

# Assessment of the Burden of Care and Burnout Level in Caregivers of Dementia Patients in a Home Care Setting

Nur Simsek Yurt<sup>1</sup>, Erdinc Yavuz<sup>2</sup>

<sup>1</sup>*Clinic of Family Medicine, Samsun Training and Research Hospital, Samsun, Türkiye. ORCID iD: 0000-0002-6585-9663*

<sup>2</sup>*Department of Family Medicine, Samsun University School of Medicine, Samsun, Türkiye. ORCID iD: 0000-0002-3275-8399. [erdincyavuz@gmail.com](mailto:erdincyavuz@gmail.com) (Corresponding Author)*

## ABSTRACT

**Aim:** This study aims to evaluate the factors affecting the care burden and burnout levels of caregivers with dementia patients receiving home care services.

**Methods:** This descriptive study was conducted in Samsun Training and Research Hospital Home Care Services which paid a visit at home between March 20 and June 20, 2021. The caregivers of the patients who were followed up by the diagnosis of dementia were included in the study after having agreed to participate in the study with their written informed consents. The 'Socio-demographic Data Form', 'Zarit Burden Interview' and 'Maslach Burnout Inventory' were administered to caregivers during face-to-face interviews.

**Results:** A total of 157 caregivers were included in our study, of which 70.1% (n=110) were women. 68.2% (n=107) were in the 40-64 years age group. The mean Zarit Burden Interview score was calculated as  $47.10 \pm 16.14$  (min=21, max=85). 76.4% of caregivers had moderate to severe escalated care burden. Once the impact of the increase in caregiver burden score on Maslach Burnout Inventory subgroups was examined, the relationship was found to be positively significant with emotional exhaustion and depersonalization, and negatively significant with personal achievement.

**Conclusion:** As the burden of care increases, the level of burnout of individuals increases. Female gender, illiteracy, lack of income, duration of care given which is prolonged for more than one year, and daily care duration exceeding 12 hours were determined as outstanding factors that increase the care burden and level of burnout.

**Keywords:** home care services, caregivers, dementia, caregiver burnout

**Date of submission:** 17.12.2021 / **Date of acceptance:** 30.12.2022

**How to cite:** Simsek Yurt N, Yavuz E. Assessment of the burden of care and burnout level in caregivers of dementia patients in a home care setting. Euras J Fam Med 2022;11(4):189-96. doi:10.33880/ejfm.2022110402.

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

**Financial disclosure:** No financial disclosure was declared by the authors.

## Introduction

Aging or in other words, senescence is the consequence of accumulative incidents that occur in compliance with a genetic program and lead the organism to structural and functional changes incidental to the impact of environmental factors (1). The World Health Organization defines aging as “the impairment of the ability to adapt to environmental factors” (2). Associated with the aging population and increasing life expectancy, dementia is gradually becoming prevalent in society thus paving the way for a substantial increase in terms of healthcare costs, especially in developed countries where the elderly population is dense (3). The number of people adversely affected by dementia worldwide is doubling every 20 years, making nursing and care for dementia a global public health concern (3,4).

Dementia is a medical condition that causes impairment in more than one of the cognitive domains, affecting daily vital functions (5). Once dementia cases are evaluated, the cases are comprised of Alzheimer's disease by 50-80%, vascular dementia by 15-20%, frontotemporal dementia by 10-15%, and senile dementia of Lewy type by less than 5%. Studies have indicated that the symptoms seen in dementia patients differ according to the type and stage of dementia (6). Neuropsychiatric disorders were found in 90% of patients diagnosed with dementia. Significant disruption and changes occur in people's cognitive functions, which are, respectively, emotional, behavioral, cognitive, and perceptual functions (7). Dementia increases an individual's risk of dependency, disability, and mortality (8). As a consequence of dementia, the process progressively gets difficult, and the person can no longer continue her/his daily life on her/his own and needs the help of someone else to fulfill her/his physical, emotional, economic and social requirements (9).

Giving care for a patient with dementia brings along and elicits differences on part of the person's habitual routine. It has been observed in previously conducted studies that psychological problems and reduced quality of life occur in caregivers' lives (6).

The responsibility of caregivers is increasing with each passing day depending on the progression of the patient's dementia. The burden of care arising from caregiving creates situations such as a decrease in the self-esteem of caregivers, restlessness, burnout, depression, sleep problems, and restricted confinement in social life (10). Socio-demographic characteristics of caregivers such as age, gender, health status, education level and income level altogether affect coping with the care burden. To help caregivers to reduce their burden of care, first of all, their demographic characteristics, common needs, and shortcomings should be primarily specified (11).

Health service delivery to patients is shifting from health institutions to home-based health services, and the number of patients who are delivered home health services is gradually increasing (12). Home health services are comprised of the provision of medical examination, inspection, treatment and rehabilitation services in the home environment to patients who have become bedbound or home-bound due to chronic or malignant diseases, and social and psychological support services to caregivers by a professional healthcare team as a whole (13). The scope of home health care is not limited to services devoted to the patient for receiving care but also includes training and support services for caregivers (14).

Our study was aimed to evaluate the factors affecting the care burden and burnout levels of caregivers of dementia patients receiving home care services.

## Methods

The target population of the study consists of the caregivers of the patients who were registered to Samsun Training and Research Hospital Home Care Services which paid a visit at home between March 20 and June 20, 2021. This is a descriptive and cross-sectional study. The inclusion criteria in the study were that the caregivers had volunteered to participate in the study, were literate, could understand and answer questions, and were primarily responsible for the care of the patients with dementia. Caregivers who were illiterate and refused to participate in the study were

excluded. Caregivers who provided written informed consent during face-to-face interviews were given the 'Socio-demographic data form', 'Zarit Burden Interview' (ZBI), and 'Maslach Burnout Inventory' (MBI).

A 'Socio-demographic data form' was created by the researcher in line with similar studies which includes variables that may affect the caregiver's care burden and burnout level.

Caregivers' burden of care was assessed with the ZBI. The Turkish validity and reliability study of the scale developed by Zarit, Reever and Bach-Peterson in 1980 was conducted by Inci et al. (15,16). Cronbach's alpha value was determined as 0.95 (16). It consists of 22 questions that determine the impact of caregiving on the life of the caregiver. It includes a Likert-type assessment, and it is a 5-level scale which is denoted as "0: never", and "4: almost always". 0-20 score interval indicates "no burden or burden of mild"; 21-40 score interval indicates "burden of moderate"; 41-60 score interval indicates "burden of severe" and 61-88 score interval indicates "burden of extreme" (14).

The burnout condition of caregivers was evaluated with the MBI. Developed by Maslach and Jackson (17) in 1981, this scale is a Likert-type scale consisting of 22 questions and three subgroups. Of these subgroups, the Emotional Exhaustion subscale (EE) consists of 9 questions (1, 2, 3, 6, 8, 13, 14, 16, 20), the Depersonalization subscale (DS) consists of 5 questions (5, 10, 11, 15, 22) and the Personal Accomplishment subscale (PAS) consists of eight questions (4, 7, 9, 12, 17, 18, 19, 21) (18). EE indicates the individual stress dimension of burnout and expresses the decrease in the emotional and physical resources of the individual. Depersonalization represents the interpersonal dimension of burnout and indicates negative, rigid attitudes towards the elderly and unresponsiveness to caregiving work. A low sense of personal accomplishment refers to the tendency of the individual to evaluate oneself in an adverse manner (19,20). Response options, which corresponded to seven levels in the original form of the scale, were arranged in five stages as "0: never", and "4: always", according to the Turkish validity and reliability study

conducted by Çam (21). The internal consistency coefficients of the burnout subscales were 0.82 for the EE subscale; 0.64 for the Depersonalization subscale; 0.77 for the Personal Achievement subscale. High burnout reflects high scores on EE and DS and low scores on PAS. For scoring, three separate burnout scores are calculated for each person (18).

Descriptive statistics are presented with mean and standard deviation values for continuous data; they are presented with numbers and percentages for categorical data. The compatibility of continuous data with a normal distribution was evaluated by Kolmogorov-Smirnov test. Mann-Whitney U and Kruskal-Wallis H were used in the statistical analysis. Post-hoc analysis was conducted for the differences arising from the Kruskal-Wallis H test and Bonferroni correction was made in the evaluation. For statistical significance, p-values in the confidence interval of 95% and below 0.05 were considered significant. The program International Business Machines Corporation Statistical Package for the Social Sciences (Chicago, IL, USA) version 26.0 was used in the statistical analysis of data.

Ethics committee approval was obtained with the Ethics Committee Decision No. Goka/2021/4/6 of Health Sciences University Samsun Education and Training Hospital Ethics Committee.

## Results

A total of 157 caregivers were included in our study, of which 70.1% (n=110) were women. 68.2% (n=107) were in the 40-64 age group. 73.9% (n=116) were married. While 56.1% (n=88) were primary school graduates, 32.5% (n=51) were high school university graduates. 58% (n=91) of the caregivers were not working. 65.6% (n=103) of the caregivers were patients' children. 66.9% (n=105) were providing care for more than one year. 69.4% (n=109) had an income of their own (Table 1).

When the caregiver burden of caregivers was evaluated, the mean ZBI score was calculated as  $47.10 \pm 16.14$  (min=21, max=85). 76.4% of caregivers had moderate to severe escalated care burden. There was no caregiver specified who stated that there was

no or mild care burden. 23.5% (n=37) assumed extreme overload. The ZBI score of women was found to be 53.27±14.86, which was significantly higher than that of men caregivers (p<0.001). When evaluated according to age groups, the care burden of individuals under the age of 40 was found to be significantly lower (p=0.011). The care burden was significantly higher in illiterate people than in people who received education in different categories (p<0.001). The ZBI score of paid caregivers was 36.57±11.51 and had the lowest score compared to other caregivers. The caregiver burden of caregivers without income was found to be significantly higher (p<0.001). It was observed that the care burden of caregivers with chronic diseases escalated (Table 2).

**Table 1.** Demographic data of caregivers of patients with dementia

		n	%
Age	<40	19	12.1
	40-64	107	68.2
	65<	31	19.7
Gender	Male	47	29.9
	Female	110	70.1
Marital Status	Single-Widow	41	26.1
	Married	116	73.9
Education	Nonliterate	18	11.5
	Primary education	88	56.1
	High school-University	51	32.5
Relationship	Spouse	12	7.6
	Offspring	103	65.6
	Other relatives	12	7.6
	Paid caregiver	30	19.1
Care duration	Continuous	122	77.7
	Periodic	35	22.3
Income status	Present	109	69.4
	Absent	48	30.6
Caregiver's chronic disease	Present	73	46.5
	Absent	84	53.5
Length of care	<1 year	52	33.1
	>1 year	105	66.9
Patient's duration of dementia	<1 year	40	25.5
	>1 year	117	74.5
Daily care duration	1-12 hour	60	38.2
	13-24 hour	97	61.8

When the MBI subscale scores of the caregivers were examined, the mean EE was found to be 17.51±5.92, the mean for DS was found to be 7.41±2.76, and the mean for PAS was found to be

18.73±3.04. EE and DS scores of the burnout inventory of individuals under the age of 40 were significantly lower (EE, p=0.009; DS, p=0.010, respectively). When the marital status of the caregivers was examined, the burnout status of the married individuals escalated according to the EE subscale (p<0.001), and no significant difference was found in the other subgroups. Burnout condition for illiterate individuals according to EE and DS was significantly higher than other groups (p<0.001). The level of burnout of the individuals who provided continuous care to the patient increased (EE, p=0.005; DS, p<0.001; PAS, p=0.010, respectively). The level of burnout was determined to be high according to the EE and PAS subgroups of people without income. The EE and DS scores of those who provided care for more than 12 hours a day increased significantly (Table 2).

When the caregivers' burden of care levels and MBI subscale scores were compared, it was found that the level of burnout increased in correlation as the caregiver burden increased. It was observed that the increase in caregiver burden followed a linear correlation with the burnout level of the caregiver (Table 3). Once the impact of the increase in caregiver burden score on MBI subgroups was examined, the relationship was found to be positively significant with EE (r=0.839; p<0.001) and DS (r=0.587; p<0.001), and negatively significant with personal achievement (r=-0.452; p<0.001). In particular, a strong correlation was found with the EE subscale.

## Discussion

In our study, 76.5% of the caregivers of dementia patients who received home-based health care had to cope with moderate to severe increased care burden. Age, gender, education level, income status, having a chronic disease, and duration of care were determined as the factors affecting the caregiver burden. Furthermore, the age, gender, marital status, education level, income status, and daily caregiving duration of the caregiver affect the level of burnout. It was observed that the level of burnout escalated as the care burden of individuals increased.

**Table 2.** Zarit Burden Interview and Maslach Burnout Inventory scores of caregivers of patients with dementia

Variables	ZBI				MBI				
			Emotional exhaustion		Depersonalization		Personal accomplishment		
	Mean ± SD	p	Mean ± SD	p	Mean ± SD	p	Mean ± SD	p	
Age	<40	38.47±14.34	0.011	13.26±5.00	0.009	5.68±2.60	0.010	17.53±2.52	0.073
	40-64	47.66±16.63		17.93±5.66		7.59±2.83		18.82±3.11	
	65<	52.16±12.95		18.74±6.34		7.87±2.25		19.19±3.03	
Gender	Male	33.79±8.98	<0.001	13.04±2.99	<0.001	5.70±1.72	<0.001	19.85±2.11	0.003
	Female	53.27±14.86		19.50±5.82		8.15±2.81		18.26±3.27	
Marital Status	Single-Widow	41.80±11.14	0.180	14.51±5.59	<0.001	6.93±2.47	0.538	18.98±2.47	0.661
	Married	49.43±17.08		18.62±5.67		7.59±2.85		18.66±3.25	
Education	Nonliterate	64.50±7.82	<0.001	23.06±4.29	<0.001	8.5±2.79	<0.001	18.83±1.98	0.120
	Primary	51.85±13.36		18.65±5.79		7.93±2.93		18.20±3.28	
	High school-University	33.80±12.06		13.69±4.05		6.14±1.92		19.63±2.76	
Relationship	Spouse	61.75±9.57	<0.001	22.83±4.15	<0.001	7.17±2.33	0.403	20.58±1.08	<0.301
	Offspring	47.08±14.94		17.66±6.14		7.38±2.89		18.53±2.90	
	Other relatives	63.42±18.05		21.75±4.41		8.75±4.29		18.17±0.94	
	Paid caregiver	36.57±11.51		13.23±2.01		7.10±1.30		20.53±2.46	
Care duration	Continuous	49.05±16.44	0.032	18.29±6.19	0.005	7.86±2.64	<0.001	19.11±2.92	0.010
	Periodic	41.83±13.46		14.79±3.84		5.86±2.64		17.46±3.18	
Income status	Present	41.50±14.16	<0.001	15.41±5.37	<0.001	7.06±2.25	0.034	19.47±2.76	<0.001
	Absent	60.94±11.33		22.13±4.23		8.23±3.57		17.08±3.05	
Caregiver's chronic disease	Present	52.10±12.89	<0.001	18.59±5.99	0.065	7.44±2.72	0.855	18.93±2.85	0.243
	Absent	43.39±17.48		16.54±5.72		7.39±2.82		18.57±3.22	
Length of care	<1 year	36.58±18.31	<0.001	14.73±3.65	<0.001	7.27±1.99	0.449	19.02±3.45	0.335
	>1 year	52.82±11.60		18.95±6.36		7.49±3.08		18.60±2.84	
Patient's duration of dementia	<1 year	45.88±14.19	0.054	17.37±6.01	0.045	7.30±1.96	0.655	18.50±2.54	0.578
	>1 year	49.71±15.40		18.27±5.73		7.45±2.99		18.82±3.21	
Daily care duration	1-12 hour	36.08±11.81	<0.001	13.87±3.21	<0.001	5.83±1.97	<0.001	19.15±3.06	0.120
	13-24 hour	54.46±14.26		19.87±6.08		8.39±2.74		18.48±3.03	

ZBI: Zarit Burden Interview; MBI: Maslach Burnout Inventory

**Table 3.** Correlation between the burden of caregivers with the subgroups of Maslach Burnout Inventory\*

	MBI		
	Emotional exhaustion	Depersonalization	Personal accomplishment
Non-burden or burden of mild (n=0)	-	-	-
ZBI** Burden of moderate (n=63)	12.29±1.93	6.16±1.65	20.29±2.38
Burden of severe (n=57)	19.30±5.16	7.05±2.99	18.14±2.70
Burden of extreme (n=37)	24.00±2.81	10.11±2.01	17.03±3.39

\*p<0.001, Kruskal- Wallis test; \*\*Non-burden or burden of mild: 0-20 scores, Burden of moderate: 21-40 scores, Burden of severe: 41-60 scores, Burden of extreme: 61-88 scores; ZBI: Zarit Burden Interview; MBI: Maslach Burnout Inventory

In our study, it was determined that 70.1% of the caregivers were women, and the care burden and the level of burnout were significantly higher in women. According to the study conducted by Egilli et al. (6) focused on the assessment of the care burden for patients with dementia, 68.8% of the caregivers were women, whereas according to the study conducted by Dagdeviren et al. (14) focused on the assessment of the care burden for patients with dementia within the

boundaries of home, 85% of the caregivers were women. This situation is considered related to the fact that the care of the elderly by family members and especially women is accepted as a natural form of care in our culture (20). Winblad et al. (22) and Bleijlevens et al. (23) also reported that most caregivers for patients with dementia were women as a conclusion of their studies. According to the study of Erkuran et al. (10), which is rather similar to our study, it was

determined that the care burden of women caring for Alzheimer's patients increased significantly compared to men. In the study of Zaybak et al. (24) investigating the burden of care given to bedbound patients, it was reported that women had to cope with a significantly escalated care burden compared to men (24).

In our study, the care burden and burnout level of caregivers who are 65 years old and older increased compared to other age groups. Especially the care burden and burnout level of individuals under the age of 40 were significantly lower. These results were in parallel with the results of the study that demonstrated and revealed a linear relationship between care burden and caregiver age (25,26). Nevertheless, there are studies available reporting an inverse relationship between the burden of care and the age of the caregiver. According to these studies, the heavy care burden of young caregivers was explained by the high rate of employment in other jobs and the discrepancy between leisure time activities and caregiving (3,27).

In our study, the level of burnout of illiterate caregivers according to the care burden and EE and DS was significantly higher than the other groups. Erkuran et al. (10) revealed and determined that the burden of care increased as the education level decreased however, no significant difference was observed. Yildizhan et al. (27) stated that the level of burnout in caregivers of Alzheimer's patients increased with respect to low education level (27). This phenomenon may be due to the low level of awareness of people who are under-educated about the process of caregiving, and the difficulty of organization in appropriate care and treatment application methods. In our study, no relationship was found between the marital status of the individuals and the burden of care. It was observed that the burnout level of married individuals increased significantly compared to single or widowed individuals only according to the EE. Yildizhan et al. (27) determined that the risk of burnout is high for married women who provide care.

In our study, it was observed that the care burden of individuals with no income and the level of burnout according to emotional exhaustion and personal achievement subscales increased significantly. It was

stated that low-income caregivers had a higher care burden than high-income caregivers (28). Caregivers with higher financial resources are likely to have more convenient access to supportive and assistive services (home health aides, adult day care) that may substantially reduce their burden (29). In our study, once the affiliation and intimacy of the caregivers with the patient were examined, it was seen that the caregiver burden of paid caregivers was significantly lower ( $p<0.001$ ). Seidel et al. (30) reported that family caregivers who care for patients with dementia perceive a moderate burden of care, while professional caregivers perceive a low and moderate burden.

With respect to our study, it was found that providing care to patients for more than one-year increased the burden of care and emotional burnout. Selcuk et al. (31) reported that the care burden of primary caregivers increased as the duration of the burden of care had prolonged. According to another study, it was demonstrated and specified that the caregiving burden of the participants who gave care to patients for less than one year was lower than that of the participants who gave care to the patients for more than one year (6). Within the scope of our study, caregiver burden and burnout level were lower in people who provided care between 1-12 hours a day compared to those who gave care for 13-24 hours a day. Salama et al. (32) stated that the caregiver burden increased as the duration of daily care had prolonged ( $p<0.001$ ).

Within the scope of the study, it was determined that 46.5% of the caregivers had a chronic disease. While the burden of care of these individuals increased significantly when compared to those without chronic diseases, no significant difference was detected with respect to the level of burnout. On the other hand, Egici et al. (12) and Kalıncara et al. (20) have determined that the care burden of caregivers suffering from a chronic disease has increased.

In our study, a significant relationship was ascertained between caregivers' burden of care and burnout levels. It was observed that as the care burden of the individuals increased, the burnout level also increased interrelatedly. According to the studies

conducted by Salama et al. (32), Yildizhan et al. (27), and Egici et al. (12) it has been stated and demonstrated that as the care burden of the individuals aggravated, the burnout level also increased interrelatedly. Hence, the level of emotional exhaustion, depersonalization, and low personal achievement of caregivers are adversely affected by the burden of care.

## Conclusion

As the burden of care increases, the level of burnout of individuals increases. Female gender, illiteracy, lack of income, duration of care given which is prolonged for more than one year, and daily care

duration exceeding 12 hours were determined as outstanding factors that increase the care burden and level of burnout. It was observed that the care burden and burnout level were lower among individuals under the age of 40 and in paid caregivers.

This research is manifested as the first and thus pioneer study in our country to examine the care burden and burnout levels of individuals who care for dementia patients receiving home care services. It is contemplated that the provision of services in the fields of psychological and social support, which includes not only patients but also caregivers, within the scope of home care services, will be beneficial in improving the quality of care provided.

## References

1. Simsek Yurt N, Cubukcu M. Quality of sleep and related factors on elderly residents of the nursing homes. *Konuralp Med J* 2021;13(2):233-41. doi: 10.18521/ktd.815000.
2. World Health Organization [Internet]. Ageing and health 2018 [cited 2018 Feb 8]. Available from: <http://www.who.int/ageing/en/>
3. Tsai CF, Hwang WS, Lee JJ, Wang WF, Huang LC, Huang LK, et al. Predictors of caregiver burden in aged caregivers of demented older patients. *BMC Geriatr* 2021;21(1):59. doi: 10.1186/s12877-021-02007-1.
4. Prince M, Bryce R, Albanese E, Wimo A, Ribeiro W, Ferri CP. The global prevalence of dementia: a systematic review and metaanalysis. *Alzheimers Dement* 2013;9(1):63-75. doi: 10.1016/j.jalz.2012.11.007.
5. Öztürk Ş. Clinical and neuropathological classification of dementia. *Turk J Geriatr* 2010;13(Suppl 3):15-9.
6. Eğilli C, Sunal N. Demanslı hastaya bakım verenlerin bakım yükü ve etkileyen etmenlerin belirlenmesi. *J Acad Res Nurs* 2017;3(2):83-91. doi: 10.5222/jaren.2017.083.
7. Ceylan ME, Turkcan A. Araştırma ve klinik uygulamada biyolojik psikiyatri 2. cilt demans. İstanbul: Yerküre Tanıtım ve Yayıncılık Hizmetleri, 2006:83-124.
8. Alzheimer's Disease International [Internet]. World Alzheimer report 2016: Improving healthcare for people living with dementia: coverage, quality and costs now and in the future [cited 2018 Feb 7]. Available from: <https://www.alzint.org/resource/world-alzheimer-report-2016>
9. Kapucu S, Kutlu Türkan S, Fesci H. Family caregivers' difficulties in caring for bedridden stroke patients. *Hacettepe University Faculty of Health Sciences Nursing Journal* 2009;16(3):17-31.
10. Erkan H, Altay B. Alzheimer'lı hastaya bakım veren kişilerin bakım yükünün stresle baş etme durumlarına etkisi. *Sağlık Hizmetleri ve Eğitimi Dergisi* 2015;3(2):52-8.
11. Demirtepe D, Bozo Ö. Bakıcı İyilik Ölçeği'nin uyarlama, güvenilirlik ve geçerlik çalışması. *Türk Psikoloji Yazıları* 2009;12(23):28-37. in Turkish.
12. Taşkın Egici M, Kök Can M, Toprak D. Care burden and burnout status of caregivers whose patients are treated in palliative care centers. *JAREN* 2019;5:123-31. doi: 10.5222/jaren.2019.38247.
13. Cayir Y. Home health care. *Turk J Fam Med Prim Care* 2020;14(1):147-52. doi: 10.21763/tjfmpe.693164.
14. Dağdeviren T, Demir N, Adahan D, Dağdeviren M, Tekin O. Evde sağlık hizmeti alan hastaların bakım verenlerinde bakım yükü. *Turk J Fam Med Prim Care* 2020;14(2):186-95. doi: 10.21763/tjfmpe.730172.

15. Zarit SH, Zarit JM. The memory and behavior problems checklist and the burden interview. PA: The Pennsylvania State University Gerontology Center; 1990.
16. İnci F, Erdem M. Bakım Verme Yükü Ölçeği'nin Türkçe'ye uyarlanması geçerlilik ve güvenilirliği. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi* 2006;11(4):85-95. in Turkish.
17. Maslach C. Burnout: a social psychological analysis, *The Burnout Syndrome: current reserch, theory and interventions*. Park Ridge: London House Management; 1981:31-52.
18. Ocak M, Simsek Yurt N, Yurt YC, Caliskan HM. The burnout levels of emergency employees in COVID-19 pandemic and the related factors. *J Harran Uni Med Fac* 2021;18(2):250-5. doi: 10.35440/hutfd.917806.
19. Maslach C, Schaufeli W, Leiter M. Job burnout. *Ann Rev Psychol* 2001;52(1):397-422. doi: 10.1146/annurev.psych.52.1.397.
20. Kalıncara V, Kalaycı İ. Yaşlıya Evde bakım hizmeti veren bireylerde yaşam doyumu, bakım yükü ve tükenmişlik. *Yaşlı Sorunları Araştırma Dergisi* 2017;10(2):19-39. in Turkish.
21. Çam O. Tükenmişlik Envanteri'nin geçerlilik ve güvenilirliğinin araştırılması. In: VII.Ulusal Psikoloji Kongresi Çalışmaları. Ankara: Türk Psikologlar Derneği, 1992:155-60.
22. Winblad B, Amouyel P, Andrieu S, Ballard C, Brayne C, Brodaty H, et al. Defeating Alzheimer's disease and other dementias: a priority for European science and society. *Lancet Neurol* 2016;15(5):455-532. doi: 10.1016/S1474-4422(16)00062-4.
23. Bleijlevens MH, Stolt M, Stephan A, Zabalegui A, Saks K, Sutcliffe C, et al. Changes in caregiver burden and health-related quality of life of informal caregivers of older people with dementia: evidence from the European Right Time Place Care prospective cohort study. *J Adv Nurs* 2015;71(6):1378-91. doi: 10.1111/jan.12561.
24. Zaybak A, Yapucu Güneş Ü, Günay İsmailoğlu E, Ülker E. The determination of burden care of caregivers for bedridden patients. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi* 2012;15(1):48-54.
25. Shin H, Youn J, Kim JS, Lee JY, Cho JW. Caregiver burden in Parkinson disease with dementia compared to Alzheimer disease in Korea. *J Geriatr Psychiatry Neurol* 2012;25(4):222-6. doi: 10.1177/0891988712464819.
26. Iavarone A, Ziello AR, Pastore F, Fasanaro AM, Poderico C. Caregiver burden and coping strategies in caregivers of patients with Alzheimer's disease. *Neuropsychiatr Dis Treat* 2014;10:1407-13. doi: 10.2147/NDT.S58063.
27. Yıldızhan E, Ören N, Erdoğan A. Burden of care of the caregivers of Alzheimer's disease patients and relationship with burnout syndromes. *European Psychiatry* 2017;41(S1):S178-S. doi: 10.1016/j.eurpsy.2017.01.2081.
28. Andrén S, Elmståhl S. Relationships between income, subjective health and caregiver burden in caregivers of people with dementia in group living care: a cross-sectional community-based study. *International Journal of Nursing Studies* 2007;44(3):435-46. doi: 10.1016/j.ijnurstu.2006.08.016.
29. Covinsky KE, Newcomer R, Fox P, Wood J, Sands L, Dane K, et al. Patient and caregiver characteristics associated with depression in caregivers of patients with dementia. *J Gen Intern Med* 2003;18(12):1006-14. doi: 10.1111/j.1525-1497.2003.30103.x.
30. Seidel D, Thyrian JR. Burden of caring for people with dementia—comparing family caregivers and professional caregivers. A descriptive study. *J Multidiscip Healthc* 2019;12:655-63. doi: 10.2147/JMDH.S209106.
31. Tarı Selçuk K, Avcı D. The care burden of caregivers caring for elderly with chronic diseases and affecting factors. *Süleyman Demirel Üniversitesi Sağlık Bilimleri Dergisi* 2016;7(1):1-9.
32. Salama R, El-Soud FAA. Caregiver burden from caring for impaired elderly: a cross-sectional study in rural lower Egypt. *Italian Journal of Public Health* 2012;9(4): e8662.1-e8662. doi: 10.2427/8662.