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The Meaning of Life and Self-Efficacy in Coping with Cancer

Kanserle Başa Çıkmada Özyeterlik ve Yaşamın Anlamı

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ABSTRACT

Objective: This study was performed to determine the relationship between the cancer patients' level of meaning of life and the level of self-efficacy in coping with cancer, and the factors impacting this relation.

Materials and Methods: The sample of this cross-sectional study consisted of 177 adult patients hospitalized in the Medical Oncology Clinic. The data were collected using the Personal Information Form, the Meaning and Purpose in Life Scale (MPLS), and the Cancer Behavior Inventory-Brief Version (CBI-B).

Results: A significant difference was determined between the median scores of MPLS and the CBI-B scale in terms of age, marital status, educational status, income status, and employment status of the patients ($p<0.05$). A statistically positive significant correlation was found between the mean values of MPLS and CBI-B total scores ($p<0.05$).

Conclusion: As the meaning in the lives of cancer patients increases, their self-efficacy levels in coping with cancer increases.

Keywords: Cancer, coping with cancer, self-efficacy

ÖZ

Amaç: Bu çalışma; kanser hastalarının hayatındaki anlam düzeyi ile kanserle başa çıkmada özyeterlik düzeyleri arasındaki ilişkiyi ve etkileyen faktörleri belirlemek amacıyla yapıldı.

Materyal ve Metot: Kesitsel türdeki bu çalışmanın örneklemini Medikal Onkoloji Kliniğinde yatarak tedavi gören, çalışmaya katılmayı kabul eden yetişkin 177 hasta oluşturdu. Veriler Kişisel Bilgi Formu, Hayatın Anlam ve Amacı Ölçeği (MPLS) ve Kanser Davranış Envanteri-Kısa Versiyon (CBI-B) ile toplandı.

Bulgular: Hastaların yaşı, medeni durumları, eğitim durumları, gelir durumları ve çalışma durumlarına göre MPLS ve CBI-B ölçek puan ortancaları arasında istatiksel olarak anlamlı bir fark bulundu ($p<0,05$). MPLS ve CBI-B toplam puan ortalamaları arasında istatistiksel olarak pozitif yönde anlamlı bir ilişki saptandı ($p<0,05$).

Sonuç: Kanser hastalarının hayatlarındaki anlam arttıkça kanserle başa çıkmada özyeterlilik düzeyleri artmaktadır.

Anahtar Kelimeler: Kanser, kanserle başa çıkma, özyeterlik

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INTRODUCTION

Cancer leads to great changes in the lives of individuals and causes them to feel that the coping mechanisms they have used until that time are inadequate. The idea that their future will change, the feeling of inability to control their lives, and the perception of uncertainty will cause them to lose their sense of meaning and experience great challenges in maintaining their sense of purpose. The meaning and purpose in life assist individuals in maintaining their well-being, coping better with the disease, and having a better quality of life.[1,2] The notion of meaning and purpose of life is described in various forms by many theorists. It is stated that individuals who have the expectations they want to realize in life in the face of challenges and agonies are more resistant. At the same time, individuals find meaning in their lives by developing an attitude towards the inevitable suffering.[3] Moadel et al.[4] revealed in their study, which was performed on cancer patients, that 40% of the patients needed to find meaning in life among their existential needs. The fact that cancer patients have a meaning and purpose in life assists them to organize their stressful experiences in life and perceive the disease less negatively.[5] In recent years, the significance of self-efficacy in the cancer management has increased. Cancer patients' self-efficacy in coping with symptoms has been shown to be associated with emotional and social well-being as well as physical symptoms and side effects.[6,7] Moreover, the evidence obtained from the studies of Bandura examining the practices of the self-efficacy theory in oncology also demonstrated that self-efficacy is effective in adapting to cancer, enhancing the personal care of patients, and lessening physical and mental symptoms.[8,9] It is predicted that the destructive factors that occur in the lives of cancer patients will cause individuals to experience more painful emotions, change the meaning and purpose of life by changing life conditions abruptly and rapidly, and ultimately decrease their level of self-efficacy in coping with the disease. The number of studies discussing the meaning of life and self-efficacy levels of cancer patients is very limited in the literature.[4-7]

This study was planned to determine the relationship between the cancer patients' level of meaning of life and the level of self-efficacy in coping with cancer, and the factors impacting this relation.

MATERIALS AND METHODS

Ethics Committee Approval: The study was approved by the Scientific Research Ethics Committee of Medical Faculty at Trakya University (Date: 08.04.2019, decision no:07/17). The study was conducted according to the ethical principles outlined by the World Medical Association's Declaration of Helsinki. After explaining the study's objective, written and verbal consent were obtained from the patients included in the study.

Research Type and Questions: This was a cross-sectional study. The following are research:

1. Is there a correlation between the self-efficacy levels of cancer patients and the meaning of life?
2. What are the factors impacting the self-efficacy levels of cancer patients?
3. What are the factors impacting the meaning of life in cancer patients?

Population and Sample: The population of the study consisted of those in the Medical Oncology Clinic of a university hospital between September and October 2019. For the sample selection, the sample calculation formula with the known population was utilized. A total of 177 adult patients were included in the sampling based on the calculation made at 95% confidence level, 5% tolerance, and 90% power. Patients diagnosed with cancer within less than 1 year were not included in the study.

Personal Information Form: This form consisted of 9 questions, including 7 questions containing the personal information of the patients (age, gender, marital status, educational status, financial situation, employment status, and having chronic diseases), and 2 questions containing variables related to cancer (the type of cancer and treatment).

The Meaning and Purpose in Life Scale (MPLS): This self-administered scale, developed by Aydın et al.[10], was generated to determine the meaning levels of individuals in their lives. This scale, which consists of 17 items and is administered in a 5-point Likert-type, has two sub-dimensions as meaning and purpose of life, the meaninglessness of life, and lack of purpose. Items 4, 8, 10, 13, 14, and 16 are reverse coded in the scale. While the highest score on the scale is 85, the lowest score can be 17. As the score level increase, the level for meaning of life increases. The Cronbach Alpha internal consistency coefficient of this scale is 0.81. In the study, the Cronbach Alpha internal consistency coefficient was determined to be 0.91.

Cancer Behavior Inventory-Brief Version (CBI-B): This inventory, which was developed by Heitzmann et al.[6], was adapted into Turkish by Iyigun et al.[11]. It is a one-dimensioned 12-item measurement tool, which was designed to assess the self-efficacy of cancer patients in coping with the disease. Each item of this 12-item scale is scored between 1 to 9 points. As the score level increases, the higher self-efficacy to cope with the disease increases. The Cronbach alpha coefficient for each sample of this scale, assessed on three sample groups, was determined to be 0.84, 0.84, and 0.88, respectively. In the study, the

Cronbach Alpha internal consistency coefficient was determined to be 0.85.

Statistical Analysis: The software of Statistical Package for Social Science for Windows 21 (SPSS, v. 21.0) was used to perform the statistical analysis of the study. After assessing the distribution normality of the variables using Shapiro-Wilk, percentage and frequency were used for nominal variables, and standard deviation, mean and median values were used for ordinal variables. The Spearman correlation analysis test was used to determine the correlations between variables. The Mann-Whitney U and Kruskal-Wallis tests were used to compare independent variables with total scale scores. The results were considered statistically significant at $p<0.05$.

RESULTS

Whereas no significant difference was determined between the medians of MPLS and CBI-B scale scores, regarding the gender of the patients, the presence of chronic disease, the time of diagnosis, and the type of cancer ($p>0.05$); a significant difference was determined between the groups regarding the age, marital status, educational status, financial situation, and employment status of the patients (Table 1).

The mean score of the patients included in the study was determined as follows; the mean MPLS total score was 69.54±11.93, the median value of it was 71.00 and mean of CBI-B total score was 81.42±15.53, and the median value of it was 84.00 (Table 2).

Based on the performed Spearman Correlation analysis in Table 3, a moderately significant positive correlation was determined between the patients' MPLS and CBI-B total scores (r:0.598, $p<0.001$).

Table 1. Comparison of participants' personal characteristics with MPLS and CBI-B (n=177).

Variable		MPLS Total		CBI-B	
	Mean±SD	r	p	r	p
Age	60.15±13.31	-0.238	0.001	-0.172	0.022
	n (%)	**Median (Q1-Q3)**		**Median (Q1-Q3)**	
Gender					
Female	88 (49.7)	71.00 (62.50-81.75)		86.50 (7.00-96.00)	
Male	89 (50.3)	70.00 (60.00-79.00)		82.00 (68.50-91.00)	
		Z=4.306 p=0.251		Z=4.584 p=0.050	
Marital status					
Single	17 (9.6)	70.00 (53.50-73.50)		82.00 (72.00-93.00)	
Married	160 (90.4)	71.00 (61.25-81.00)		84.00 (74.00-94.00)	
		Z=1.105 p=0.042		Z=1.332 p=0.031	
Education status					
Illiterate	18 (10.2)	65.00 (55.75-72.25)		76.50 (68.25-90.75)	
Primary School	109 (61.5)	70.00 (61.00-79.75)		79.71 (69.00-93.00)	
High school and above	50 (28.3)	76.00 (68.00-82.00)		89.00 (82.00-96.00)	
		X^2=10.079 p=0.06		X^2=8.178 p=0.017	
Financial situation					
Poor	14 (7.9)	58.50 (46.00-61.00)		70.50 (55.00-85.25)	
Medium	138 (78.0)	71.00 (62.00-81.00)		84.00 (72.00-93.00)	
Good	25 (14.1)	71.00 (65.50-78.50)		90.00 (79.50-96.00)	
		X^2=14.735 p=0.001		X^2=7.878 p=0.019	
Employment status					
Employed	27 (15.3)	77.00 (66.00-83.00)		93.00 (79.00-97.00)	
Unemployed	150 (84.7)	70.00 (61.00-79.00)		82.00 (69.75-90.00)	
		Z=1.498 p=0.031		Z=1.338 p=0.005	
Chronic disease status					
Yes	97 (54.8)	70.00 (60.50-79.50)		82.00 (69.00-94.50)	
No	80 (45.2)	71.00 (62.00-81.00)		87.00 (73.25-93.75)	
		Z=3.672 p=0.540		Z=3.478 p=0.236	
Cancer type					
Lungs	46 (26.0)	70.00 (60.00-79.00)		79.50 (72.00-91.50)	
Breast	48 (27.1)	71.00 (64.50-82.00)		89.50 (73.00-97.00)	
Gynecological	9 (5.1)	82.00 (67.50-85.00)		86.00 (79.50-95.50)	
Gastrointestinal	44 (24.9)	70.00 (61.00-77.75)		84.00 (63.00-93.00)	
Other (urinary system etc.)	30 (16.9)	69.00 (56.75-79.00)		81.00 (62.25-89.50)	
		X^2=5.577 p=0.233		X^2=7.478 p=0.113	
Time of Diagnosis					
1-5 years	157 (88.7)	71.00 (61.00-81.00)		88.00 (81.50-95.50)	
6-10 years	10 (5.6)	67.50 (64.25-74.75)		81.00 (61.50-91.25)	
11 years and above	10 (5.6)	67.50 (55.25-74.00)		84.00 (72.00-95.00)	
		X^2=1.598 p=0.450		X^2=1.578 p=0.454	

SD: Standard deviation; Z=Whitney U test; X^2=Kruskal Wallis test.

Table 2. Distribution of participants' MPLS and CBI-B median and mean scores.

	Median (Q1-Q3)	Mode	Mean±SD	Min-Max
Meaning and purpose of life sub-dimension	47.00 (42.00-52.00)	55.00	46.52±7.14	11-55
Meaninglessness of life and lack of purpose sub-dimension	24.00 (19.00-28.00)	30.00	23.02±5.74	6-30
MPLS Total	71.00 (61.00-80.00)	85.00	69.54±11.93	17-85
CBI-B Total	84.00 (72.00-94.00)	89.00	81.42±15.53	12-108

MPLS: The Meaning and Purpose in Life Scale; CBI-B: Cancer Behavior Inventory-Brief Version; SD: Standard deviation; Min.: Minimum; Max.: Maximum.

Table 3. The relationship between MPLS and CBI-B.

		CBI-B Total
MPLS Total	r	0.598*
	p	0.000

MPLS: The Meaning and Purpose in Life Scale; *: Spearman correlation test p<0.001.

DISCUSSION AND CONCLUSION

How cancer patients cope with the destructive factors that occur during the diagnosis and treatment stages and how they make sense of life are among the increasingly important issues in recent studies.[12,13] Hence, this study was designed to determine the correlation between cancer patients' meaning in their lives and their self-efficacy level in coping with cancer and the factors impacting them.

A positive and significant correlation was determined between the ages of the patients included in the study and the mean score of MPLS and CBI-B. Aftab et al.[14] revealed that individuals' life meaning resources were lost due to reasons such as the health problems of individuals experienced after the age of sixty, the change in their social life following retirement, the loss of a family or loved one, and that elderly individuals are in search of a meaning in life. Moreover, Serpentini et al.[15] found in their study, which was performed on cancer patients in palliative care, that patients aged older than 62 years stated a higher self-efficacy level than younger patients. Considering the findings, which support the result of the study, as the age increases, the meaning of life of the patients with cancer and their self-efficacy to cope with cancer also increase. The potential for coping with problems increases with the increasing experience against the challenges faced in life as the age gets older.

While it was determined that the median of MPLS and CBI-B total scale score was higher in female patients who were included in the study compared to male patients, and the mentioned median scores were higher among patients without any other chronic disease than patients with another chronic disease, and there was no significant difference between the groups. Similar to the results of the studies performed by Erci,[16] Gravier et al.,[17] and Tomás-Sábado et al.,[18] it was found that there is no significant difference between the sex of cancer patients and the mean of MPLS. Regardless of sex, all diseases trigger more or less fear of death in individuals. This fear causes patients to experience an internal conflict in the face of their desire to recover and continue their lives. It can be suggested that having other long-term health problems apart from cancer might adversely impact the meaning of life and coping with the disease in individuals by inducing internal conflict.

It was determined that the median of the total scale scores of the MPLS and CBI-B were statistically higher in married patients included in the study compared to single patients, and it was higher in patients who are at least high school graduates compared to illiterate and primary school graduates. In the study, it is estimated that as married individuals have more roles in life than single individuals, they would have more desire to achieve the meaning and goals of life, and it is considered that the social support, which married cancer patients receive from their environment, and meaningful relationships would also enhance their self-efficacy in coping with the disease. Gravier et al.[17] found out that cancer patients' having a high education level increase the meaning of life in these patients. This finding is in line with the results of our study. It is considered that education would increase the self-efficacy in coping by helping individuals to understand better their emotions, thoughts, behaviors and life experiences, and the process of self-recognition.

In the study, it was determined that the median of the MPLS and CBI-B total scale scores were significantly higher in the patients with good income compared to the patients with middle and poor income and in the working patients compared to the patients who did not work. It is well-known that patients

experience financial difficulties during the long-term illness period that begins with a cancer diagnosis. While it is suggested that financial difficulties negatively affect the self-efficacy of patients,[19] it can be stated that this situation might impact the meaning and purpose of life as well.

In the study, no significant difference was determined between the groups in terms of the type of disease and the duration of the disease. It was determined that those with the first 5 years of their illness had higher mean MPLS and CBI-B total scale scores. Mystakidou et al.[20] stated that the perceived general self-efficacy of patients receiving radiotherapy decreased with the progression of the disease. The results of the study are in line with the literature. The fact that the cancer diagnosis period is over five years suggests that the disease recurs after a long time, as a result, it can be stated that the life purpose resources of the patients might have changed, and their self-efficacy might be affected adversely.

In the study, a positive and significant correlation was found between the patients' level of meaning in life and their self-efficacy in coping with cancer. As the meaning in patients' lives increases, the level of self-efficacy increases as well. Winger et al.[21] stated that the meaning of life in cancer patients provides support at various stages of coping with the disease and plays a crucial role in the adaptation process.

In conclusion, it was determined that as the meaning in the lives of cancer patients increased, their self-efficacy in coping with cancer also increased. Moreover, it was determined that the meaning of life and self-efficacy level of cancer patients were affected by factors such as age, marital status, educational status, comorbidity of another chronic disease, and income status. In this regard, it is suggested that nurses should counsel patients with cancer to participate in psychotherapies and psychosocial support programs such as Logotherapy, known as meaning therapy for cancer patients. Furthermore, it is suggested that nurses working in the field should consider variables such as age, marital status, and the presence of any comorbid chronic disease when planning psychosocial support interventions in their care.

Ethics Committee Approval: The study was approved by the Scientific Research Ethics Committee of Medical Faculty at Trakya University (Date: 08.04.2019, decision no:07/17). The study was conducted according to the ethical principles outlined by the World Medical Association's Declaration of Helsinki. After explaining the objective of the study, the written and verbal consents were obtained from the patients included in the study.

Conflict of Interest: No conflict of interest was declared by the authors.

Author Contributions: Concept- NAS, SK; Supervision- NAS; Materials- NAS, SK; Data collection and/or processing- NAS, SK; Analysis and/or interpretation-NAS, SK; Writing-NAS, SK.

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