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Investigation of Hope, Social Support Level, Relationship, and Affecting Factors in Patients with Gynecological Cancer

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Abstract

Background: Cancer is a deadly disease that affects individuals deeply. The hope of healing of patients and the social support they receive are important in coping with cancer.

Aim: The aim of this study was to determine the hope and social support levels of patients with gynecological cancer and the relationship between them, and the factors affecting hope and social support.

Methods: This is an analytical cross-sectional study. Random sampling method was applied in sample selection. One hundred fifteen women with gynecological cancer, whose treatment is still ongoing, were included in the study. The data were collected using the Introductory Information Form, Herth Hope Index, and Cancer Patient Social Support Scale. For statistical analysis, number and percentage calculation, multiple linear regression analysis, and Pearson correlation analysis were used.

Results: The mean age of the patients was 58.91 ± 8.68 years; 77.3% were primary school graduates, and 76.5% were married. The mean score of the Herth Hope Index of the patients was 34.80 ± 4.92, and the mean score of the Cancer Patient Social Support Scale was 132.76 ± 21.36. A positive significant and moderate relationship was found between the Herth Hope Index mean score and the Cancer Patient Social Support Scale mean score (r=0.664, P < .001). According to the regression analysis, the hope level of women with the disease in the second stage was higher (B=4.163, P < .05), and the social support level of women with medium or high income was higher (B=10.502, P < .05).

Conclusion: The stage of the cancer affects the hope level, and the income level affects the social support. The hope level of patients with second-stage gynecological cancer is higher. The higher the income level, the higher the level of social support. In patients with gynecological cancer, patients with high social support scores received from the family have high hope scores. It is thought that efforts to evaluate and increase the social support that patients receive from the family can be effective in increasing the hope levels of the patients.

Keywords: Gynecologic cancer, hope, social support

Introduction

Cancer is an important public health problem as it ranks second among the causes of death in the world.[1] Cancer, which is the common problem of all humanity regardless of age, race, gender, religion, or language, has caused death of nearly 10 million people worldwide in 2020, and 19.3 million new cancer cases have emerged.[2,3] Cancer cases and cancer-related deaths are increasing day by day, and cancer is continuing to be a global problem.[3]

Being diagnosed with cancer and the accompanying treatments affect patients negatively in many ways.[4] Gynecological cancers also make it difficult to cope with by causing various physical, psychological, and social changes in the female body.[4] Physical problems such as menopause, infertility, and sexual dysfunction as a result of surgical treatments within the scope of gynecological cancer treatment, changes in femininity identity and body image, psychological problems such as recurrence and fear of death, and social problems such as low self-perception and negative impact on quality of life have been identified.[5,6] It has been stated that patients with gynecological cancer experience disappointment, hopelessness, depression, anger control disorder, and problems in sexual life.[7] The quality of life of individuals decreases due to physical, psychological,

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and socioeconomic problems related to cancer and treatments, and accordingly, the hope levels of patients decrease.

Hope is a healing element that strengthens the psychological and physiological defense of the individual with cancer, as well as a source of strength for coping with difficulties and getting rid of grief.[8] Hope contributes positively to the life energy of the individual diagnosed with cancer and helps to overcome the illness and loss process better, to reduce the feelings of uncertainty and helplessness, to coping with better cancer, to adapt to the disease, and to maintain the state of well-being.[9] Hope for cancer patients is recognized as one of the most important and effective coping styles in overcoming cancer during treatment.[10]

People with a high level of hope tend to see illness as a natural part of life, as a process that will strengthen and improve themselves, instead of giving up the fight and remaining passive or complaining in case of illness.[11] It is known that hope plays an important role in the lifespan of patients, their level of perception of pain during the treatment process, and the determination of suicide risks.[12] The fact that nurses who care for cancer patients take into account the hope of recovery and the factors affecting the hope ensures that patients are given better quality care.[13]

Social support, just like hope, has an important place for cancer patients to cope with.[14] The presence or absence of social support may be an important factor influencing the development and progression of cancer.[15] Social support leads the cancer patients to believe that they are interested for and accepted by other people.[16] The existence of supportive interpersonal relationships has the potential to positively influence cancer-related well-being.[17] It has been shown that social support reduces loneliness in cancer patients, strengthens strategies to cope with loneliness,[18] and contributes positively to quality of life.[17,19] In a study conducted with patients with gynecological cancer, it was found that as the perceived social support from family, friends, and a special person increased, effective coping methods with stress increased.[20] Öztunç et al[21] showed that hopelessness levels were low in cancer patients with high perceived social support. Other studies have also stated that there is a relationship between social support and hope in cancer patients.[22-24]

Although there are studies to determine the relationship between hope and social support in cancer patients, no study has been found on patients with gynecological cancer in our country. It is thought that examining the relationship between hope and social support in cancer patients will guide the health personnel to increase hope and social support in patients.

Aim

The aim of this study was to determine the hope and social support levels of patients with gynecological cancer and the relationship between them, and the factors affecting hope and social support.

Research Questions

- Is there a relationship between hope and social support level of patients with gynecological cancer?
- What are the factors affecting the hope level of patients with gynecological cancer?
- What are the factors affecting the social support level of patients with gynecological cancer?

Materials and Methods

This research was an analytical cross-sectional study and was conducted between September 2017 and September 2018. The population of the study consisted of 312 women who were diagnosed with gynecological cancer and continuing their treatment in the outpatient chemotherapy unit. Random sampling method was used in sample selection. Before starting this study, the sample size was calculated using the sampling method, where the population is known,[25] i.e., 172 patients were planned to be included in the study.

$$n = \frac{N \times t^2 \times (p \times q)}{d^2(N-1) + t^2 \times (p \times q)}$$

where N is the number of individuals in the population, n is the sample size, p is the frequency of incidence of the event under consideration (expected prevalence), q is the frequency of absence of the event under consideration (expected non-prevalence), t is the theoretical value obtained from the table t at a certain degree of freedom and the level of error determined, and d is according to the frequency of occurrence of the event desired to be done ± deviation[25]

$$\frac{312 \times (1.96 \times 1.96)(0.5 \times 0.5)}{(0.05 \times 0.05) \times (312-1) + (1.96 \times 1.96) \times (0.5 \times 0.5)} = 172$$

However, 135 women with gynecological cancer who continued chemotherapy treatment and agreed to participate in the study could be reached. Twenty of the women were excluded from the study because they filled in the questionnaires incompletely. The study was completed with a total of 115 women with gynecological cancer.

Instruments

Data were collected using 3 forms: "Introductory Information Form," "Herth Hope Index," and "Cancer Patient Social Support Scale (CPSSS)."

Introductory Information Form

This form prepared by the researchers in line with the literature consists of 12 questions including age, education status, marital status, income status, work status, family type, cancer type, cancer stage, diagnosis duration, treatments, psychological support status, and social support resources.[18,19,22,24]

Herth Hope Index

It is an index developed by Dr. Kaye Herth and used to measure hope in patients.[26] There are 12 items within the scope of the index. There are 4 options for each item: "strongly disagree" (1 point), "disagree" (2 points), "agree" (3 points), and "strongly agree" (4 points). The index consists of 3 subscales: "future," "positive readiness and expectation," and "interconnectedness." The total score of the scale is between 12 and 48. High scores indicate that hope is high. The Turkish validity and reliability of the scale was performed on cancer patients in 2003, and the Cronbach's alpha coefficient was calculated as 0.75. This value indicates that the index is "quite reliable."[27] The Cronbach's alpha coefficient of the scale in this study was 0.86.

Cancer Patient Social Support Scale

It is a 5-point Likert-type scale developed by Eylen[28] in order to determine the type and level of social support that cancer patients think

they receive from their families. Each item is evaluated as "very suitable for my situation" (5 points), "suitable for my situation" (4 points), "partially suitable for my situation" (3 points), "not suitable for my situation" (2 points), and "not suitable for my situation at all" (1 point). Of the items in the measurement tool, which consists of 35 items, 13 are negative and 22 are positive statements. The scale consists of 3 subscales: emotional support, information support, and trust support. A high score obtained from the scale indicates that the social support that the cancer patient perceives from her family is high. The Cronbach's alpha coefficient of the scale was found to be 0.92.[28] The Cronbach's alpha coefficient of the scale in this study was 0.96.

Data Collection

The study was conducted in an Outpatient Daily Medical Oncology Centre affiliated to a university hospital located in Western Turkey. The questionnaires were completed by the patients in an average of 15 minutes. Data collection tools were given to gynecological cancer patients, and they were filled in independently from the researchers.

Ethical Aspect of Study

The ethical approval of the study (dated July 4, 2017, and numbered 09) was obtained from the ethics committee of Pamukkale University where the study was conducted and written permission was obtained from the relevant hospital. Patients eligible to sample characteristics were informed about the purpose of the study and explained that participation was voluntary. Written and verbal consents were obtained from the patients who agreed to participate in the study. In addition, permission from the owners of the scales used in the research was obtained via e-mail.

Statistical Analysis

The data were evaluated with the Statistical Package for Social Sciences 22.0 (IBM SPSS Corp.; Armonk, NY, USA) package program. Numbers and percentages were used in the evaluation of the data regarding the personal characteristics of the patients. Skewness and kurtosis values were examined to determine the conformity of the data to the normal distribution. Since the skewness (−0.020, −0.662) and kurtosis (−0.034, −0.035) values are between +1.5 and −1.5, the data are in accordance with the normal distribution.[29] Multiple linear regression analysis was performed to analyze the effect of independent variables on patients' hope level and social support. In addition, Pearson correlation analysis was performed to determine the relationship between hope and social support.

Results

Sociodemographic information, details regarding gynecological cancer, and social support characteristics of the patients are given in Table 1. The mean age of women was 58.91 ± 8.68 years, 77.3% of them are primary school graduates, 76.5% are married, 67% of them have income equal to their expenses, 82.6% of them do not work in any job, 82.6% of them have nuclear family type, 51.3% of them have ovarian cancer, 62.6% of them do not know the stage of the cancer, 41.7% were diagnosed less than 12 months ago, and 41.7% of them are individuals who have undergone surgery + chemotherapy treatment. Among the patients, the rate of those who did not receive any psychological support was 94.8%, and the rate of those who stated that they did not have a source of social support was 4.3%. The social support resources of the women who stated that they received social

Table 1. Sociodemographic Information, Details Regarding Gynecological Cancer, and Characteristics Related to Social Support of the Patients (n=115)

Variables	n (%)
Age[a]	58.91 ± 8.68
Education status[b]	
Primary school	89 (77.3)
High school	18 (15.7)
University	8 (7.0)
Marital status[b]	
Married	88 (76.5)
Single	27 (23.5)
Income status[b]	
Low	36 (31.3)
Medium	77 (67.0)
High	2 (1.7)
Work status[b]	
Working	20 (17.4)
Not working	95 (82.6)
Family type[b]	
Nuclear family	95 (82.6)
Extended family	13 (11.3)
Other	7 (6.1)
Cancer type[b]	
Over	59 (51.3)
Endometrium	32 (27.8)
Cervix	20 (17.4)
Other (vaginal, vulvar, fallopian tube)	4 (3.5)
Cancer stage[b]	
Don't know	72 (62.6)
Stage 1	6 (5.2)
Stage 2	27 (23.5)
Stage 3	10 (8.7)
Diagnosis duration[b]	
Less than 12 months	48 (41.7)
1-2 years	37 (32.2)
3-5 years	20 (17.4)
More than 5 years	10 (8.7)
Treatments[b]	
Chemotherapy	20 (17.4)
Surgery + chemotherapy	48 (41.7)

(*Continued*)

Table 1. Sociodemographic Information, Details Regarding Gynecological Cancer, and Characteristics Related to Social Support of the Patients (n = 115) (*Continued*)

Variables	n (%)
Surgery + chemotherapy + radiotherapy	42 (36.5)
Chemotherapy + radiotherapy	5 (4.4)
Psychological support[b]	
No	109 (94.8)
Yes	6 (5.2)
Social support resources[b,c]	
No support	5 (4.3)
Spouse	72 (62.6)
Sibling(s)	9 (7.8)
Child(s)	56 (48.7)
Relative(s)	21 (18.3)
Friends(s)	9 (7.8)
Total	100 (100)

[a]Mean ± standard deviation. [b]Frequency. [c]More than one option is marked in this question.

Statistics on the patients' Herth Hope Index, CPSSS mean scores, and the correlation coefficient between the scales are given in Table 2. The patients' Herth Hope Index mean score was 34.80 ± 4.92, the "future" sub-dimension was 10.80 ± 1.98, the "positive readiness and expectation" sub-dimension was 11.51 ± 1.93, and the "interconnectedness" sub-dimension was 11.51 ± 1.93. CPSSS mean score was 132.76 ± 21.36, trust support mean score was 51.13 ± 8.67, emotional support mean score was 45.98 ± 8.15, and information support mean score was 35.64 ± 6.18. It was found that there was a positive, significant, and moderate correlation between the Herth Hope Index and CPSSS mean scores ($r = 0.664$, $P < .001$).

Multiple linear regression analysis was performed to determine the factors affecting the level of hope and social support, and the results are given in Table 3. The data were analyzed in terms of multicollinearity assumption, correlation coefficients between independent variables, variance inflation factor, and tolerance values. It was determined that there was no multicollinearity problem among the independent variables. After all these examinations, it was found that the data set was suitable for multiple linear regression analysis. Since it consisted of 4 categorical variables, artificial coding was applied to the "stage of cancer" variable, and 4 − 1 = 3 (k − 1) group was obtained. The stage of cancer affected the hope level of patients. Women with second-stage gynecological cancer had higher hope levels ($B = 4.163$, $P = .047$).

According to multiple linear regression analysis, income status affects the social support level of patients. Social support level is higher in patients with middle- or high-income status ($B = 10.502$, $P = .024$).

Discussion

In this study, it was found that the Herth Hope Index total score mean (34.80) of women diagnosed with gynecological cancer was moderate.

Table 2. Mean, Standard Deviation, and Correlation Coefficient Values of Herth Hope Index and CPSSS and Subscales

	Mean	SD	Herth Future	Herth Positive Readiness and Expectation	Herth Interconnectedness	Herth Total	CPSSS Trust Support	CPSSS Emotional Support	CPSSS Information Support	CPSSS Total
Herth future	10.80	1.98	1							
Herth positive readiness and expectation	11.51	1.93	0.733	1						
Herth interconnectedness	11.51	1.93	0.733	1.000	1					
Herth total	34.80	4.92	0.891	0.906	0.906	1				
CPSSS trust support	51.13	8.67	0.497	0.501	0.501	0.586	1			
CPSSS emotional support	45.98	8.15	0.576	0.545	0.545	0.647	0.913	1		
CPSSS information support	35.64	6.18	0.576	0.572	0.527	0.618	0.634	0.784	1	
CPSSS total	132.76	21.36	0.589	0.564	0.564	0.664	0.938	0.980	0.846	1

Pearson correlation analysis has been performed.
$P < .01$ for all correlation coefficient values in the table.
CPSSS, Cancer Patient Social Support Scale.

Table 3. Multiple Linear Regression Model of Factors Affecting Hope Level and Social Support

	Herth Hope Index				CPSSS			
Variables	*B*	SE	ß	*P*	*B*	SE	ß	*P*
Constant	32.958	2.143		**<.001**	124.079	9.776		**<.001**
Education status	−0.043	1.386			−0.416	6.322		
Primary school			Ref	.975			Ref	.948
High school and university			−0.004				−0.008	
Income status	1.048	1.004			10.502	4.579		
Low			Ref	.299			Ref	**.024***
Medium or high			0.099				0.229	
Work status	1.673	1.288			1.340	5.877		
Working			Ref	.197			Ref	.820
Not working			0.129				0.024	
Cancer stage[a]								
Comparing don't know and stage 1, 2, 3	0.247	2.090	0.024	.906	−0.686	9.535	−0.016	.943
Comparing stage 2 and stage 1 and 3, and don't know	4.163	2.074	0.360	**.047***	5.034	9.461	0.100	.596
Comparing stage 3 and stage 1 and 2, and don't know	0.796	2.486	0.046	.749	6.677	11.341	0.088	.557

[a]Dummy coding has been done. ß: Beta, S.E: Standard error, *$P < .05$. Herth Hope Index: $R = 0.422$, $R^2 = 0.178$, $F = 3.896$, $P < .001$.CPSSS: $R = 0.300$, $R^2 = 0.090$, $F = 1.782$, $P = .109$.

The "future" sub-dimension of the scale was found to be 10.80, the "positive readiness and expectation" sub-dimension was 11.51, and the "interconnectedness" sub-dimension was 11.51 points. In Aslan et al[27] study, the patients' Herth Hope Index general score mean was 38.51, the "future" subscale was 12.48, the "positive readiness and expectation" subscale was 9.84, and the "interconnectedness" subscale was 13.28, and it was stated that their hope levels were above the medium level. Similarly, other studies evaluating the level of hope in cancer patients stated that the hope level of the patients was generally slightly above the moderate level[30,31] or high.[32] Considering that hope has an important place in the adaptation of cancer patients to their disease and treatment process, the supportive role of health personnel is important in raising the hope level of the patients.

In this study, it was found that the CPSSS total score mean (132.76) was close to the middle level. From the CPSSS subscales, trust support mean score was 51.13, emotional support mean score was 45.98, and information support mean score was 35.64. Similarly, another study revealed that the mean score CPSSS of cancer patients was 136.4.[33] Kaykunoğlu,[34] in his study with cancer patients receiving chemotherapy, revealed that the patients' CPSSS total score mean was 141.38, the trust support subscale mean score was 56.50, the emotional support subscale mean score was 48.59, and the information support subscale mean score was 36.28. Another study, stated that cancer patients have a moderate level of social support.[14] Çalışkan et al[35] found that the social support level perceived by cancer patients was high (CPSSS total mean score 143.8).[35]

In this study, it was found that there was a positive, significant, and moderate correlation between Herth Hope Index and CPSSS scores in patients with gynecological cancer. Patients with high hope scores also have high social support scores. Similarly, other studies found a positive and significant relationship between hope and social support scores of cancer patients.[21,22,36,37] Aydın's[22] study reported that there is a statistically significant positive correlation between the hope level of cancer patients and the level of social support. Öztunç et al[21] stated that cancer patients with high perceived social support had low hopelessness levels.

In the present study, it was determined that the stage of cancer affects the hope level of the patients. It has been revealed that most patients do not know their cancer stage, and the level of hope of patients with gynecological cancer whose disease is in the second stage is higher than other patients. In Aydın's[22] study with cancer patients, a significant relationship was found between cancer stages and hope levels. The hope levels of those in the first stage were found to be lower than others. This finding can be explained by the fact that the adaptation process to chemotherapy treatment is more difficult in the early stages, negatively affecting hope.

In this study, it was determined that the income status of cancer patients affected the level of social support and that the social support level of patients with low income status was low. There are studies in the literature that support this finding.[22,38,39] In patients with low-income status, the low level of social support may be the result of the inability of the patient's relatives to provide adequate support

while trying to cope with the financial worries they experience due to expensive cancer treatments.

All these studies and the findings obtained from this research reveal the importance of increasing social support in reducing hopelessness. Health personnel should be aware of the hope and social support levels in gynecological cancer patients receiving chemotherapy, and families should be encouraged to support the patients.

Limitations

The first limitation of this study was that the sample size calculated at the beginning of the study could not be reached due to the small number of patients who accepted to participate in the study. In order to control this situation, regression analysis was conducted to determine the variables that may contribute to the examination of the factors affecting the dependent variables. The second limitation is that the results obtained are limited to the participants' reports.

Conclusion

According to the results of the study, patients with gynecological cancer who had high levels of social support from their families also had high levels of hope. The stage of the disease affected the level of hope. The hope levels of women with second stage gynecological cancer were higher than other patients. In addition, income status affected the level of social support. The level of social support of patients with low income was also low. It is thought that evaluating the social support networks of the patients, the social support received from the family, and interventions to increase this support may be effective in increasing the hope levels of the patients. Realizing the direct proportion between social support and hope and preferring supportive approaches while providing care by the healthcare providers will increase the level of hope of patients. In addition, it is recommended to consider that patients may have different levels of hope in different stages of cancer and plan the supportive care to be provided by healthcare providers by paying attention to this distinction.

Ethics Committee Approval: Ethics committee approval was received for this study from the Pamukkale University Committee of Non-Interventional Clinical Research's Ethics Committee (Date: July 4, 2017, No: 09).

Informed Consent: Written and verbal informed consent was obtained from all participants who participated in this study.

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