ORİJİNAL ARAŞTIRMA ORIGINAL RESEARCH

DOI: 10.5336/nurses.2021-82824

Investigation of the Relationship Between the Compassion and Depression Levels of Primary Caregivers of Individuals with Chronic Disease: Descriptive Study

Kronik Hastalıklara Sahip Bireylerin Primer Bakım Vericilerinde Merhamet Düzeyi ve Depresyon Arasındaki İlişkinin İncelenmesi: Tanımlayıcı Çalışma

Özge İŞERİ[a], Yasemin BOY[b], Halis Emre BOYRAZ[c]

[a]Department of Nursing, Ondokuz Mayıs University Faculty of Health Sciences, Samsun, Türkiye
[b]Department of Nursing, Tokat Gaziosmanpaşa University Faculty of Health Sciences, Tokat, Türkiye
[c]Tokat State Hospital, Tokat, Türkiye

This study was presented as orally at the 18th National Nursing Students Congress, 25-27 April 2019, Afyonkarahisar, Turkey (The summary text was based on the preliminary data of this research, then data collection was continued.).

ABSTRACT Objective: The aim of the study was to investigate the compassion and depression levels of primary caregivers of individuals with chronic disease and the relationship between these two states. **Material and Methods:** The cross-sectional, descriptive study was conducted with 389 caregivers between November 2019 and January 2020. The data were collected using "Descriptive Characteristics Form", "Compassion Scale" and "Beck Depression Scale". Mann-Whitney U, Kruskal-Wallis and Spearman correlation tests were used to evaluate the data. **Results:** It was determined that 47.8% of the caregivers were between the ages of 34-49, 88.2% were women, 93.8% were married, 84.6% were have children, 39.6% were high school graduates, 65% were not working (19% were left the job to give care), 56% of them were equal to their expenses and 50.6% of them were the spouses of the patient who received care. At the same time, it was determined that 79.2% of the caregivers did not have previous care experience, 65.8% were not supported financially/morally while providing care, 73% did not change their role/relationship status. It was determined that the compassion levels of the caregivers were moderate and almost all of them had moderate to severe depression. A significant negative correlation was found between compassion and depression level. **Conclusion:** This study is one of the few studies that determine the level of compassion in caregivers and examine its relationship with depression. It was concluded that the level of depression decreased with the increase in the level of compassion. For this reason, it is thought that measuring the compassion levels of caregivers and supporting individuals with compassion training programs are important for quality care.

Keywords: Caregiver; chronic disease; compassion; depression

ÖZET Amaç: Bu araştırma, kronik hastalıklara sahip bireylerin primer bakım vericilerinin merhamet ve depresyon düzeylerini ve 2 durum arasındaki ilişkiyi incelemeyi amaçlamaktadır. **Gereç ve Yöntemler:** Kesitsel ve tanımlayıcı tipteki araştırma, Kasım 2019-Ocak 2020 tarihleri arasında 389 bakım verici ile gerçekleştirilmiştir. Verilerin toplanması için "Tanıtıcı Bilgi Formu", "Merhamet Ölçeği" ve "Beck Depresyon Ölçeği" kullanılmıştır. Verilerin değerlendirilmesinde Mann-Whitney U, Kruskal-Wallis ve Spearman korelasyon testinden yararlanılmıştır. **Bulgular:** Bakım verenlerin %47,8'inin 34-49 yaş aralığında, %88,2'sinin kadın, %93,8'inin evli, %84,6'sının çocuk sahibi olduğu, %39,6'sının lise mezunu, %65'inin çalışmadığı (%19'unun bakım verebilmek için işten ayrıldığı), %56'sının gelirlerinin giderlerine denk olduğu, %50,6'sının bakım verilen hastanın eşi olduğu belirlenmiştir. Aynı zamanda bakım vericilerin %79,2'sinin daha önce bakım deneyiminin olmadığı, %65,8'inin bakım verirken maddi/manevi olarak desteklenmediği, %73'ünün rol/ilişki durumlarında herhangi bir değişme olmadığı saptanmıştır. Bakım verenlerin merhamet düzeylerinin ise orta düzeyde olduğu ve tamamına yakınının orta-şiddetli düzeyde depresyon yaşadığı belirlenmiştir. Merhamet düzeyi ve depresyon arasında ise negatif yönlü anlamlı bir ilişki saptanmıştır. **Sonuç:** Bu çalışma, bakım veren bireyler üzerinde merhamet düzeyini belirleyen ve depresyonla ilişkisini inceleyen az sayıda çalışmadan biridir. Çalışmadan elde edilen bulgular doğrultusunda, merhamet düzeyinin artması ile depresyon düzeyinin azaldığı sonucuna ulaşılmıştır. Bakım verenlerin merhamet düzeylerinde artışın sağlanmasıyla depresyon yaşama riski azaltılabilir. Bu nedenle bakım veren bireylerin merhamet düzeylerinin ölçülmesi, düşük merhamet düzeyine sahip bireylerin merhamet eğitimi programları ile desteklenmesinin kaliteli bakım için önemli olduğu düşünülmektedir.

Anahtar Kelimeler: Bakım verici; kronik hastalık; merhamet; depresyon

Correspondence: Yasemin BOY
Department of Nursing, Ondokuz Mayıs University Faculty of Health Sciences, Samsun, Türkiye
E-mail: yaseminboy55560@gmail.com

Peer review under responsibility of Turkiye Klinikleri Journal of Nursing Sciences.

Received: 02 Mar 2021 ***Received in revised form:*** 29 Mar 2021 ***Accepted:*** 03 Apr 2021 ***Available online:*** 15 Apr 2021

Chronic diseases which are called "silent epidemic" and cause more than 38 million deaths every year have adverse effects on the quality of life of individuals.[1] About 80% of patients live at home and almost all of them (90%) are cared by their family members.[2] Caregivers play an important role in providing emotional, physical, moral and social support to individuals with chronic disease.[3] However, they postpone their physical, moral and health needs when fulfilling these responsibilities; they have to live in the conflict circle between family relationships, business life, entertainment and social life and caregiving roles.[4] The quantitative and qualitative studies also showed that caregivers have psychological problems such as stress, depression, anxiety, compassion fatigue, cognitive impairment; psychological problems such as weakened immune system, sleep disturbances, obesity, hypertension, diabetes, pain; and social problems such as impaired social life, lack of support in care, job losses and associated financial difficulties, loss of productivity and poor quality of life.[5,6]

The essential need and expectation of individuals with chronic disease are to receive compassionate care.[7] Compassionate care is based on empathy, respect and dignity, and also defined as "qualified goodness". Therefore, patients need compassionate care since it strengthens themselves, improves their coping capabilities and provides hope for healing.[8] Compassion has many positive effects on the patient as well as the individuals who approach them with compassion.[9] The studies showed that compassion contributes to improvement of self-respect, having a positive mental attitude, establishing good social relationships as well as subjective well-being, thus acting with compassion might reduce stress and depressive symptom.[10] Although there are many studies on the concept of compassion fatigue and self-compassion in caregivers and the effects of compassionate care on nurses but there are a limited number of studies about the relationship between compassion level and depression in caregivers.[7,10-13] Thus, this study aims to reveal the compassion and depression levels of primary caregivers of individuals with chronic disease and the relationship between these two states.

MATERIAL AND METHODS

This cross-sectional and descriptive study was performed with primary caregivers who had no diagnosed mental disorder, psychiatric medication use and took care of a patient with chronic disease, who have stayed in internal and surgical clinics of a university hospital for at least one week between November 2019 and January 2020. The caregivers of patients who have been hospitalized between these dates but stayed in the hospital for a short time, had no chronic disease and required no home care were excluded from the study.

Based on the post hoc analysis performed at the end of the study using the correlation coefficient, the sample size was calculated as 389 individuals with an error margin of 5%, an effect size of 0.5744563 and the power of the test was 100%.

STUDY ETHICS

The study was conducted after obtaining the ethics committee approval (dated 07.11.2019 and reg. number 19-KAEK-224) from the Clinical Researches Ethics Committee of the Dean of Medical Faculty Tokat Gaziosmanpaşa University, the written permission from the hospital and the verbal consents from the participants with the respect to voluntarily participation. The study was designed and conducted in compliance with the Helsinki Declaration criteria.

DATA COLLECTION TOOLS

The study data were collected using the Descriptive Characteristics Form, the Compassion Scale and the Beck Depression Inventory. The Descriptive Characteristics Form was created by the researchers by reviewing the related literature. It consists of 26 questions about socio-demographic characteristics (age, sex, educational status, employment status, income status, living place, etc.), chronic conditions, relationship with the patient, caregiving duration, role losses and social changes of the caregivers as well as the diagnosis and age of the patient for whom they take care.

Compassion Scale (CS) was developed by Pommier and the validity and reliability analysis of the Turkish version was performed by Akdeniz and

Deniz.[14,15] It contains 24 items presented in a 5-point Likert scale format and has six sub-scales including kindness (6,8,16,24), indifference (2,12,14,18), common humanity (11,15,17,20), separation (3,5,10,22), mindfulness (4,9,13,21) and disengagement (1,7,19,23). Items in the indifference, separation and disengagement subscales are reverse-coded. Then, the total average score is obtained. Higher scores from the scale mean a higher compassion level. The Cronbach alpha value was 0.85 in the study by Akdeniz and Deniz, however, the Cronbach alpha coefficient was 0.86 for this sample size.[15]

Beck's Depression Inventory: Its original version was developed by Beck et al., and the validity and reliability analysis of the Turkish version was performed by Hisli.[16] It consists of 21 items. The items are scored from 0 to 3 according to the severity of depression. It aims to numerically express the degree of symptoms not to diagnose depression. A score of 0-9 indicates minimal depressive symptoms, 10-16 mild depressive symptoms, 17-29 moderate depressive symptoms, and 30-63 severe depressive symptoms (Hisli). The Cronbach alpha value was 0.80 in the study by Hisli, however, it was 0.73 for this sample size.

STATISTICAL ANALYSIS

The data were analyzed with IBM SPSS V25 software. In the analysis of socio-demographic characteristics, frequency, percentage, average, minimum, maximum and standard deviation were used. The conformity to normal distribution was examined with the Shapiro-Wilk and Kolmogorov-Smirnov tests. The data not conforming to normal distribution were compared using the Mann-Whitney U test and the Kruskal-Wallis. The data not conforming to normal distribution were given as median (minimum-maximum). The Spearman correlation coefficient was used to examine the relationship between the variables not conforming to normal distribution. The significance level was $p<0.05$.

RESULTS

THE CAREGIVERS

Of the caregivers in the study, 47.8% were aged between 34-49 years old, 88.2% were female, 93.8% were married, 84.6% had a child, 39.6% were high-school graduate, 65% were unemployed (19% left the job to take care), 56% had an income equal to expenses, 50.6% were the spouse of the patient for whom they care (Table 1).

It was found that 73.5% of the individuals with chronic disease who received care were male 39.3%, and 39.3% were aged between 50-65 years (Table 2).

When the caregivers were examined in terms of caregiving parameters, it was found that 73.3% took care of the patient for 0-11 months, 79.2% had no previous caregiving experience, 67.6% spent 2-3 hours/day for caregiving, 65.8% were not supported financially and morally, 83.3% had no financial problem and 73% experienced no change in their role/relationship status.

It was determined that 73.5% of chronic patients receiving care were male, 39.3% were between the ages of 50-65 and all of them received home care (Table 2).

COMPASSION SCALE SUB-DIMENSIONS AND DEPRESSION LEVELS OF CAREGIVERS

When the median values of the CS sub-dimensions of the participants were examined, it was determined that the kindness 3.25, indifference 3.00, the common humanity 3.25, separation 3.00, mindfulness 3.25 and disengagement 3.00. The caregivers had a median value of 3.08 from CS and a Beck Depression Inventory (BDI) median value of 29 (Table 3).

It was found that 2.6% (n=10) of the participants had mild depression, 51.2% (n=199) had moderate depression and 46.3% (n=180) had severe depression.

COMPARISON OF CAREGIVER DEMOGRAPHIC FEATURES AND COMPASSION SCALE SUB-DIMENSIONS AND DEPRESSION LEVELS

When the compassion sub-dimensions of the caregivers were examined, no significant difference was found in terms of sex, parental status, employment status, financial problems, change in role and relationship, family type, relationship with the patient, caregiving experience, the status of being supported financially/emotionally when providing care, age of

TABLE 1: Socio-demographic characteristics of the caregivers.

	Variables	n	%
Age	18-33 years old	144	37.0
	34-49 years old	186	47.8
	50-65 years old	59	15.2
Sex	Women	343	88.2
	Men	46	11.8
Marital status	Single	24	6.2
	Married	365	93.8
Parental status	Yes	329	84.6
	No	60	15.4
Educational status	Primary school	72	18.5
	Secondary school	53	13.6
	High-school	154	39.6
	University and higher	110	28.3
Employment status	I have a job	136	35.0
	I have no job	179	46.0
	I left my job for caregiving	74	19.0
Income status	Income less than expenses	163	41.9
	Income equal to expenses	218	56.0
	Income higher than expenses	8	2.1
Chronic disease	Yes	38	9.8
	No	351	90.2
Family type	Nuclear family	310	79.7
	Extended family	79	20.3
Relationship (with the patient)	Spouse	197	50.6
	Child	96	24.7
	Parent	86	22.1
	Relative	10	2.6

*When the "illiterate" frequency of the educational status variable was 1.3, it was combined with "primary school".

the patient, diagnosis of the patient and daily time allocated for caregiving ($p>0.05$).

When the depression levels of the caregivers are examined, no significant difference was found according to age, sex, marital status, parental status, family type, relationship with the patient, caregiving experience, the status of being supported financially/emotionally when providing care, age of the patient, diagnosis of the patient and daily time allocated for caregiving ($p>0.05$).

Table 3 shows the median score values of the sub-dimensions of CS according to some variables. Accordingly, the difference between the age variable and the median values of indifference and compassion was found to be statistically significant ($p<0.05$).

Accordingly, it was determined that the median value of the indifference sub-dimension of the 18-33 age group was lower than that of the 34-49 age group. At the same time, it was found that the median value of compassion was significantly lower in the 18-33 age group compared to the other age groups (Table 3).

When examined by marital status, the median value of the kindness sub-dimension of married caregivers was found to be significantly higher than those of single caregivers ($p<0.05$).

When we compared according to educational status, it was found that the median value of the common humanity sub-dimension of CS those who graduated from primary school was significantly lower than the others ($p<0.05$) (Table 3).

TABLE 2: Patient in whom caregivers take care and caregiving characteristics.

Patient characteristics		**n**	**%**
Taken care place	Home	389	100
Sex	Women	103	26.5
	Men	286	73.5
Age	18-33	67	17.2
	34-49	119	30.6
	50-65	153	39.3
	66 and higher	50	12.9
Diagnosis	Diabetes mellitus	67	16.4
	Hypertension	59	14.5
	Lumbar disc herniation	53	13.0
	Heart failure	44	10.8
	Asthma	34	8.3
	Chronic obstructive pulmonary disease	29	7.1
	Renal failure	29	7.1
	Coronary artery disease	23	5.6
	Cancer	18	4.4
	Cerebrovascular disease	16	3.9
	Rheumatoid arthritis	13	3.2
Caregiving characteristics		**n**	**%**
How long have you been caring for your patient?	0-11 months	285	73.3
	1-2 year	95	24.4
	3 years and higher	9	2.4
Do you have a previous caregiving experience?	Yes	81	20.8
	No	308	79.2
How many hours a day do you allocate to meeting the needs of your patient?	0-1 hour	32	8.2
	2-3 hours	263	67.6
	4-5 hours	73	18.8
	6-7 hours	14	3.6
	8 hours and higher	7	1.8
Are you supported financially/emotionally for caregiving?	Yes	133	34.2
	No	256	65.8
Do you have financial difficulty when providing care?	Yes	65	16.7
	No	324	83.3
Do you experience changes in role/relationship status during the caregiving process?	Yes	105	27.0
	No	284	73.0

Table 4 shows the median score values of BDI according to some variables. Accordingly, as the income level and education level of the caregivers decreased, the depression median value increased. A significant difference was found between the depression median values according to the working status ($p<0.05$) (Table 4). Accordingly, the depression median value of the non-working group is significantly higher than the other groups. Depression median values of those who have financial problems and change in role/relationship status are significantly higher than the others ($p<0.05$) (Table 4).

Relationship Between Compassion and Lower Dimensions of Caregivers and Depression Levels

Table 5 gives the distribution of the correlation values for the CS, sub-dimensions of CS and the BDI. There was a statistically significant weak-negative

TABLE 3: Comparison of the characteristics of the caregivers with the average scores from the compassion scale and its sub-scales.

Variable n=389	Kindness	Indifference	Common humanity	Separation	Mindfulness	Disengagement	Compassion scale
	Median (Minimum-Maximum)						
Age							
18-33	3.12	3.00	3.25	2.75	3.25	3.00	3.04
years old	(1.50-5.00)	(1.50-5.00)	(1.50-5.00)	(1.50-4.50)	(1.75-4.75)	(1.25-5.00)	(2.21-4.58)
34-49	3.25	3.25	3.25	3.00	3.00	3.25	3.12
years old	(1.50-5.00)	(1.75-5.00)	(1.50-4.75)	(1.75-4.50)	(1.75-5.00)	(1.25-5.00)	(2.42-4.54)
50-65	3.25	3.00	3.00	3.25	3.25	3.25	3.12
years old	(1.75-4.50)	(2.00-4.50)	(1.75-5.00)	(1.50-4.50)	(1.50-4.25)	(1.00-4.50)	(2.50-4.13)
	X^2=4.630	X^2=6.632	X^2=2.328	X^2=5.954	X^2=0.443	X^2=1.890	X^2=7.036
	p=0.99	**p=0.036***	p=0.312	p=0.051	p=0.801	p=0.389	p=0.030*
Marital status							
Married	3.25	3.00	3.25	3.00	3.25	3.00	3.08
	(1.50-5.00)	(1.50-5.00)	(1.50-5.00)	(1.50-4.50)	(1.50-5.00)	(1.00-5.00)	(2.42-4.58)
Single	3.00	3.25	3.37	2.87	3.37	3.50	3.17
	(1.50-4.25)	(1.75-5.0)	(1.75-4.25)	(1.75-4.50)	(1.75-4.75)	(1.75-4.50)	(2.21-4.46)
	U=3152.00	U=4045.50	U=4124.00	U=4309.50	U=4172.50	U=3491.50	U=4224.50
	p=0.020*	p=0.528	p=0.629	p=0.894	p=0.696	p=0.094	p=0.770
Educational status							
Primary school	3.25	3.00	3.00	3.12	3.00	3.25	3.10
	(2.25-5.00)	(2.00-4.50)	(1.50-4.75)	(1.50-4.50)	(1.50-4.75)	(1.00-5.00)	(2.42-4.58)
Secondary school	3.00	3.00	3.25	3.00	3.00	3.00	3.12
	(1.50-4.50)	(2.00-5.00)	(2.00-5.00)	(1.50-4.50)	(2.25-4.75)	(1.50-4.75)	(2.38-4.46)
High school	3.50	3.00	3.25	3.25	3.25	3.00	3.12
	(1.50-5.00)	(1.50-4.75)	(1.50-4.75)	(1.75-4.50)	(1.75-4.75)	(1.25-4.75)	(2.21-4.46)
University	3.00	3.00	3.25	2.75	3.25	3.00	3.02
	(1.50-4.75)	(1.75-5.00)	(1.75-5.00)	(1.50-4.25)	(1.75-5.00)	(1.50-5.00)	(2.63-4.54)
	X^2=1.913	X^2=0.379	X^2=6.683	X^2=2.357	X^2=1.388	X^2=0.722	X^2=0.281
	p=0.384	p=0.827	**p=0.035***	p=0.308	p=0.500	p=0.697	p=0.869
Total score	3.25	3.00	3.25	3.00	3.25	3.00	3.08
	(1.50-5.00)	(1.50-5.00)	(1.50-5.00)	(1.50-4.50)	(1.50-5.00)	(1.00-5.00)	(2.21-4.58)

X^2: Kruskal-Wallis test; U: Mann-Whitney U test; p: Probability; *p<0.05.

correlation between the total score of the CS and the BDI total score (r=-0.310, p<0.05).

DISCUSSION

The concepts "compassion" and "depression" experienced by caregivers providing care to individuals with chronic disease are one of the most important subjects in recent researches. The studies on the phenomenon of compassion in care and the compassion level mostly focused on healthcare professionals, however, for caregivers, mostly compassion fatigue and self-compassion subjects were addressed.[11,17,18] It was found that there was a limited number of studies about the compassion levels of caregivers and compassionate care practices.[10,13] Therefore, this study evaluated the relationship between "compassion" as a necessity in care and "depression" as an adverse outcome.

Despite debates on whether compassion is a professional emotion, there is a great need for compassion in care.[19] This concept is also seen as the building block of high-quality health care by patients,

TABLE 4: Comparison of the characteristics of the caregivers with the average scores from the Beck Depression Inventory.

Variable n=389	BDI Median (Minimum-Maximum)
Educational status	
Primary school	30 (10-51)
Secondary school	33 (20-52)
High-school	28 (12-52)
University	26 (11-43)
	X^2=7.386 **p=0.025***
Income status	
Income less than expenses	40 (18-47)
Income equal to expenses	29 (10-52)
Income higher than expenses	27 (11-52)
	X^2=11.497 **p=0.003***
Employment status	
I have a job	27 (11-52)
I have no job	30 (10-51)
I left my job for caregiving	27 (12-41)
	X^2=7.006 **p=0.030***
Financial problem	
Yes	31 (12-52)
No	28 (10-52)
	U=8475.5 **p=0.021***
Change in role/relationship	
Yes	31 (10-52)
No	28 (11-52)
	U=12202.5 **p=0.006***
Total score	29 (10-52)

X^2: Kruskal-Wallis test; U: Mann-Whitney U test; p: Probability; BDI: Beck Depression Inventory; *p<0.05.

TABLE 5: Investigation of the relationship between compassion and depression level.

	Beck Depression Inventory	
	r value	p value
Disengagement sub-dimension	-0.09	0.075
Kindness sub-dimension	-0.204**	0.00
Indifference sub-dimension	-0.218**	0.00
Common humanity sub-dimension	-0.195**	0.00
Seperation sub-dimension	-0.198**	0.00
Mindfulness sub-dimension	-0.253**	0.00
Compassion scale	-0.310**	0.00

r: Spearman correlation coefficient; **Correlation is significant at the 0.01 level (2-tailed).

families, healthcare professionals and politicians.[20] The literature defines physicians and nurses as the main players of compassionate care, but it rules out caregivers.[21] However, caregivers are just as important as healthcare professionals for the quality of compassionate care. The average CS score of the caregivers in the study was found as 3.08. Given that the highest possible score from the scale is five, it can be said that the compassion levels of the caregivers are at a moderate level. The priority of caregivers is to take care of the basic needs of the patients. However, the fulfillment of physical needs alone is not indicative of compassion. Because care is provided mechanically without considering the emotional needs. In the literature, the main key point in providing patient-centered care is indicated as the compassionate caregiver with high communication skills.[20,22] It can be said that the caregivers in our study provide compassionate care.

The European-wide Eurocare study found that more than 50.0% of caregivers were women. In the literature, the reason why women are seen appropriate for caregiving is explained by the fact that household and family affairs are perceived as a part of the role of women due to traditional characteristics of the traditional features of societies. In our study, the majority of caregivers were women, as similar to the literature. The degree of relationship of caregivers with the patient varies from country to country. Rinaldi et al., in their study, reported that the majority of the caregivers were the children or spouses of the patients.[23] In our study, the majority of caregivers were the spouses of the patients, in accordance with the literature. It was found that the total CS scores of the caregivers did not vary by sex, marital status, educational status, income status, employment status, parental status, family type, relationship with the patient, caregiving experience, the status of being supported financially/emotionally when providing care, age and diagnosis of the patient, having financial difficulties, change in role/relationship status and daily time allocated for caregiving, however, only the age has an additive effect on the total CS score. It was thought that this might result from the fact that individuals show a more mature attitude towards events and have a changed view of life due to previous experiences. Kalınkara and Kalaycı, in their study, reported that sex and education level do not affect the compassion score.[24] Our study found that the average

score from the kindness, indifference and common humanity sub-scales were affected by certain characteristics of caregivers. It was found that the kindness sub-scale score was higher in married caregivers, the indifference sub-scale scores were increased with increasing age, and the common humanity sub-scale scores were increased in proportion with education level. The kindness sub-scale items include the main idea based on supporting the individual when he/she faces difficulty and is unhappy. Thus, it can be said that married individuals can better use the psychosocial support system compared to single individuals.

It was stated that witnessing the suffering of a relative with chronic disease can be emotionally devastating.[13] The studies with the caregivers of individuals with chronic disease in different groups concluded that depression has been commonly experienced for this reason.[25,26] In parallel with the literature, our study found that 51.2% of the participants had moderate depression, while 46.3% had severe depression. It was found that the depression levels of the caregivers were decreased with a higher level of education and income; the depression levels were higher in those who were unemployed, had financial difficulties and changed role/relationship status. A person with a higher education level can be more knowledgeable and obtain more information about the diagnosis of the patient, which makes a positive contribution to the caregiving abilities of caregivers.[27] Similar to our study results, Quesada et al. reported that the depression levels were higher in those who were unemployed and had a low education level; Choi et al. reported that the depression levels were higher in those with a low income level and Hu et al. reported that those who met the needs of the patient from their own pockets had a higher level of depression.[26,28,29] Similar to our study, the studies also found that there was no difference in depression levels by sex.[25] The main hypothesis of our study was that individuals with a high compassion level feel happy with meeting the needs of the patients for whom they take care, and can be satisfied with the care they provide; thus, they can have stronger coping methods and lower depression levels. The results of our study showed that there was a negative correlation between compassion level and depression. Thus, participants with higher compassion levels have lower depression levels. The study by Lutz et al. found that compassionate daydreaming about others causes changes in the frontal cortex, strengthens the immune system and increases well-being.[30] Similarly, other studies with compassion also showed that compassion has a positive effect on psychology.[31,32] There is a consensus about the fact that compassion is teachable.[9] Jazaeri et al. reported that a group receiving compassion training had an increased level of compassion at the end of the training, which also had positive effects on psychology and well-being.[33] Despite all these positive opinions, Schulz et al. stated that compassion plays a role in establishing a good relationship between the caregiver and the care receivers, however, a high level of compassion may have disadvantages for the caregiver.[13] Instead of directly associating with depression, they address compassion as a moderator between physical pain and uninvited thoughts.[13]

CONCLUSION

This study is one of the limited number of studies investigating the relationship between compassion level and depression in caregivers. The phenomenon of compassion in care is a golden rule and is what patients want most. In line with the study results, it was concluded that depression level was decreased with increasing compassion level. This revealed that when the compassion levels of caregivers are increased, they can have a reduced risk of having depression and maintain their psychological health. Thus, the patient will be provided with high-quality care. Therefore, it is recommended to determine the compassion levels of caregivers of individuals with chronic disease, to support those with low compassion levels with compassion-focused therapy approaches and to provide various training programs to provide them with basic information and skills on the improvement of compassion.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a

company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Özge İşeri, Yasemin Boy;* ***Design:*** *Özge İşeri, Yasemin Boy;* ***Control/Supervision:*** *Yasemin Boy, Özge İşeri, Halis Emre Boyraz;* ***Data Collection and/or Processing:*** *Halis Emre Boyraz, Yasemin Boy, Özge İşeri;* ***Analysis and/or Interpretation:*** *Özge İşeri, Yasemin Boy;* ***Literature Review:*** *Yasemin Boy, Özge İşeri, Halis Emre Boyraz;* ***Writing the Article:*** *Özge İşeri, Yasemin Boy, Halis Emre Boyraz;* ***Critical Review:*** *Özge İşeri, Yasemin Boy, Halis Emre Boyraz;* ***References and Fundings:*** *Yasemin Boy, Özge İşeri, Halis Emre Boyraz.*

REFERENCES

1. World Health Organization (WHO) [Internet]. ©2020 WHO. [Accessed date: 02.09.2020]. Preventing noncommunicable diseases. Available from: [Link]
2. Collins LG, Swartz K. Caregiver care. Am Fam Physician. 2011;83(11): 1309-17. [Pubmed]
3. Demir Barutcu C. Relationship between caregiver health literacy and caregiver burden. P R Health Sci J. 2019;38(3):163-9. [Pubmed]
4. Özcan Yüce U, Taşcı S. Bakım verici stresi ve reiki enerji terapisi. [Caregiver stress and reiki energy therapy]. Turkiye Klinikleri J Nurs Sci. 2020;12(1):158-65. [Crossref]
5. Laks J, Goren A, Due-as H, Novick D, Kahle-Wrobleski K. Caregiving for patients with Alzheimer's disease or dementia and its association with psychiatric and clinical comorbidities and other health outcomes in Brazil. Int J Geriatr Psychiatry. 2016;31(2):176-85. [Crossref] [Pubmed]
6. Abdollahpour I, Noroozian M, Nedjat S, Majdzadeh R. Caregiver burden and its determinants among the family members of patients with dementia in Iran. Int J Prev Med. 2012; 3(8):544-51. [Pubmed] [PMC]
7. van der Cingel M. Compassion: the missing link in quality of care. Nurse Educ Today. 2014;34(9):1253-7. [Crossref] [Pubmed]
8. Adib-Hajbaghery M, Ahmadi B. Caregiver Burden and Its Associated Factors in Caregivers of Children and Adolescents with Chronic Conditions. Int J Community Based Nurs Midwifery. 2019;7(4):258-69. doi: 10.30476/IJCBNM.2019.73893.0. [Pubmed] [PMC]
9. Boy Y, Karabey T. Medication that springs from our soul: compassion "can it be taught. Turkiye Klinikleri J Nurs Sci. 2020;13(3):405-11. [Crossref]
10. Hsieh CC, Yu CJ, Chen HJ, Chen YW, Chang NT, Hsiao FH. Dispositional mindfulness, self-compassion, and compassion from others as moderators between stress and depression in caregivers of patients with lung cancer. Psychooncology. 2019;28(7):1498-505. [Crossref] [Pubmed]
11. Lynch SH, Shuster G, Lobo ML. The family caregiver experience - examining the positive and negative aspects of compassion satisfaction and compassion fatigue as caregiving outcomes. Aging Ment Health. 2018;22(11): 1424-31. [Crossref] [Pubmed]
12. PsyArXiv [Internet]. © 2011-2021 Center for Open Science. Beals M, Birkett M. Self-compassion and empathy in caregiver and comparison groups: differences in negative components.(Erişim tarihi: 18.02.2021) Available from: [Link]
13. Schulz R, Savla J, Czaja SJ, Monin J. The role of compassion, suffering, and intrusive thoughts in dementia caregiver depression. Aging Ment Health. 2017;21(9):997-1004. [Crossref] [Pubmed] [PMC]
14. Pommier EA. The compassion scale. Dissertation Abstracts International Section A: Humanities and Social Sciences. 2011;72(4-A): e:1174. [Link]
15. Akdeniz S, Deniz ME. Merhamet ölçeğinin Türkçeye uyarlanması: geçerlik ve güvenirlik çalışması. [The Turkish adaptation of compassion scale: the validity and reliability study]. The Journal of Happiness and Well-Being. 2016;4(1):50-61. [Link]
16. Hisli N. Beck depresyon envanterinin üniversite ögrencileri için geçerliliği, güvenilirliği. [A reliability and validity study of Beck depression inventory in a university student sample]. J Psychol. 1988;6(23):3-13. [Link]
17. Durkin M, Gurbutt R, Carson J. Qualities, teaching, and measurement of compassion in nursing: a systematic review. Nurse Educ Today. 2018;63:50-8. [Crossref] [Pubmed]
18. Mantelou A, Karakasidou E. The role of compassion for self and others, compassion fatigue and subjective happiness on levels of well-being of mental health professionals. Psychology. 2019;10(3):285-304. [Crossref]
19. Mills J, Wand T, Fraser JA. Examining self-care, self-compassion and compassion for others: a cross-sectional survey of palliative care nurses and doctors. Int J Palliat Nurs. 2018;2;24(1):4-11. [Crossref] [Pubmed]
20. Sinclair S, Beamer K, Hack TF, McClement S, Raffin Bouchal S, Chochinov HM, et al. Sympathy, empathy, and compassion: a grounded theory study of palliative care patients' understandings, experiences, and preferences. Palliat Med. 2017;31(5):437-47. [Crossref] [Pubmed] [PMC]
21. Tierney S, Ozer CT, Perry S. Having the "headspace" for compassion toward self and others: a qualitative study of medical students' views and experiences. Teaching and Learning in Medicine. 2018;30(3):274-83. [Crossref] [Pubmed]
22. Blomberg K, Griffiths P, Wengström Y, May C, Bridges J. Interventions for compassionate nursing care: A systematic review. Int J Nurs Stud. 2016;62:137-55. Erratum in: Int J Nurs Stud. 2018;83:104-5. [Crossref] [Pubmed]
23. Rinaldi P, Spazzafumo L, Mastriforti R, Mattioli P, Marvardi M, Polidori MC, et al; Study Group on Brain Aging of the Italian Society of Gerontology and Geriatrics. Predictors of high level of burden and distress in caregivers of demented patients: results of an Italian multicenter study. Int J Geriatr Psychiatry. 2005; 20(2):168-74. [Crossref] [Pubmed]
24. Kalınkara V, Kalaycı I. Sağlık kurumlarında çalışan personelin iş stresi, yorgunluk ve tükenmişlik ilişkisi. [Work load, fatigue and burnout relationship between the health personnel]. Journal of Engineering Sciences and Design. 2018;6:125-36. [Crossref]
25. Goldzweig G, Schapira L, Baider L, Jacobs JM, Andritsch E, Rottenberg Y. Who will care for the caregiver? Distress and depression among spousal caregivers of older patients undergoing treatment for cancer. Support Care Cancer. 2019;27(11):4221-7. [Crossref] [Pubmed]

26. Hu P, Yang Q, Kong L, Hu L, Zeng L. Relationship between the anxiety/depression and care burden of the major caregiver of stroke patients. Medicine (Baltimore). 2018;97(40): e12638. [Crossref] [Pubmed] [PMC]
27. Fukkink RG, Lont A. Does training matter? A meta-analysis and review of caregiver training studies. ECRQ. 2007;22(3):294-311. [Crossref]
28. Quesada M, Madrigal M, Luna A, Perez-Carceles MD. Caring for the caregiver: factors associated with the quality of life of family caregivers to palliative care patients. EJPCH. 2015;3(3):352-61. [Crossref]
29. Choi YS, Hwang SW, Hwang IC, Lee YJ, Kim YS, Kim HM, et al. Factors associated with quality of life among family caregivers of terminally ill cancer patients. Psychooncology. 2016;25(2):217-24. [Crossref] [Pubmed]
30. Lutz A, Brefczynski-Lewis J, Johnstone T, Davidson RJ. Regulation of the neural circuitry of emotion by compassion meditation: effects of meditative expertise. PLoS One. 2008; 26;3(3):e1897. [Crossref] [Pubmed] [PMC]
31. Coffey A, Saab MM, Landers M, Cornally N, Hegarty J, Drennan J, et al. The impact of compassionate care education on nurses: a mixed-method systematic review. J Adv Nurs. 2019;75(11):2340-51. [Crossref] [Pubmed]
32. Eldor L. Public service sector: the compassionate workplace-the effect of compassion and stress on employee engagement, burnout, and performance. JPART. 2018; 28(1):86-103. [Crossref]
33. Jazaieri H, Jinpa GT, McGonigal K, Rosenberg EL, Finkelstei J, Simon-Thomas E, Goldin PR. Enhancing compassion: a randomized controlled trial of a compassion cultivation training program. J Happiness Stud. 2013;14(4):1113-26. [Crossref]