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Research Article

The Burden of Care and Coping Strategies of Caregivers of Elderly Patients

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Abstract: This study was conducted to determine the burden of care and coping strategies experienced by caregivers of elderly inpatients in a palliative care unit and internal medicine services. This study is a descriptive and comparative study. The study sample consisted of 80 caregivers of the elderly hospitalized in the Palliative Care Unit and Internal Medicine Clinic in a city hospital between April and June 2017. The Personal Information Form, the Zarit Caregiver Burden Interview Scale (ZCBI Scale), and Coping Strategies Inventory-Short Form (CSI Short Form) were used in this study. The total score obtained by the caregivers from the ZCBI Scale was 50.37 ± 10.93 in the palliative care unit and 32.72 ± 8.72 in the internal medicine clinic. A significant difference was found between the two groups in terms of the subscales "Planning" and "Searching Social Support-Instrumental" of the CSI Short Form and the total score of ZCBI Scale. Nurses should assess socio-demographic characteristics, financial difficulties, and family relationships that may intensify the burden on caregivers of elderly patients in the palliative care units and facilitate coping strategies.

Keywords: *Burden; coping; elderly; nursing; palliative care*

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1. Introduction

A caregiver is someone who has a responsibility to support the patient physically, socially, emotionally, and financially (Veloso, and Tripodoro, 2016). As the burden of care increases, the caregiving-receiving relationship can be transformed into a troublesome, one-way, dependent, intense, and long-term obligation for caregivers. Additionally, the level of burden on caregivers increases when this obligation is inconsistent with the caregivers' other needs and wishes (Aires et al., 2017).

The burden of care is used to express the physical, psychological, social, or economic problems that caregivers may experience while providing care (Liu et al., 2017; Parker et al., 2016). This phenomenon may cause caregivers to experience depression and anxiety, deterioration of health, increased referrals to the doctor, and increased drug use. The nature of the disease whether chronic or terminal as well as the caregivers' close affinity to their patients adds to the burden. Comparatively, the resources allocated for care and the increased psychological and social problems impact the burden of care experienced by caregivers which leads to changes in their social roles (Hsu et al., 2017; Macneil, 2010; Mollica et al., 2017; Schulz, 1999; Terakye, 2011; Weissman, and Meier 2011). As the quality of life of the patient deteriorates with increased symptoms to manage an uncertain prognosis, the quality of life of the caregiver is negatively affected (Walczak et al., 2017).

Coping is the struggle of an individual to prevent or overcome internal and external pressures (Eslami et al., 2016; Vitorino et al., 2018). Coping is also defined as a dynamic process with cognitive and behavioral reactions to reduce psychological distress or stress-causing sources (Bacanlı et al., 2013). Caregivers of patients with chronic diseases must constantly adapt to changing conditions, providing care for both patients and themselves. Therefore, they need to maintain various coping behaviors to adapt (Eslami et al., 2016).

According to the World Health Organization (WHO), one of the primary goals of palliative care is to focus on the needs of patients and their caregivers (WHO, 2012). Therefore, healthcare professionals need to determine the needs of caregivers and work toward solutions to the identified needs through planning, implementing, and evaluating appropriate interventions.

Care burden causes more depression and anxiety, and deterioration in health in caregivers and makes them visit their doctor more and use more drugs. In time, the personal care of the patient, like washing and feeding, comes to be perceived as more difficult than meeting the impersonal care needs of the patient (Mollica et al., 2017).

Studies conducted on cancer patients and their caregivers have found that longer care periods increase care burden and depression in caregivers and that care burden is higher among caregivers who provide care for patients with malign tumors and more symptoms of the disease (Orak and Sezgin, 2015; Yildirim et al., 2013). It was also found that 80.3% of caregivers perceive their health to be good before providing care while 51.6% perceive their health to be bad after they have started to provide care (Orak and Sezgin, 2015). In another study, it was found that caregivers in worse economic situations have a greater care burden (Kalınkara and Kalayci, 2017).

The caregivers of patients with chronic diseases must constantly adapt to a variety of conditions providing care for patients and themselves and exhibit various coping behaviors to manage this situation (Eslami et al., 2016).

Nurses should assess the level of burden experienced by families, especially those who care for elderly patients in the palliative care unit. Additionally, relevant coping strategies should be developed. Elderly patients can receive better support in long-term care and more successful outcomes with activities of daily living by reducing the level of burden on caregivers and facilitating relevant coping strategies. Therefore, it is important to determine the care burden of elderly patients on caregivers.

1.1. *Aim*

This study was conducted to determine the burden of care and coping strategies experienced by caregivers of elderly inpatients in a palliative care unit and internal medicine clinic.

2. Materials and Methods

2.1. *Study design*

This descriptive and comparative study was carried out between April and June 2017 in the Palliative Care Unit and Internal Medicine Clinic of Kahramanmaras Necip Fazıl City Hospital.

2.2. *Study participants*

The definition and classifications of old age are mostly concerned with the physiological and chronological dimensions of old age. According to WHO and ONS (Office for National Statistics), big majorities of countries have chosen an optional chronological age of 60 or 65 as a definition of 'older person' (BMA, 2016; WHO, 2018). The participants in the present study were family caregivers of 80 patients over 65 years old who were hospitalised at the Palliative Care Unit and Internal Medicine Clinic of Kahramanmaras Necip Fazıl City Hospital during the data collection period. The inclusion criterion was being the person (over the age of 18) who spends the most time caring for the patient with over 65 years old, i.e., the main caregiver. Caregivers were eligible if they provided for the last one months or more and were looking after a care-recipient with at least one chronic medical condition. The pilot study was conducted with the inclusion criteria for the appropriate 6 caregivers. Caregivers participating in the pilot study were not included in the study. The study sample was determined by performing a power analysis in the G*power statistical program. Significance level (α), statistical power (1-. beta.), and effect size were determined as 0.05, 0.80, and 0.74, respectively, in previous studies which often used an experimental group of 30 caregivers giving palliative care and a control group of 30 caregivers giving non-palliative care (Bacanlı et al., 2013). The study sample consisted of a total of 80 caregivers who agreed to participate in the study, including 40 caregivers from the palliative care unit and 40 caregivers from the internal medicine clinic. The power of this study was calculated using T test, effect size 0.96 (high size), significance level 0.05 and statistical power $(1 - \beta) = 0.95$.

2.3. *Data Collection*

Data collection was carried out in the Palliative Care Unit and Internal Medicine Clinic. The data were collected by face-to-face interview method. A researcher approached caregivers who were initially identified as main caregivers of patients by clinical nurses. The researcher explained the purpose of the study, checked eligibility, and invited main caregivers to participate in the study. A personal information form prepared by the researcher, the Zarit Caregiver Burden Interview (ZCBI)**,** and Coping Strategies Inventory-Short Form (CSI Short Form) were used during the caregiver interviews. Each caregiver was interviewed for 35-40 minutes. Tools used to assess caregivers are as follows:

2.4. *Measures*

2.4.1. *Personal İnformation Form*

Researchers examined literature and prepared this form to determine the sociodemographic characteristics of the caregivers included in the study. In addition to the sociodemographic characteristics of caregivers in the personal information form, there are questions such as the length of care that caregivers allocate to the individual, how caregivers look after the patient, how difficult caregivers are having to care, and how caregivers cope with these difficulties (Ateş and Bilgili, 2013; Tarı Selçuk, and Avcı 2016).

2.4.2. *Zarit Caregiver Burden Interview (ZCBI)*

Zarit, Reever, and Bach-Peterson developed the scale in 1980. It measures the stress experienced by caregivers. It consists of 22 questions aimed at determining the effect of caregiving on an individuals' life. The questions can be self-reported or through interview techniques. The scale has a Likert-type score ranging from 1 to 5 (1=never, 2=rarely, 3= sometimes, 4=often and 5=always). A high score indicates a higher frequency of experiencing stress. The validity and reliability study for the Turkish population was carried out by Ozlu et al., (2013). Cronbach's alpha value of the scale was found to be 0.92 in this study (Kaiser-Meyer-Olkin (KMO) = 0.871, x2 = 1119.785, p=0.000).

2.4.3. *Coping Strategies Inventory-Short Form (CSI Short form)*

Carver (1997) developed an instrument with fewer questions, taken from the long-form of the Coping Strategies Inventory. This short version is composed of 14 factors, each with two items. As in the long-form, each subscale is evaluated separately. Low scores indicate that the subscale is used less, and high scores indicate that the subscale is used more.

The validity and reliability study for the Turkish population was carried out by Bacanlı et al., (2013). For this study, Cronbach's alpha value of the scale was found to be 0.66 (Kaiser-Meyer-Olkin (KMO) = 0.540, x^2 = 720.181, p =0.000).

2.5. *Analysis*

IBM SPSS Statistics 22 statistical program was used to analyze the data. Percentage values, arithmetic mean, standard deviation, minimum and maximum values were given as descriptive statistics of the data. The Shapiro-Wilk normality test was used to determine whether the data showed a normal distribution. Data were found to show a normal distribution. Data were evaluated using t-test, chi-square analysis, and Pearson's correlation in independent groups. The significance level p value of <0.05 is considered as significant.

2.6. Ethical Consideration

The study was approved by an ethics committee (ID: 2017/111). All participants provided verbal and written informed consent. Written informed consent has been obtained from patients and the patient's family/guardian for publication of the data. The participant was verbally informed by the researchers with the following information; why is he/she included in the study, how many minutes the survey will last, his/her responses to this survey will be kept confidential and anonymous, he/she *can leave* this *research study at any time.* Permission for the study was obtained from the institution involved in the study.

2.7. Limitation of The Study

The sample size of this study is relatively small, which may limit the study's generalizability. However, samples of this and smaller sizes have been found adequate in some studies (Hagell et al., 2017). Nonetheless, assessments based on larger samples are warranted to allow for strong results, especially regarding dimensionality and functioning.

3. Results

Table 1 shows the sociodemographic characteristics of the caregivers of elderly patients. The participants: 65% of them were female, the majority were over 36 years old and 80% were married. Further, 81.3% were unemployed, 38.8% were primary school graduates, 70% had health insurance and 55% did not suffer from chronic diseases. Most of the caregivers were daughters or spouses of the patients (Table 1).

Table 1. Sociodemographic characteristics of caregivers of older inpatients hospitalized in PCU and IMC (n=80).

		PCU		**IMC**		**Total**		**Test***
		n	**%**	**n**	**%**	**n**	**%**	
Gender	Female	24	60.0	28	70.0	52	65	p= 0.482
	Male	16	40.0	12	30.0	28	35	
Age	18-25	7	17.5	2	5.0	9	11.3	p=0.360
	26-35	5	12.5	6	15.0	11	13.8	
	36-50	13	32.5	16	40.0	29	36.3	
	Above 50	15	37.5	16	40.0	31	38.8	
Marital status	Married	29	72.5	35	87.5	64	80	p=0.243
	Single	7	17.5	3	7.5	10	12.5	
	Divorced/widowed	4	10.0	2	5.0	6	7.5	
Children	Yes	29	72.5	33	82.5	62	77.5	p=0.422
	No	11	27.5	7	17.5	18	22.5	
Employment Status	Employed	8	20.0	7	17.5	15	18.8	p=0.775
	Unemployed	32	80.0	33	82.5	65	81.3	
Educational Status	Illiterate	11	27.5	14	35.0	25	31.3	p=0.064
	Primary education	12	30.0	19	47.5	31	38.8	
	High school	8	20.0	6	15.0	14	17.5	
	Associate Degree	4	10.0	0	0	4	5	
	Undergraduate	5	12.5	1	2.5	6	7.5	
Economic Status	Poor	4	10.0	6	15.0	10	12.5	p=0.795
	Middle	21	52.5	20	50.5	41	51.3	
	Good	15	37.5	14	35.5	29	36.3	
Health Insurance	Yes	29	72.5	27	67.5	56	70	p= 0.626
	No	11	27.5	13	32.5	24	30	
Chronic Disease	Yes	18	45.0	18	45.0	36	45	p=1.00
	No	22	55.0	22	55.0	44	55	
Patient Relationship	Caregiver	1	2.5	1	1.3	2	2.5	p=0.479
	Mother	0	0	2	2.5	2	2.5	
	Father	0	0	1	1.3	1	1.3	
	Sibling	2	5	1	1.3	3	3.8	
	Spouse	7	17.5	11	13.8	18	22.5	
	Daughter	11	27.5	13	16.3	24	30	
	Son	10	25	6	7.5	16	20	
	Other	9	22.5	5	6.3	14	17.5	

*Crosstabs analysis, PCU: Palliative Care Unit IMC: Internal Medicine Clinic

Table 2 illustrates the aspects of providing care to elderly inpatients in the PCU and IMC. There was a significant difference between these two groups in terms of the time allocated to patient care, the most difficult situation in providing care for patients, and the coping strategies for difficulties in providing patient care. Of the caregivers, 55% allocated 13 hours or more per day to patient care, 35% had the most difficulty providing personal care for their patients and 37.5% of them coped with difficulties in caring by receiving support from other family members in the PCU. Also, 32.5% of them felt the need for psychosocial support. Conversely, in the other group of these caregivers, 20% coped with difficulties by receiving support from other family members. This other group includes the patient's brother, son's wife, and friend. Besides, 15% of them felt the need for psychosocial support, 20% coped by being patient and 17.5% used other methods in the IMC, 12% used other methods (respectively, praying and receiving spiritual support) in the PCU. However, 15% did not find a solution for their problems (Table 2).

Table 2. Comparison of caregivers' characteristics of caregivers (n=80)

		PCU		IMC		Total		Test*
		n	%	n	%	n	%	
Time Allocated for Patient Care	Takes no time	0	0	16	40.0	16	20.0	X^2=45.329 p=0.001
	0-3 hours	1	2.5	11	27.5	12	15.0	
	3-6 hours	3	7.5	6	15.0	9	11.3	
	7-12 hours	14	35.0	4	10.0	18	22.5	
	13 hours and above	22	55.0	3	7.5	25	31.3	
Time Spent for Patient Care	1-3 months	9	22.5	12	30.0	21	26.3	X^2=8.992 p=0.109
	3-12 months	13	32.5	5	12.5	18	22.5	
	1-2 years	3	7.5	2	5.0	5	6.3	
	2-3 years	3	7.5	3	7.5	6	7.5	
	3-4 years	5	12.5	2	5.0	7	8.8	
	More than 4 years	7	17.5	16	40.0	23	28.8	
The Most Challenging Situation in Patient Care	Patient's personal care	14	35.0	6	15.0	20	25.0	X^2=35.382 p=0.001
	Patient's insufficient oral intake	7	17.5	0	0	7	8.8	
	Patient's unconscious behaviors	5	12.5	1	2.5	6	7.5	
	Patient's infectious diseases	1	2.5	2	5.0	3	3.8	
	Caregiver's inadequate time	3	7.5	0	0	3	3.8	
	Patient's violation of dietary rules	0	0	8	20.0	8	10.0	
	Other	10	25.0	12	30.0	22	27.5	
	None	0	0	11	27.5	11	13.8	
Coping Strategies for Challenges of Patient Care	Hiring a caregiver for patient care	3	7.5	0	0	3	3.8	X^2=28.908 p=0.001
	Receiving support from family members	15	37.5	8	20.0	23	28.8	
	Getting home-care pay	2	5.0	0	0	2	2.5	
	Applying to hospital	10	25.0	6	15.0	16	20.0	
	Getting assistance from home-care services	4	10.0	0	0	4	5.0	
	Being patient	1	2.5	8	20.0	11	13.8	
	Other	5	12.5	7	17.5	9	11.3	
	None	0	0	11	27.5	12	15.0	
Living with the patient	No	18	45.0	17	42.5	35	43.8	X^2=0.051 p=0.822
	Yes	22	55.0	23	57.5	45	56.3	
Psychosocial Support Request Status	Yes	13	32.5	6	15.0	19	23.8	X^2=3.382 p=0.066
	No	27	67.5	34	85.0	61	76.3	

*Chi Square Test, PCU: Palliative Care Unit, IMC: Internal Medicine Clinic

The caregivers in both settings received the highest coping score on the subscale of "mental disengagement". The mean score from the CSI Short Form subscale of "planning" in the PCU was found to be 3.57 ± 1.41 and 4.45 ± 1.01 in the IMC. The mean score from the CSI Short Form subscale of "use of instrumental social support" in the PCU was found to be 6.32 ± 0.99 and the mean score in the IMC was found to be 5.67 ± 1.20. The mean total score from the ZCBI was found to be 50.37 ± 10.93 in the PCU and 32.72 ± 8.72 in the IMC (Table 3).

Table 3. Comparison of the groups' scores on Coping Strategies Interview Short Form Subscales and Zarit Caregiver Burden Interview

	Group	**X ± SD**	**t**	**p**
CSI Short Form Subscales				
Active coping	IMC	6.07 ± 1.02	1.359	0.178
	PCU	6.35 ± 0.76		
Planning	IMC	4.45 ± 1.01	-3.186	0.002
	PCU	3.57 ± 1.41		
Use of instrumental social support	IMC	5.67 ± 1.20	2.626	0.001
	PCU	6.32 ± 0.99		
Use of emotional social support	IMC	2.37 ± 0.70	- 0.646	0.520
	PCU	2.27 ± 0.67		
Focus on & Venting of emotions	IMC	5.97 ± 1.02	1.053	0.296
	PCU	6.25 ± 1.29		
Behavioral disengagement	IMC	4.87 ± 0.85	1.484	0.142
	PCU	5.20 ± 1.09		
Mental disengagement	IMC	6.67 ± 0.97	0.660	0.511
	PCU	6.82 ± 1.05		
Positive Reinterpretation & growth	IMC	4.52 ± 1.35	-1.868	0.066
	PCU	3.95 ± 1.39		
Denial	IMC	4.80 ± 0.93	- 0.815	0.418
	PCU	4.60 ± 1.21		
Acceptance	IMC	5.07 ± 1.16	0.772	0.443
	PCU	5.27 ± 1.15		
Religious Coping	IMC	5.75 ± 0.95	-1.193	0.236
	PCU	5.52 ± 0.71		
Substance Use	IMC	5.12 ± 0.99	-0.606	0.546
	PCU	5.00 ± 0.84		
Humor	IMC	5.50 ± 1.19	1.695	0.094
	PCU	5.95 ± 1.17		
Self-blame	IMC	5.22 ± 0.89	0.648	0.519
	PCU	5.35 ± 0.83		
Total Score of ZCBI	IMC	32.72 ± 8.72	7.979	.001
	PCU	50.37 ± 10.93		

*Student t test, PCU: Palliative Care Unit IMC: Internal Medicine Clinic, ZCBI: Zarit Caregiver Burden Interview, CSI: Coping Strategies Interview

A weak and positive relationship was found between the scores of the CSI Short Form subscale of "active coping" and the ZCBI ($p < 0.05$) for the caregivers in the PCU. Besides, a weak and negative relationship was found between the scores of the CSI Short Form subscale of "planning" and the ZCBI, whereas a weak and positive relationship was found between their scores from the CSI Short Form subscale of "self-blaming" and the ZCBI in the PCU ($p < 0.05$). On the other hand, for the caregivers of elderly inpatients in the IMC; a weak and positive relationship was found between the scores from the CSI Short Form subscale of "self-blaming" and the ZCBI ($p < 0.05$) (Table 4).

Table 4. The relationship between scores on CSI Short Form Subscales and ZCBI received by caregivers of older inpatients in PCU and IMC (n=80)

CSI-SF Scale Subscales	**Total Score of ZCBI**					
	PCU			**IMC**		
	r	**p**	**N**	**r**	**p**	**N**
Active coping	0.350	0.027	40	-0.225	0.163	40
Planning	-0.340	0.032	40	-0.160	0.324	40
Use of instrumental social support	-0.019	0.910	40	-0.009	0.957	40
Use of emotional social support	0.017	0.918	40	-.004	0.982	40
Focus on & Venting of emotions	0.024	0.883	40	-.009	0.954	40
Behavioral disengagement	-0.024	0.885	40	0.220	0.843	40
Mental disengagement	-0.080	0.621	40	0.186	0.251	40
Positive Reinterpretation & growth	-0.242	0.132	40	-0.032	0.172	40
Denial	-0.044	0.789	40	-0.007	0.966	40
Acceptance	-0.169	0.298	40	-0.026	0.875	40
Religious Coping	-0.311	0.051	40	-0.101	0.517	40
Substance Use	0.050	0.760	40	-0.381	0.537	40
Humor	0.287	0.073	40	-0.06	0.713	40
Self-blame	0.320	0.044	40	0.106	0.015	40

*Pearson Correlation Analysis, PCU: Palliative Care Unit IMC: Internal Medicine Clinic, ZCBI: Zarit Caregiver Burden Interview, CSI: Coping Strategies Interview

4. Discussion

The caregiving process is distressing in terms of both caregivers and patients. Chronic and terminal illnesses involve a high level of care due to the severity of symptoms and the resources needed for the patient. The close affinity to their patients, the amount of time and money they spend for patient care, and the increase in psychological and social problems experienced by caregivers increase their burden of care and lead to changes in their social life (Mollica et al., 2017). Health professionals need to support caregivers, plan multidimensional initiatives, manage the implementation and assess outcomes. Caregivers face a multitude of tasks such as monitoring and controlling patient symptoms and ensuring patients receive medical treatments. Also, problem-solving and decision-making, providing emotional support, and coordinating patient care are tasks for caregivers. Tasks also include ensuring patient safety and providing an environment of care and appropriate equipment (Polat, 2011).

In this study, as in other studies, most of the caregivers were women, which is an expected result due to the cultural characteristics of Turkey (Küçükgüçlü et al., 2009; Pérez-Cruz et al., 2017; Tarı Selçuk and Avcı, 2016; Uzelli Yılmaz and Sarı, 2017). Additionally, the task of caregiving is often left to more experienced and unemployed individuals. Working conditions and ages of the caregivers in this study are similar to those in the literature (Küçükgüçlü et al., 2009; Pérez-Cruz et al., 2017; Tarı Selçuk and Avcı, 2016). Most of the caregivers in this study were the daughters of the patient, and more than half of the caregivers lived in the same house with the patient. Like this study, other studies have reported that the task of caregiving is mostly left to the daughter of the person receiving care (Ateş and Bilgili 2013; Küçükgüçlü et al., 2009; Perez-Ordòñez et al., 2016).

While 55% of the caregivers of elderly patients receiving palliative care spend 13 hours or more a day on patient care, the majority care for patients between 0 and 1 year. Conversely, most of the caregivers (40%) in the IMC reported they have not monitored times for patient care. All the results obtained showed 31.3% of the caregivers provided patient care for 13 hours or more per day, and most of them provided care for more than 4 years. The caregivers of inpatients in the PCU and IMC provided more daily care (in hours) and have longer periods of care than in other units examined in other studies (Ateş and Bilgili 2013; Naef et al., 2017; Tarı Selçuk and Avcı 2016). Considering the cultural structure in Turkey, the notion of family is very important among the people in the Eastern and Southeastern regions. Therefore, the care given to the elderly is mostly provided by the family of the elderly individual, not in private or state care institutions (Ateş and Bilgili 2013; Tarı Selçuk and Avcı 2016).

This study found that the care burden scores of the caregivers with palliative care patients were higher than those giving care to patients in the internal medicine clinic. The review of other studies showed the care burden of the patient group requiring high-intensity care was heavier than those who required low-intensity care (Naef et al., 2017; Spatuzzi et al., 2017; Tarı Selçuk and Avcı, 2016; Vahidi et al., 2016). This shows that the current study complies with the studies in the literature.

There are no studies on coping strategies for the burden of care, but studies of similar subjects were evaluated. Ateş and Bilgili (2013) stated caregivers' coping strategies for stress vary according to the degree of their patients' dependency levels. This study found that coping strategies of the caregivers of elderly inpatients in the PCU differed from those of the caregivers in the IMC. As the burden of care on the caregivers in the PCU increased, their ability to plan decreased, and self-blame increases. Perez-Ordòñez et al. (2016) found a positive relationship between anxiety with the perceived burden of care and non-functional coping, whereas a negative relationship between anxiety and emotional-focused coping was determined. Richardson et al. (2016) found that post-traumatic stress disorder was high and positively correlated with the coping subscales of behavioral disengagement, refusal, and humor.

Conclusion

Caregivers of elderly inpatients in the PCU were found to suffer from a higher burden of care than those in the IMC. In terms of coping strategies, the caregivers of elderly inpatients in the IMC received higher scores in the "planning" subscale, and the caregivers in the PCU received higher scores in the "use of instrumental social support" subscale. Recommendations based on the study are; nurses in the PCUs be increasingly supportive of caregivers especially those of elderly patients and pay close attention to their distress and problems. Nurses should routinely assess the burden of care levels on caregivers and implement plans to address the problem. Caring for caregivers of elderly patients by providing supportive nursing intervention to provide physical, emotional, social, and financial support to decrease their burden and develop coping strategies must be considered for caregiver support. Detailed information about terms of "burden of care" and "coping", the burden of care assessment tools should be provided in-service training. Strategies for coping should be explained in discharge training to the patient and the caregiver. Further studies are recommended to improve various coping strategies for reducing the burden of care on caregivers of patients in palliative care.

Ethical Consideration

The study was approved by the Gaziantep University Ethics Committee for Non-Interventional Clinical Investigations (2017/111) and all participants gave verbal approval.

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Exhibitor Consent

Informed consent has been obtained from or patient's family/guardian for publication of the case report and accompanying images. Permission for the study was obtained from the institution involved in the study.

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Conflict of Interest

Authors declare no conflict of interest.

References

Aires, M., Mocellin, D., Fengler, F. L., Rosset, I., Santos, N. O., Machado, Day, C. B., Paskulin, L. M G. (2017). Association between filial responsibility when caring for parents and the caregivers overload. *Rev Bras Enferm*. 70(4), 767-774.

Ateş, E., Bilgili, N. (2013). Coping with stress and social support in caregivers of individuals with spinal cord injuries. *Hemşirelikte Araştırma Geliştirme Dergisi*, 15(3), 1-12.

Bacanlı, H., Sürücü, M., İlhan, T. (2013). Examination of psychometric properties of short form of coping styles scale (CSL-SF). *Kuram ve Uygulamada Eğitim Bilimleri*, 13(1), 81-96.

British Medical Association BMA. (2016) Growing older in the UK. http://www.bgs.org.uk/pdfs/2016bma_growing_older_in_uk.pdf 2016.

Eslami, A. A., Rabiei, L., Abedi, H. A., Shirani, M., & Masoudi, R. (2016). Coping skills of Iranian family caregivers in caretaking of patients undergoing haemodialysis: A qualitative study. *Journal of Renal Care*, 42(3), 162–171. https://doi.org/10.1111/jorc.12166

Hagell, P., Alvariza, A., Westergren, A., & Årestedt, K. (2017). Assessment of Burden Among Family Caregivers of People With Parkinson's Disease Using the Zarit Burden Interview. *Journal of pain and symptom management*, 53(2), 272–278. https://doi.org/10.1016/j.jpainsymman.2016.09.007

Hsu, T., Loscalzo, M., Ramani, R., Forman, S., Popplewell, L., Clark, K., Katheria, V., Strowbridge, R., Rinehart, R., Smith, D., Matthews, K., Dillehunt, J., Feng, T., Smith, D., Sun, C., & Hurria, A. (2017). Are disagreements in caregiver and patient assessment of patient health associated with increased caregiver burden in caregivers of older adults with cancer? *The Oncologist*, 22(11), 1383–1391. https://doi.org/10.1634/theoncologist.2017-0085

Kalinkara, V., Kalayci, I. (2017). Life satisfaction, care burden and burnout in elderly home care persons. *Elderly Issues Research Journal*, 10(2), 19-39.

Küçükgüçlü, Ö., Esen, A., Yener, G. (2009). To examine the validity and reliability of Caregivers' Burden Inventory for Turkish society. *Journal of Neurological Sciences*, 26(1), 060-073.

Liu, J. F., Lu, M. C., Fang, T. P., Yu, H. R., Lin, H. L., & Fang, D. L. (2017). Burden on caregivers of ventilator-dependent patients: A cross-sectional study. *Medicine*, 96(27), e7396. https://doi.org/10.1097/MD.0000000000007396

Macneil, G., Kosberg, J. I., Durkin, D. W., Dooley, W. K., Decoster, J., & Williamson, G. M. (2010). Caregiver mental health and potentially harmful caregiving behavior: the central role of caregiver anger. *The Gerontologist,* 50(1), 76–86. https://doi.org/10.1093/geront/gnp099

Mollica, M. A., Litzelman, K., Rowland, J. H., & Kent, E. E. (2017). The role of medical/nursing skills training in caregiver confidence and burden: A CanCORS study. *Cancer*, 123(22), 4481–4487. https://doi.org/10.1002/cncr.30875

Naef, R., Hediger, H., Imhof, L., Mahrer-Imhof, R. (2017). Variances in family carers' quality of life based on selected relationship and caregiving indicators: A quantitative secondary analysis. *Int J Older People Nurs*, 12(2). https://doi.org/10.1111/opn.12138.

Orak, S. O., Sezgin, S. (2015). Caregiver burden in family members of cancer patients. *Journal of Psychiatric Nursing*, 6(1), 33-39. https://doi: 10.5505/phd.2015.02986.

Özlü, A., Yıldız, M., Aker, T. (2009). A reliability and validity study on the Zarit Caregiver Burden Scale. *Archives of Neuropsychiatry*, 46, 38-42.

Parker, D., Clifton, K., Tuckett, A., Walker, H., Reymond, E., Prior, T., McAnelly, K., Jenkin, P., Israel, F., Greeve, K., Glaetzer, K. (2016). Palliative care case conferences in longterm care: views of family members. *International Journal of Older People Nursing*, 11, 140–148. https://doi.org/10.1111/opn.12105.

Pérez-Cruz, M., Mu˜noz-Martínez, M. A., Parra-Anguita, L., Del-Pino-Casado, R. (2017). Coping and subjective burden in primary caregivers of dependent elderly relatives in Andalusia. Spain, *Aten Primaria*, 49(7), 381-388.

Perez-Ordóñez, F., Frías-Osuna, A., Romero-Rodríguez, Y., & Del-Pino-Casado, R. (2016). Coping strategies and anxiety in caregivers of palliative cancer patients. *European Journal of Cancer Care*, 25(4), 600–607. https://doi.org/10.1111/ecc.12507

Polat, Ü. (2011). Caregivers' roles and support necessities in symptom management for patients with cancer advanced. *Türk Onkoloji Dergisi*, 26(4), 193-198. https://doi: 10.5505/tjoncol.2011.461.

Richardson, A. E., Morton, R. P., & Broadbent, E. A. (2016). Illness perceptions and coping predict post-traumatic stress in caregivers of patients with head and neck cancer. *Supportive care in cancer: official journal of the Multinational Association of Supportive Care in Cancer*, 24(10), 4443–4450. https://doi.org/10.1007/s00520-016-3285-0

Schulz, R., & Beach, S. R. (1999). Caregiving as a risk factor for mortality: the caregiver health effects study. *JAMA*, 282(23), 2215–2219. https://doi.org/10.1001/jama.282.23.2215

Spatuzzi, R., Giulietti, M. V., Ricciuti, M., Merico, F., Meloni, C., Fabbietti, P., Ottaviani, M., Violani, C., Cormio, C., & Vespa, A. (2017). Quality of life and burden in family caregivers of patients with advanced cancer in active treatment settings and hospice care: A comparative study. *Death studies*, 41(5), 276–283. https://doi.org/10.1080/07481187.2016.1273277

Tarı, S., K., Avcı, D. (2016). The Care Burden of caregivers caring for elderly with chronic diseases and affecting factors. *Süleyman Demirel Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi*, 7(1), 1-9.

Terakye, G. (2011). Interaction with the patient and his relatives. *Dokuz Eylül Üniversitesi Hemşirelik Yüksekokulu Dergisi,* 4(2), 78–82.

Uzelli Yılmaz, D., Sarı, D. (2017). The Investigation of the relationship between the sleep quality and fatigue levels of caregivers whose patients with chronic disease. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 20(2), 90-99.

Vahidi, M., Mahdavi, N., Asghari, E., Ebrahimi, H., Eivazi Ziaei, J., Hosseinzadeh, M., Areshtanab, H. N., Kermani, I. A. (2016). Other side of breast cancer: factors associated with caregiver burden. *Asian Nursing Research*, 10, 10(3), 201-206.

Veloso, V. I., & Tripodoro, V. A. (2016). Caregivers burden in palliative care patients: a problem to tackle. *Current opinion in supportive and palliative care*, 10(4), 330–335. https://doi.org/10.1097/SPC.0000000000000239

Vitorino, L. M., Marins, L. S., Granero Lucchetti, A. L., Oliveira Santos, A. E., Cruz, J. P., Oliveira Cortez, P. J., & Lucchetti, G. (2018). Spiritual/religious coping and depressive symptoms in informal caregivers of hospitalized older adults. *Geriatric nursing (New York, N.Y.)*, 39(1), 48–53. https://doi.org/10.1016/j.gerinurse.2017.06.001

Walczak, A., Butow, P. N., Tattersall, M. H., Davidson, P. M., Young, J., Epstein, R. M., Costa, D. S., & Clayton, J. M. (2017). Encouraging early discussion of life expectancy and end-of-life care: A randomised controlled trial of a nurse-led communication support program for patients and caregivers. *International journal of nursing studies,* 67, 31–40. https://doi.org/10.1016/j.ijnurstu.2016.10.008

Weissman, D. E., & Meier, D. E. (2011). Identifying patients in need of a palliative care assessment in the hospital setting: A consensus report from the Center to Advance Palliative Care. *Journal of palliative medicine*, 14(1), 17–23. https://doi.org/10.1089/jpm.2010.0347

World Health organization WHO (2012). Definition of palliative care. http://www.who.int/cancer/palliative/definition/en/.

World Health Organization WHO (2018) Definition of an Older or Elderly Person. Available at: http://www.who.int/healthinfo/survey/ageingdefnolder/en/.

Yildirim, S., Engin E., Baskaya B. A. (2013). The burden of caregivers of stroke patients and the factors affecting the burden. *Archives of Neuropsychiatry*, 50, 169-174. https://doi: 10.4274/npa.y6505.