power analysis based on an alpha of 0.05, power of 0.95, assumed

effect size was 0.50 for the sample size estimation. The response rate was 85.1%. Thirty-two patients did not participate because they were too busy or unwilling; their characteristics were similar to those included in the study. The patients were recruited through convenience sampling method. The inclusion criteria were: (1) being registered with a primary diagnosis of cancer in the oncology clinic; (2) aged 18 years or more, (3) able to read and understand the Turkish language, and (4) no history of psychiatric illness.

Data Collection

The data were collected in 2007. The researcher visited the oncology clinic on five working days in every week and conducted interviews with the patients. The researcher explained the questionnaire to the patients and invited them to participate in the study. Then, the researcher assisted the participants with the self-completion questionnaire. The questionnaire took approximately 25 minutes to complete and could be understood by people with minimal reading ability. The questionnaire was given to patients in a separate quiet room in the oncology clinic.

Validity and Reliability of The instruments and Measurement

The Life Attitude Profile Scale

The life attitude profile scale was used for the measurement of meaning in life. The scale developed by Reker (1992) and was adapted to Turkish patients with cancer by Erci (2008). First, the scale was translated into Turkish and was reviewed by two experts for clarity and cultural sensitivity. Then, three experts in both languages translated the Turkish instrument into English. The translation phase had the purpose of checking for discrepancies between the content and meaning of the original version and the translated instrument. Finally, the instrument was tested for comprehension. Internal reliability coefficients (Cronbach's alpha) for the four factors ranged from 0.73 to 0.82, and total alpha of the scale was 0.71. The test retest reliability of the scale was 0.76. Factor loadings of scale's items ranged 0.32 to 0.65. The corrected item-total correlations ranged from 0.29 to 0.72. The scale is a 30-item self-report multi-dimensional measure of discovered meaning and purpose in life and the motivation to find meaning and purpose in life. The scale is scored and profiled in terms of four (purpose: 8 items, coherence: 7 items, Choice/Responsibility: 8 items, Goal Seeking: 7 items) dimensions scales. Each statement of meaning in life was measured on a seven-point Likert scale, ranging from strongly agree (scored 7) to agree

(6), moderately agree (5), undecided (4), moderately disagree (3), disagree (2) and strongly disagree (1) (Reker, 1992; Erci, 2008). In the current study, the alpha of the scale was 0.85.

The M. D. Anderson Symptom Inventory (MDASI)

The MDASI is a brief measure of the severity and impact of cancer related to symptoms. Each symptom is rated on an 11-point scale (0–10) to indicate the presence and severity of the symptom, with 0 meaning “not present” and 10 meaning “as bad as you can imagine.” 11-point rating scales maximize the trade-off between a patient’s ease of responding and the marginal increase in reliability associated with a greater number of response choices. Each symptom is rated at its worst in the last 24 hours. The MDASI also includes ratings of how much symptoms interfered with different aspects of a patient’s life in the last 24 hours. These interference items include general activity, mood, work (includes both work outside the home and housework), relations with other people, walking, and enjoyment of life. The interference items also are measured on 0–10 scales, with 0 meaning “did not interfere,” and 10 meaning “interfered completely.” The mean of all of these symptom interference items was used as a measure of overall symptom distress. The inventory’s alpha was 0.87 (Mendoza et al., 1999; Cleeland et al., 2000).

Initially, the inventory was translated into Turkish and reviewed by two experts for clarity and cultural sensitivity; recommended changes related to wording were implemented in the inventory. Three individuals, expert in both languages, back-translated the Turkish instrument into English, between them achieving agreement. No item was extracted from the questionnaire because factor loading was adequate. Internal reliability coefficients (Cronbach’s alpha) for the two factors ranged from 0.84 to 0.77, and total alpha of the inventory was 0.85. The corrected item total correlations ranged from 0.36 to 0.79, and test retest reliability of the inventory was 0.76. Statistical analyses have shown that a standardized inventory of symptoms has statistically acceptable levels of reliability and validity. In the current study, the alpha of the inventory was 0.85.

Ethical Considerations

The study was approved by the ethics committee at the Atatürk University and informed consent was obtained from each participant. The patients were informed about the purpose of the research, and assured of their right to refuse to participate or to withdraw from the study at any stage. Anonymity and confidentiality were guaranteed.

Data Analysis

Independent sample *t*-tests (confidence interval 95%) were used to examine differences in scores of the four categories of the meaning in life scale by occupation situation, marital status, and gender. Kruskal-Wallis variance was utilized to investigate the differences among scores of the four categories of the meaning in life scale by education level and treatment characteristics and stage of cancer with confidence interval 0.95 ($P < 0.05$). Bivariate correlation was used to determine whether relationship exists between scores of the four categories of the meaning in life scale and age, monthly income, duration of diagnosis, and the MDASI with criterion 0.95 ($P < 0.05$).

RESULTS

The characteristics of the sample were summarized in Table 1. The mean age of the participants was 51.5 ($SD = 15.0$) years and 58.8% of the sample consisted of men and 41.2% women. Most of the patients had graduated from primary school (44.5%), the mean monthly income of the participants’ families was 770.1 ($SD = US\$ 270.8$). Mean monthly income of family in Turkey is US\$ 952 as a whole. According to mean monthly income of family in Turkey, the mean monthly income of participants’ families was lower in this study (ATO 2008). The rate of unemployed among the patients was 59.9%, and 45.7% of the unemployed consisted of housewife. About 91.8% of the joints were married. The mean duration of cancer since diagnosis was 2.9 ($SD = 2.5$) years. The majority of them had received chemotherapy, 68.7% of the patients in Stage II of cancer (Table 1).

The mean scores of the two categories and total of the symptom inventory ranged from 64.9 ($SD = 25.1$) (severity) to 27.0 ($SD = 13.3$) (interfere category) and 91.9 ($SD = 32.6$) points. The mean score of the inventory suggested that the patients had moderate severity symptoms.

The mean scores of the four categories of the meaning in life ranged from the lowest [Goal seeking: 24.4 ($SD = 9.1$)] to the highest [Coherence: 35.1 ($SD = 7.1$)]. The mean score of the total meaning in life was 132.8 ($SD = 18.7$) points. The mean score of the total meaning in life stated that the patients had low motivation to find meaning and purpose in life. The mean score of the coherence subscale showed that the patients had an integrated and consistent understanding of self, others, and life (Table 2).

Statistical evaluation of demographic features with the meaning in life and its dimensions demonstrated that the patients’ gender, marital status, occupation situation, treatment characteristics, stage

Table 1. *The demographic and disease/treatment characteristics of the participants (n = 182)*

Characteristics	Mean (SD)	Median	Range
Diagnosis duration (years)	2.9 (2.5)	3	2–4
Age (years)	51.5 (15.0)	54	18–82
Monthly income of family (US\$)	770.1 (270.8)	700	50–2500
Characteristics	N		%
Gender			
Women	75		41.2
Men	107		58.8
Education Level			
Literate	66		36.3
Primary School	81		44.5
Secondary School	10		5.5
High School	19		10.4
University	6		3.3
Marital Status			
Married	167		91.8
Single	15		8.2
Occupation Situation			
Employed	73		40.1
Unemployed	109		59.9
Treatment Characteristics			
Radiotherapy	4		2.2
Chemotherapy	134		73.6
Radiotherapy and chemotherapy	13		7.1
Chemotherapy + surgery + Radiotherapy	27		14.8
Chemotherapy + surgery	4		2.2
Stage of Cancer			
I	4		2.2
II	125		68.7
III	38		20.9
IV	15		8.2
Total	182		100.0

of cancer, level severity of symptom were no influence on the meaning in life and its dimensions. Education level of the patients was statistically effect on goal seeking dimension of the meaning in life and literate patients with cancer had higher goal seeking score (Table 3).

Age of the patients was positive correlated with the goal seeking dimension ($r = 0.253^{***}$). Also, there was a significant positive correlation between monthly income of the patient's family (US\$) and the purpose ($r = 0.148^*$) or coherence dimensions ($r = 0.157^*$). Similarly, diagnosis duration (years)

was a positive associated with the goal seeking dimension ($r = 0.184^*$) (Table 4).

DISCUSSION

The findings must be interpreted cautiously because of the study limitations. This non-probability sample from a single geographic area consisted of lower socio-economic status. Therefore, it is not reasonable to generalize these findings to other populations. Although relationships between these variables have been identified, the actual path and interaction among them remains unclear. The results of this study may be generalized to the sample group in this study. The sample in this study reflects only one area of Turkey. The findings therefore cannot be generalized to all patients with cancer in Turkey.

Meaning in life is a broad phrase that also is referred to as existential meaning, whereas meaning of the cancer experience, or situational meaning, focuses on the meaning a person discovers from that particular event (Thompson, 2007). Meaning in life is determined by the life attitude profile scale in general.

Table 2. *Descriptive statistics for the life attitude profile scale and its subscales*

Life Attitude Profile	Range	Mean (SD)
Purpose	14.0–48.0	35.0 (7.6)
Coherence	13.0–49.0	35.1 (7.1)
Choice/ Responsibleness	12.0–55.0	38.2 (9.6)
Goal Seeking	7.0–49.0	24.4 (9.1)
Total	81.0–174.0	132.8 (18.7)

Table 3. The difference between the life attitude profile or its subscales and demographic and disease/treatment characteristics of the participants

Characteristics	Subscales of Life Attitude Profile				
	Purpose Mean (SD)	Coherence Mean (SD)	Choice/Responsibleness Mean (SD)	Goal Seeking Mean (SD)	Total Mean (SD)
Gender					
Women	34.0 (7.8)	35.7 (6.5)	38.2 (9.2)	23.7 (8.0)	131.7 (17.8)
Men	35.9 (7.1)	34.7 (7.6)	38.3 (10.0)	24.8 (10.1)	133.7 (18.4)
<i>df:180</i>	<i>t:1.51 p > 0.05</i>	<i>t:.85 p > 0.05</i>	<i>t:.05, p > 0.05</i>	<i>t:.67 p > 0.05</i>	<i>t:.66, p > 0.05</i>
Education Level					
Literate	34.1 (7.6)	34.2 (7.0)	36.4 (10.0)	27.2 (8.7)	132.1 (17.5)
Primary School	35.2 (7.2)	34.8 (6.9)	38.7 (8.4)	23.1 (7.9)	132.0 (17.2)
Secondary School	38.2 (6.2)	37.2 (5.2)	42.5 (6.7)	23.6 (11.7)	141.5 (20.2)
High School	36.5 (8.0)	35.8 (8.6)	39.5 (12.4)	22.3 (12.5)	134.3 (25.1)
University	31.5 (9.2)	38.3 (6.9)	35.5 (11.3)	22.8 (6.9)	128.1 (19.3)
<i>df:4</i>	<i>KW: 5.79 p > 0.05</i>	<i>KW: 4.66 p > 0.05</i>	<i>KW: 5.23 p > 0.05</i>	<i>KW: 9.59 *p < 0.05</i>	<i>KW: 3.22 p > 0.05</i>
Marital Status					
Married	34.8 (7.6)	34.8 (7.1)	37.8 (9.6)	24.8 (8.9)	132.3 (18.7)
Single	37.2 (5.3)	36.3 (6.7)	41.5 (8.1)	21.8 (11.1)	137.0 (14.4)
<i>df:180</i>	<i>t:1.20 p > 0.05</i>	<i>t:.77 p > 0.05</i>	<i>t:1.44, p > 0.05</i>	<i>t:1.19 p > 0.05</i>	<i>t:.94 p > 0.05</i>
Occupation Situation					
Employed	35.82 (8.0)	34.82 (8.2)	38.22 (11.1)	22.72 (9.4)	131.8 (21.4)
Unemployed	34.8 (7.3)	34.9 (6.7)	38.1 (9.1)	25.1 (8.9)	132.9 (17.6)
<i>df:180</i>	<i>t:.78 p > 0.05</i>	<i>t:.02 p > 0.05</i>	<i>t:.11 p > 0.05</i>	<i>t:1.48 p > 0.05</i>	<i>t:.35 p > 0.05</i>
Treatment Characteristics					
Radiotherapy	31.2 (10.8)	36.0 (10.0)	36.0 (12.2)	30.7 (5.1)	134.0 (30.2)
Chemotherapy	35.3 (7.2)	35.0 (7.3)	38.1 (9.6)	24.1 (9.1)	132.5 (18.0)
Radiotherapy and chemotherapy	35.1 (8.3)	33.8 (5.3)	40.1 (9.5)	24.6 (9.1)	133.8 (23.4)
Chemotherapy + surgery + Radiotherapy	33.3 (7.7)	34.2 (5.6)	35.9 (8.6)	26.5 (8.9)	129.9 (16.6)
Chemotherapy + surgery	41.2 (6.2)	41.2 (6.2)	47.5 (6.3)	20.7 (12.2)	150.7 (10.0)
<i>df:4</i>	<i>KW: 5.23 p > 0.05</i>	<i>KW: 4.39 p > 0.05</i>	<i>KW: 7.01 p > 0.05</i>	<i>KW: 4.22 p > 0.05</i>	<i>KW: 5.69 p > 0.05</i>
Stage of Cancer					
I	25.5 (8.3)	35.7 (4.7)	30.2 (16.3)	23.0 (11.4)	114.5 (16.6)
II	35.1 (7.6)	35.5 (7.0)	38.1 (9.7)	23.9 (9.3)	132.7 (19.4)
III	35.6 (6.7)	33.3 (7.1)	38.3 (8.7)	26.6 (7.4)	134.0 (16.6)
IV	35.4 (7.0)	34.3 (7.7)	39.0 (7.4)	24.8 (10.2)	133.6 (13.3)
<i>df:3</i>	<i>KW: 5.01 p > 0.05</i>	<i>KW: 3.61 p > 0.05</i>	<i>KW: 1.22 p > 0.05</i>	<i>KW: 3.42 p > 0.05</i>	<i>KW: 3.84 p > 0.05</i>

Table 4. *The relationship between the life attitude profile or its subscales and demographic and disease characteristics of the participants*

Other Characteristics	Subscales of Life Attitude Profile				Total <i>r</i>
	Purpose <i>r</i>	Coherence <i>r</i>	Choice/Responsibleness <i>r</i>	Goal Seeking <i>r</i>	
Age (years)	0.021	-0.124	-0.035	0.253***	0.068
Monthly income of family (US \$)	0.148*	0.157*	0.112	-0.126	0.116
Diagnosis duration (years)	-0.113	-0.090	-0.118	0.184*	-0.051
Severity symptoms	-0.084	-0.114	0.013	0.037	-0.052
Interfere symptoms	-0.005	-0.098	0.111	0.049	0.042

***Correlation is significant at the 0.001 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

In this study, the mean score of the total meaning in life stated that the patients had low motivation to find meaning and purpose in life. The scores of the meaning in life showed that there was loss of meaning in life in Turkish patients with cancer. The mean score of the coherence indicated that the patients had an integrated and consistent understanding of self, others, and life. The goal seeking subscale score showed that the patients desired to search for new and different experiences (Table 2). Bauer-Wu and Farran (2005) found mean score of total meaning in life was 81.4 points in women with breast cancer. Differently, a previous study established that the meaning in life of patients with cancer's scores were higher (Thompson, 2007). It may be thought that scores of the meaning in life of the patients vary as depend on country and culture. Breitbart and Heller (2003) stated that those were the patients who knew they were going to die and the cancer had robbed them of many of the usual sources of meaning in their lives. Also, culture supplies people with the provisions to derive meaning from life. Thus, the search for meaning appears to be influenced by culture, and search for meaning appears to moderate cultural influences on presence of meaning (Steger & Kashdan, 2007). Patients who are confronted with cancer tend to search for a meaning in that experience (Moore, 1997; Richer & Ezer, 2002; Coward & Kahn, 2005).

It was found that gender, marital status, occupation situation, treatment characteristics, stage of cancer of the patients were no influence on the meaning in life and its dimensions in this study. Skrabski et al. (2005) determined that meaning in life relatively unrelated to gender. Also, one previous study found that meaning in life was uncorrelated with socio-demographic variables (employment, spousal status, disease characteristics) (Jim et al., 2006). These findings of this study are similar to those of other studies.

In the study, education level of the patients was effective on goal seeking dimension of the meaning in life and literate patients with cancer had higher score of goal seeking (Table 3). Jim et al. (2006) indicated that education level affected life attitude profile. Skrabski et al. (2005) clarified that education level was less closely related to life attitude profile. These results of the current study are compatible with those of other studies.

In the present study, age was positive correlated with the goal seeking dimension ($r = 0.253^{***}$). Steger and Kashdan (2007) found that age was important predictor for life attitude profile. Thompson (2007) found that breast cancer survivors aged 50–59 years scored significantly higher on meaning of life than survivors aged 36–49 years. Additionally, Skrabski et al. (2005) declared that age was effectual on meaning of life. Younger cancer patients have been found to experience more meaning in life (Schroevens et al., 2004). It may be that younger patients with cancer poses a greater sense of threat, because it is more interfering with their developmental stage, while older patients may already have learned most of their lessons of life (Jaarsma et al., 2007). These findings in this study are compatible with those of other studies.

There was a significant positive correlation between monthly income of the patients' families (US\$) and the purpose or coherence dimensions in this study. Jaarsma et al. (2007) found that the experience of meaning in life was also related to trait-like characteristics as personality. Diagnosis duration (years) was positive connected with the goal seeking dimension (Table 4). Park et al. (2008) established that there was a positive relationship between increased life meaning and over time.

The results of this study point that education level, age, monthly income of family, and diagnosis duration of the independent variables were effective predictors for meaning in life.

CONCLUSION

The findings of this study provide support for potential clinical application and future research related to meaning in life and predictor factors in patients with cancer. Nurses and other health care providers can assist the patients in expressing and processing their psychological or provide referrals to counselors, chaplains, which might help to alleviate physical, mind, and emotions health consequences. This information may be used in nursing education to develop continuing education programs for nurses and other health care providers.

The results of the study have implications for nursing practice. First, nurses should be aware that meaning in life may be related to demographic and disease/treatment characteristics. That awareness should lead to assessment of a sense of life meaning or purpose in patients and survivors. Assessment may lead to determination of a potential source of meaning for individuals and guide nurses in possible interventions or referrals.

The present study can be only a beginning to understanding the meaning in life and its relation to demographic and disease/treatment characteristics of patients with cancer. The study findings add to the growing body of nursing literature. The literature review revealed need for more studies relating evaluate meaning in life and its predictors. Further studies would be useful regarding how evaluate meaning in life and its predictors can aid health professionals to better identify the patients' evaluate meaning in life and its predictors. The meaning in life should be studied in various forms of cancer to determine whether meaning in life changes throughout the process of diagnosis, during treatment, following treatment, and during advanced stages of cancer. In Turkey, the results of this study have to be taken into consideration in the related areas of this issue. The meaning in life and its predictors should be further evaluated with a large and enough sample size at different regions of Turkey and diverse populations in different cultures of world.

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