

## Research Article

## Caregiver Burden and the Level of Perceived Social Support of Caregivers Helping with Inpatient Care of Patients with Gynecologic Cancer

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### Abstract

**AIM:** This study aimed to determine the caregiver burden and the level of perceived social support of caregivers helping with inpatient care of patients with gynecologic cancer.

**METHOD:** This was a descriptive study. The research sample included 227 caregivers. These caregivers, whose informed consent was obtained, assisted in the inpatient care in gynecologic oncology clinics of 3 hospitals in Ankara, Turkey. The research data were collected using an information form developed to define the characteristics of patients and their caregivers. The Zarit Caregiver Burden Scale and the Multidimensional Scale of Perceived Social Support were used.

**RESULTS:** The average caregiving duration of the caregivers was 8.63±13.06 days. Their age, educational status, income, employment status, the number of children and duration of caregiving, sharing the caregiving, the difficulties faced during the caregiving significantly affected the caregiver burden and the perceived social support. It was found that there is a moderate, negative, and significant relationship between the scores of caregiver burden and perceived social support.

**CONCLUSION:** On the basis of these results, the nurses should adopt an integrated approach while providing care for patients with gynecologic cancer and plan the care by including the caregivers.

**Keywords:** Cancer, caregiver burden, caregivers, gynecology, social support

### Introduction

Cancer is one of the ever-increasing diseases in Turkey and worldwide. According to the 2009 cancer statistics, 96,000 men and 67,000 women are diagnosed with cancer every year in Turkey (Public Health Agency, 2017). Gynecologic cancers are the most commonly seen cancer types in women (Foundation for Women's Cancer, 2015).

Patients with gynecologic cancer and their relatives experience several psychological, social, financial, and emotional problems because of the physiology of the illness, its death-evoking nature, the loss of femininity, the treatment, and side effects of the treatment (Kreitler, 2019; Yaman & Ayaz, 2016). Therefore, health professionals need to plan a supportive care program for both patients and their caregivers (Papadopoulos et al., 2011).

In the Turkish culture, a relative helping an inpatient during their stay at the hospital is called "refakatçi"

(caregiver), and it is a traditionally accepted practice. These caregivers provide emotional support to the patients and meet their physical needs when necessary. Within this period, the caregivers may encounter financial and emotional problems while they enjoy accompanying their beloved ones (Balfe et al., 2016; Chen et al., 2017). Caregivers' problems that occur during this period are called "caregiver burden." As a result of increasing caregiver burden, caregivers experience fatigue, sleep deprivation, insufficient time for personal care, attention deficit, distress, depression, desire to cry, not wanting to talk, fear, despair, a decrease in social relations, and breakdown in family life and relationships (Chen et al., 2017; Dionne-Odom et al., 2017; Doherty et al., 2016; Isikhan, 2018; Johansen et al., 2018; Oksuz et al., 2013). In studies investigating the caregiver burden of those who provide care to a patient with cancer at home, it has been reported that the caregiver burden is high, this period is very exhausting for the caregiver, and their health is negatively affected (Isikhan, 2018;

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Kahrman & Zaybak, 2015; Teixeira & Pereira, 2013; Yakar & Pinar, 2013; Yeh & Chang, 2015).

Social support has been defined as resources provided by other persons. Social support is one of the factors affecting the caregiving burden of the individuals who help with patient care. It has been reported in previous studies that if the level of perceived social support of caregivers who assist in a patient's care at home is high, the caregiver burden is low (Mashayekhi et al., 2016; Shieh et al., 2012; Wang et al., 2016; Yang et al., 2019). As far as our literature search is concerned, there are no studies defining the caregiver burden and the level of perceived social support of caregivers helping with inpatient care of patients with gynecologic cancer. This study aimed to determine the caregiver burden and the level of perceived social support of caregivers helping with inpatient care of patients with gynecologic cancer.

### Research Questions

1. What is the level of caregiver burden of caregivers helping with inpatient care of patients with gynecologic cancer?
2. What is the level of perceived social support of caregivers helping with inpatient care of patients with gynecologic cancer?
3. Is there a correlation between the caregiver characteristics and the caregiver burden?
4. Is there a correlation between the caregiver characteristics and the perceived social support?
5. Is there a correlation between the caregiver burden and the perceived social support of caregivers?

## Method

### Study Design

This study was a descriptive research.

### Sample

The study sample included 560 caregivers recruited between May 01, 2014, and September 26, 2014, from the gynecologic oncology clinics of 3 university hospitals in Ankara, Turkey. The sample size was determined by sample size calculation used in known populations. The sample was selected by a stratified sampling method from the 3 university hospitals. According to the stratified sampling method, the sample included 227 caregivers in the gynecologic oncology clinics. Volunteer caregivers helping with inpatient care of patients with gynecologic cancer

aged more than 18 years and those who did not have any communication problems (verbal, visual, and auditory) and whose informed consent was obtained were included in this study.

### Data Collection

The caregivers stayed in the same room with their patients in the gynecologic oncology clinics of hospitals. The data were collected by interviewing the caregivers in a setting where the patients were absent. Areas where the caregivers felt good and could answer questions comfortably were chosen. Empty patient rooms or waiting areas in the clinics were used for this meeting. The researcher and caregiver met alone for privacy. Before giving the forms, the caregivers who met the inclusion criteria were informed about the study and a written consent was obtained. Caregivers who did not meet the inclusion criteria were excluded from the study. The information form and scales were filled by the caregivers themselves. The caregivers answered all questions about patients and themselves in the information form. No direct information was collected from the patients. The information about the diagnosis and stages was obtained from the patients' medical records. Each interview lasted an average of 30 minutes.

### Data Collection Tools

The research data were collected using an information form developed to define the characteristics of patients and their caregivers. Moreover, the Zarit Caregiver Burden Scale (ZCBS) and the Multidimensional Scale of Perceived Social Support (MSPSS) were used to determine the caregivers' burden and their perceived social support.

### Information Form

Information form, which was developed by the researchers in line with the literature, included 2 parts (Daly et al., 2009; Park et al., 2012; Teixeira & Pereira, 2013). In the first part, there were 13 questions aiming at identifying the patients' sociodemographic characteristics and defining the characteristics related to the disease. In the second part, there were 21 questions that investigated the caregivers' sociodemographic characteristics and defined their caregiving practice. The form was evaluated by 3 experts in this field (2 of them were women's health nurses and 1 was a public health nurse) before the application, and necessary revisions were made.

### **The Zarit Caregiver Burden Scale**

The ZCBS was developed by Zarit et al., 1980 and includes 22 items, which determine the effect of caregiving on the caregiver's life. As a 5-point Likert-type scale, each item is evaluated as never (0), rarely (1), sometimes (2), quite frequently (3), and nearly always (4). The lowest score that can be taken from the scale is 0, and the highest score is 88. A high score indicates more caregiver burden. The Turkish validity and reliability of the scale were examined by İnci; the internal consistency was between 0.87 and 0.94, and the test-retest reliability was 0.71 (İnci & Erdem, 2008). In our study, the Cronbach alpha coefficient of the scale was 0.90.

### **The Multidimensional Scale of Perceived Social Support**

The MSPSS was developed by Zimet et al. in 1988. The Turkish validity and reliability of the scale were examined by Eker et al. The Cronbach alpha coefficient of the scale was 0.80–0.95. In our study, the Cronbach alpha coefficient of the scale was 0.90. The scale has 12 items with 3 subdimensions (family, friend, and special person). As a 7-point Likert-type scale, the items are assessed by responding from 1 (strongly disagree) to 7 (strongly agree). The lowest score that can be taken from the scale is 12, and the highest score is 84; the lowest score that can be taken from each subdimension is 4, and the highest score is 28. A high score represents a high perceived social support on this scale, in which there is no breakpoint (Eker et al., 2001).

### **Statistical Analysis**

The Statistical Package for the Social Sciences (Computer Program, International Business Machines, New York, USA) 20 was used for data evaluation. The Kolmogorov-Smirnov test was used to determine whether the scores of the scales follow a normal distribution. It was observed in the evaluation that the ZCBS and MSPSS scores were not normally distributed; hence, nonparametric methods/tests were preferred in the statistical analysis. The Mann-Whitney U test was used for the comparison of the scores of 2 independent groups, and the Kruskal-Wallis H test was used for the comparison of the scores of 3 or more groups. Because the scores of the scales did not follow a normal distribution, the Spearman's rank-order correlation was used in the assessment of the relationship between the scales, direction of the relationship, and degree of relation-

ship. In the assessment of correlation coefficient, the correlations were interpreted as low or weak ( $r=0.05-0.30$ ), low moderate ( $r=0.30-0.40$ ), moderate ( $r=0.40-0.60$ ), strong ( $r=0.60-0.70$ ), very strong ( $r=0.70-0.75$ ), and perfect ( $r=0.75-1.00$ ). Significance level was taken as  $\alpha=0.05$  (Hayran & Hayran, 2011).

### **Ethical Considerations**

Before the data collection, a written consent was obtained from the institutions where the research was conducted. The ethics committee of Gazi University (ref. no: 25901600-2090) approved this study. Written consent was obtained from caregiver and patients.

## **Results**

Although it is not presented in Table 1, all caregivers were family members; 39.2% of the caregivers were children of the patients, and 68.7% were unemployed. The caregivers experienced some difficulties at the hospital during the caregiving process. These difficulties included psychological, physical, and economic care issues (hospital and medicine costs, feeding the patient, hygiene and bathing, colostomy and dressing care, positive talking, giving hope, listening to the patient, motivation, and so on). Overall, 44.5% of the patients were diagnosed with endometrial cancer, of which 30.4% were at stage 3.

It was observed that the caregivers' ZCBS mean scores significantly changed according to age. The mean ZCBS score for caregivers aged 30 years and younger ( $35.75\pm 19.56$ ) was found to be significantly lower than that of those aged 40 to 49 years ( $46.30\pm 18.55$ ); the mean ZCBS score for caregivers aged 50 to 59 years ( $48.17\pm 21.42$ ) was detected to be significantly lower than that of those aged 60 years and older ( $52.17\pm 19.14$ ). Marital status was determined to be significantly affecting the ZCBS mean score, and married caregivers' ( $47.73\pm 19.83$ ) burden was found to be significantly higher than single caregivers' burden ( $36.45\pm 19.22$ ). The number of children that caregivers had was also seen to be significantly affecting the ZCBS mean score; the caregivers with 3 to 4 children ( $56.39\pm 16.51$ ) had significantly higher scores ( $p<0.05$ ) than those with no children ( $39.55\pm 20.83$ ) and those with 1 to 2 children ( $42.78\pm 19.38$ ). It was also observed that the mean ZCBS scores varied according to educational status; the mean score of primary school

**Table 1**

*The Distribution of the Characteristics of Caregivers and Patients (n=227)*

Characteristics	Caregivers		Patients	
	n	%	n	%
<b>Age group (years)</b>				
<30	40	17.7	4	1.7
30–39	44	19.4	17	7.6
40–49	79	34.8	44	19.4
50–59	46	20.2	58	25.5
≥60	18	7.9	104	45.8
Age (years), mean± SD (minimum to maximum)	42.54±12.67(18-84)		57.55±12.88 (18-84)	
<b>Sex</b>				
Male	47	20.7	NA	NA
Female	180	79.3	227	100
<b>Marital status</b>				
Married	162	71.4	171	75.3
Single	60	26.4	41	18.1
Divorced	5	2.2	15	6.6
<b>Number of children</b>				
No children	73	32.2	29	12.8
1–2 children	104	45.8	68	30.0
3–4 children	44	19.4	84	37.0
5 and more children	6	2.6	46	20.2
<b>Educational level</b>				
Illiterate	6	2.6	49	21.6
Primary school	66	29.1	107	47.2
Secondary school	18	7.9	16	7.0
High school	65	28.6	31	13.7
Bachelor's and postgraduate degree*	72	31.8	24	10.5
<b>Perceived income level</b>				
Sufficient	65	28.6	48	21.1
Average	131	57.7	134	59.0
Low	31	13.7	45	19.9
<b>Type of family</b>				
Nuclear	203	89.4	180	79.3
Extended	13	5.7	24	10.6
Lonely	11	4.8	23	10.1

\*9 people in caregivers have a postgraduate degree; 1 person in patients has a bachelor's degree. Note. SD: Standard deviation, NA: Not applicable

graduates (56.31±16.96) was significantly higher (p<0.05) than that of high school graduates (41.63±20.62) and those who had a bachelor's and postgraduate degree (36.86±19.50). The mean

ZCBS score for caregivers significantly changed with regard to income status; those who had sufficient income (38.02±19.09) had significantly higher (p<0.05) scores than those who had low income

**Table 2***Distribution of the Zarit Caregiver Burden Scale Mean Scores according to Caregivers' Characteristics (n=227)*

Characteristics	n	Zarit Caregiving Burden Scale (mean±SD)	Test statistics
<b>Age (years)</b>			
<30 <sup>a,b,c</sup>	40	35.75±19.56	χ <sup>2</sup> =12.578
30–39	44	42.34±20.65	p=0.014
40–49 <sup>a</sup>	79	46.30±18.55	
50–59 <sup>b</sup>	46	48.17±21.42	
≥60 <sup>c</sup>	18	52.17±19.14	
<b>Sex</b>			
Male	47	42.15±19.14	Z=-0.993
Female	180	45.14±20.47	p=0.320
<b>Marital status</b>			
Married <sup>a</sup>	162	47.73±19.83	χ <sup>2</sup> =13.498
Single <sup>a</sup>	60	36.45±19.22	p=0.001
Divorced	5	37.20±17.31	
<b>Number of children</b>			
No children <sup>a</sup>	73	39.55±20.83	χ <sup>2</sup> =19.544
1–2 children <sup>b</sup>	104	42.78±19.38	p=0.000
3–4 children <sup>a,b</sup>	44	56.39±16.51	
5 and more children	6	48.17±20.56	
<b>Education level</b>			
Illiterate	6	49.33±9.44	χ <sup>2</sup> =24.950
Primary school <sup>a,b</sup>	66	56.31±16.96	p=0.000
Secondary School	18	50.67±21.39	
High school <sup>a</sup>	65	41.63±20.62	
Bachelor's and postgraduate degree <sup>b</sup>	72	36.86±19.50	
<b>Perceived income status</b>			
Sufficient <sup>a</sup>	65	38.02±19.09	χ <sup>2</sup> =11.357
Average	131	45.93±20.87	p=0.003
Low <sup>a</sup>	31	52.19±15.68	
<b>Working status</b>			
Employed	71	36.08±19.09	Z=-4.197
Unemployed	156	48.36±19.56	p=0.000
<b>Caregiving duration at the hospital</b>			
≤7 days <sup>a</sup>	161	41.85±20.53	χ <sup>2</sup> =11.882
8–15 days	45	48.07±18.54	p=0.018
16–30 days <sup>a</sup>	14	56.64±16.56	
31–45 days	3	57.67±7.10	
46–60 days	-	NA	
≥60 days	4	59.75±15.84	

**Table 2**

*Distribution of the Zarit Caregiver Burden Scale Mean Scores according to Caregivers' Characteristics (n=227)*  
(Continued)

Characteristics	n	Zarit Caregiving Burden Scale (mean±SD)	Test statistics
<b>Sharing of care</b>			
Yes	68	36.66±20.07	Z=-3.853
No	159	47.88±19.36	p=0.000
<b>Experience difficulties at the hospital during the caregiving</b>			
Yes	132	50.36±18.06	Z=-4.939
No	95	36.41±20.29	p=0.000
<b>Responsible for taking care of another patient at home</b>			
Yes	13	63.46±10.71	Z=-3.622
No	214	43.37±20.08	p=0.000

Note. SD: Standard deviation, NA: Not applicable

a.b.c.d=Bonferroni correction. Statistically different groups are classified with the same letter.

\*p<0.05

<sup>†</sup>The Kruskal-Wallis H statistics obtains the probability value from  $\chi^2$  values. The Mann-Whitney U test obtains from Z values.

(52.19±15.68). Moreover, the mean ZCBS score for unemployed caregivers (48.36±19.56) was significantly higher (p<0.05) than that of employed caregivers (36.08±19.09). It was seen that longer caregiving duration represents higher ZCBS mean score. A difference between the mean ZCBS scores was found (p<0.05) between those with a caregiving duration of 7 days or less (41.85±20.53) and those with that of 16 to 30 days (56.64±16.56). Those who gave care to the patient themselves, namely, those who did not share the caregiving (47.88±19.36), had a significantly higher mean ZCBS score than that of those who shared (36.66±20.07). The mean ZCBS score for those who reported to experience difficulties at the hospital during caregiving (50.36±18.06) was significantly higher (p<0.05) than that of those who did not (36.41±20.29). Caregivers who were responsible for taking care of another patient at home (63.46±10.71) had a significantly higher (p<0.005) ZCBS mean score than that of those who were not responsible for taking care of another patient at home (43.37±20.08). In contrast, the mean ZCBS scores did not differ according to the caregivers' sex (p>0.05; Table 2).

It was observed that the mean MSPSS scores significantly differed according to age, that is, those who aged 30 years and younger (61.30±18.94) had significantly higher (p<0.05) mean MSPSS scores than those who aged 40 to 49 years (47.38±19.62) and 60 years and older (43.56±18.27). The number

of children that caregivers had also affected the mean MSPSS score; those who had 3 to 4 children (41.77±17.12) had a significantly lower mean MSPSS score (p<0.05) than that of those who had 1 to 2 children (57.07±21.11) and those who had no children (53.45±19.56). It was seen that those with a bachelor's and postgraduate degree (61.63±18.44) had significantly higher (p<0.05) mean MSPSS scores than those of other groups. The mean MSPSS scores were seen to be affected by the income as well; those who had sufficient income (62.42±17.99) had significantly higher (p<0.05) scores than those who had average (51.62±20.18) and low income (36.32±16.21). The mean MSPSS scores for those who were employed (59.83±19.51) were significantly higher (p<0.05) than those of caregivers who were unemployed (49.34±20.34). Those who shared the caregiving (60.06±19.13) had a significantly higher (p<0.05) mean MSPSS score than those who did not share (49.44±20.48). The mean MSPSS score for those who did not experience difficulties at the hospital during the caregiving (56.18±20.14) was significantly higher (p<0.05) than that of those who experienced difficulties (50.06±20.67). The caregivers who were responsible for taking care of another patient at home (41.23±20.94) had a significantly lower (p<0.005) mean MSPSS score than that of those who were not responsible for taking care of another patient at home (53.31±20.45). However, the mean MSPSS scores did not differ according to the caregivers' sex and marital status (p>0.05; Table 3).

**Table 3**

*Distribution of the Multidimensional Scale of Perceived Social Support Mean Scores According to Caregivers' Characteristics (n=227)*

Characteristics	n	Multidimensional Scale of Perceived Social Support (mean±SD)	Test statistics
<b>Age (years)</b>			
<30 <sup>a,b</sup>	40	61.30±18.94	
30–39 years	44	56.32±21.44	χ <sup>2</sup> =16.979 p=0.002
40–49a years	79	47.38±19.62	
50–59 years	46	54.09±20.72	
≥60 <sup>b</sup>	18	43.56±18.27	
<b>Sex</b>			
Male	47	55.47±19.33	Z=-1.104
Female	180	51.88±20.94	p=0.269
<b>Marital status</b>			
Married	162	52.74±20.86	χ <sup>2</sup> =0.387 p=0.924
Single	60	52.72±20.25	
Divorced	5	47.60±21.22	
<b>Number of children</b>			
No children <sup>a</sup>	73	53.45±19.56	χ <sup>2</sup> =17.763 p=0.001
1–2 children <sup>b</sup>	104	57.07±21.11	
3–4 children <sup>a,b</sup>	44	41.77±17.12	
5 and more children	6	45.00±22.04	
<b>Educational level</b>			
Illiterate <sup>a</sup>	6	37.33±15.72	χ <sup>2</sup> =23.529 p=0.000
Primary school <sup>b</sup>	66	47.47±20.40	
Secondary school <sup>c</sup>	18	45.00±18.65	
High school <sup>d</sup>	65	51.40±20.79	
Bachelor's and postgraduate degree <sup>a,b,c,d</sup>	72	61.63±18.44	
<b>Perceived income level</b>			
Sufficient <sup>a,b</sup>	65	62.42±17.99	χ <sup>2</sup> =32.397 p=0.000
Average <sup>a,c</sup>	131	51.62±20.18	
Low <sup>b,c</sup>	31	36.32±16.21	
<b>Working status</b>			
Employed	71	59.83±19.51	Z=-3.575 p=0.000
Unemployed	156	49.34±20.34	
<b>Sharing of care</b>			
Yes	68	60.06±19.13	Z=-3.476 p=0.001
No	159	49.44±20.48	
<b>Experience difficulties at the hospital during the caregiving</b>			
Yes	132	50.06±20.67	Z=-2.186 p=0.029
No	95	56.18±20.14	
<b>Responsible for taking care of another patient at home</b>			
Yes	13	41.23±20.94	Z=-1.998 p=0.046
No	214	53.31±20.45	

Note. SD: standard deviation.

a,b,c,d=Bonferroni correction. Statistically different groups are classified with the same letter.

\*p<0.05

<sup>†</sup>The Kruskal-Wallis H statistics obtains the probability value from χ<sup>2</sup> values. The Mann-Whitney U test obtains from Z values.

**Table 4**

*The Distribution of Caregivers' Mean Scores of the Zarit Caregiver Burden Scale and the Multidimensional Scale of Perceived Social Support (n=227)*

Variable	Mean±SD	Minimum–maximum
Zarit Caregiving Burden Scale	44.52±20.19	3–88
Multidimensional Scale of Perceived Social Support	52.62±20.63	12–84
Perceived social support from family	18.75±8.48	4–28
Perceived social support from friend	16.38±8.29	4–28
Perceived social support from special person	17.49±9.86	4–28

Note. SD: Standard deviation

A statistically significant moderate negative correlation was found between the mean scores of ZCBS and MSPSS ( $p < 0.05$ ;  $r = -0.596$ ). Although a statistically significant strong negative correlation was found between the family subdimension of MSPSS and ZCBS ( $p = 0.000$ ;  $r = -0.600$ ), a statistically significant moderate negative correlation was found between the friend subdimension of MSPSS and ZCBS ( $p = 0.000$ ;  $r = -0.539$ ), and a statistically significant low moderate negative correlation was found between the special person subdimension of MSPSS and ZCBS ( $p = 0.000$ ;  $r = -0.331$ ) (Table 4).

### Discussion

Being a relative of a patient with cancer negatively affects an individual in emotional, social, and economic ways. Turkey is a country where family bonds are strong, and traditions are kept alive. Thus, happiness and sadness are both shared by family members. This characteristic of the Turkish society continues in the inpatient care throughout the treatment procedure. In this procedure, caregivers are generally the first-degree relatives. They sometimes contribute to the care of the patient and provide emotional support. This brings emotional satisfaction to the caregiver; however, poor hospital conditions may cause several problems (Gok Metin et al., 2019; Isikhan, 2018; Seçinti et al., 2017).

In this study, a significant relationship was observed among the caregiver's age and their perceived social support and caregiver burden ( $p < 0.05$ ). Although the age of the caregiver and caregiver burden increase, the perceived social support decreases. Similar to the findings of this study, Papastavrou et al., (2009) have found that the caregiver burden significantly increased along with the age of the caregiver. In a study conducted by Bradley et al., 2009, it has been

observed that older caregivers were more prone to experience caregiver burden. In addition, Stenberg et al., (2014) have stated that older caregivers experience a significantly higher financial caregiver burden than young ones. In contrast, the study carried out by Daly et al. (2009) has shown that social support increased with age but it was not reported to be a significant difference. In this study, young caregivers had low caregiver burden because of their higher perceptions of social support than other age groups, having less number of children, and thus having fewer responsibilities apart from caregiving.

Parenthood increases an individual's responsibilities, and related studies have provided various results on this issue. In this study, caregivers with 3 to 4 children had higher caregiver burden than those with 1 to 2 children or none, and their social support was the lowest ( $p < 0.05$ ). However, previous studies have stated that the number of children did not affect the caregiver burden (Preksha & Kaur, 2016; Shieh et al., 2012; Stenberg et al., 2014). The difference between the previous results and the results of this study may stem from the fact that the caregivers in this study were mostly women and that this study, unlike the other studies, investigated the caregiver burden at the hospital. Moreover, the caregivers who were married and had 3 to 4 children stated high caregiver burden and low social support because of heavy responsibilities that are traditionally attributed to women as mother and wife.

Educational status is one of the factors affecting an individual's level of awareness and ability to cope with difficulties. In addition, people's communication skills, methods to cope with stress, and social and financial possibilities generally increase along with the level of education. In this study, higher level of education and sufficient income led to less caregiver burden but more social support ( $p < 0.05$ ). The results



found in the literature are in line with those in this study, as the high level of education indicated low caregiver burden. In the literature, Papastavrou et al. (2009) have found that primary school graduates had significantly high caregiver burden, Stenberg et al. (2014) have suggested that caregivers with a bachelor's degree experienced significantly lower financial caregiver burden than others, and Shieh et al. (2012) have suggested that high levels of education indicated significantly low caregiver burden. In addition, the study conducted by Park et al. (2012) has indicated that those with a high level of education had significantly high family support. According to these results, it can be said that as the level of education and income increase, caregivers are less affected by the financial burden of the disease and care; thus, they experience less caregiver burden.

Being employed contributes to an individual's economic and social strengthening. Therefore, it was found that being employed affects caregiver burden and social support in this study. However, unemployed caregivers had a high caregiver burden but low social support ( $p < 0.05$ ). In accordance with this study, the study carried out by Stenberg et al. (2014) has shown that unemployed caregivers had significantly higher financial caregiver burden and significantly lower family support than employed ones. This situation can be interpreted in a way that employed caregivers have higher economic power with a more social environment and better use of their social support system.

Caregiver burden is affected by several factors, one of which is the duration of care. In this study, it was determined that the caregiver burden increases along with the duration ( $p < 0.05$ ). Similar results can be found in the literature (Clark et al., 2013; Milbury et al., 2013; Seo & Park, 2019). Another factor affecting the caregiver burden is the sharing of care. In this study, it was observed that sharing the care affects caregiver burden and social support; however, those who did not share the care had high caregiver burden and less perceived social support ( $p < 0.05$ ). Similarly, Park et al. (2012) have found that sharing the care resulted in less financial caregiver burden and those who shared the care had significantly high family support. Shieh et al. (2012) have also determined that those who shared the care had significantly low caregiver burden. Seo & Park (2019) and Yigitalp et al., (2017) have determined that the presence of a helper during care decrease the caregiver burden.

In this study, a statistically significant moderate negative correlation was found between the mean ZCBS and MSPSS scores ( $p < 0.05$ ). It was also found that as the social support of the caregiver decreases, the caregiver burden increases; hence, there is a negative relationship between the caregiver burden and social support. There are several studies in the literature that support this study (Bradley et al., 2009; Daly et al., 2009; Preksha & Kaur, 2016; Shieh et al., 2012; Teixeira & Pereira, 2013; Yigitalp et al., 2017). According to these results, it can be put forth that social support systems are of importance for the caregivers and patients.

### Conclusions and Recommendations

In this study, it was observed that the burden of the caregivers of patients with gynecologic cancer is affected by several factors, such as age, number of children, economic status, employment, sharing the caregiving, duration of the caregiving, and experiencing problems related to the hospital setting. Moreover, the burden of the patients' caregivers has an inverse negative relationship with social support. Therefore, it is suggested that nurses giving care to the patients with gynecologic cancer should provide the care in a holistic manner by comprising the caregivers as well. Accordingly, they should be given information about the hospital setting and the disease, suitable arrangements should be made in the hospital for meeting the personal care needs, and various social events should be organized.

**Ethics Committee Approval:** This study was approved by Ethics committee of Gazi University (Approval No: 25901600-2090).

**Informed Consent:** Written informed consent was obtained from the patients who agreed to take part in the study.

**Peer-review:** Externally peer-reviewed.

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