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Research Article

Factors Associated With Caregiver Burden in Family Caregivers of Older Adults: A Cross-Sectional Study

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Abstract

AIM: This study aimed to assess caregiver burden and identify factors associated with caregiver burden among family caregivers of older adults.
METHOD: This cross-sectional study included 140 older adults and their family caregivers. The study was conducted between February and November 2020 at a hospital in İstanbul. Data were collected using the Zarit Burden Interview (ZBI), Multidimensional Scale of Perceived Social Support (MSPSS), General Health Questionnaire-12 (GHQ-12), and Katz Activities of Daily Living Scale (Katz ADL).
RESULTS: The mean age of the caregivers was 49.20 ± 10.75 years, and 72.9% were female. The mean ZBI score was 30.65 ± 9.31. Katz Activities of Daily Living Scale (β = −.579, p < .001), older adults' age (β = −.462, p < .001), caregiver's gender (β = .250, p < .001), MSPSS (β = −.195, p < .01), whether the caregiver had regular health check-ups (β = −.156, p < .05), and GHQ-12 (β = .147, p < .05) were found to be significant predictors of caregiver burden respectively. These variables explain 56.3% of the total variance for the caregiver burden (R^2 = .563, p < .001).
CONCLUSION: Being a female caregiver and experiencing poor mental health were associated with a higher caregiver burden. Regular health check-ups received by caregivers and good social support were associated with a lower caregiver burden. Older age and higher dependency of older adults were associated with a lower caregiver burden. Based on these findings, there is a need for interventions and social policies aimed at reducing caregiver burden among family caregivers of older adults.
Keywords: Caregiver burden, caregiving, mental health, older adults, social support

Introduction

The elderly population continues to grow rapidly both globally and in Türkiye. Individuals aged 65 and over represented 10% of the world population and 10.2% of Türkiye in 2023 (The World Bank, 2022; Turkish Statistical Institute, 2023). As the population ages, specific health and social problems become more apparent (Or & Kartal, 2019). Older adults often have multiple chronic diseases and use various medications. The increase in the frequency of chronic diseases, disability, and frailty in older adults brings with it many problems, especially the need for care for older adults (Xie et al., 2016). While home care for older adults is preferred in Asian and Latin American countries with strong familial norms, institutional care is more common in North American and European countries (Maximiano-Barreto et al., 2022). Despite evolving social structures in Türkiye, robust familial bonds endure, with the primary responsibility for caring for older individuals falling predominantly on family members, particularly women (Kalınkara & Kalaycı, 2017; Republic of Turkey Ministry of Family, Labour and Social Services [RTMFLSS], 2018).

Caregiving takes caregivers' time, energy, and attention by bringing additional responsibilities into their daily lives (Yıkılkan et al., 2014). Older adults and their caregivers frequently face circumstances that increase the stress level of the caregiver, such as the management of chronic health problems, psycho-social problems, falls, cognitive deficits, stool and urinary incontinence, security problems, problems at home, lack of information and communication problems (Chiao et al., 2015; Kalınkara & Kalaycı, 2017; Seidlein et al., 2019). Caregivers are at risk for caregiver burden due to the responsibility of caregiving and the problems arising from it (Bekdemir & İlhan, 2019; Kalınkara & Kalaycı, 2017; Or & Kartal, 2019). Caregiver burden encompasses objective and subjective consequences arising from the physical and emotional strain of caring for an ill individual (Bekdemir & İlhan, 2019; Tulek et al., 2020).

Risk factors associated with caregiver burden include low education level, financial strain, female gender, cohabitation with the care recipient, extensive caregiving hours, social isolation, depression, and lack of choice in assuming the caregiving role (Adelman et al., 2014; Chiao et al., 2015). In a systematic

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review, cultural factors associated with care burden in carers of older adults were reported as living with the care recipient, not belonging to a religion, having little spirituality, familism (less reciprocity), and low social support (Maximiano-Barreto et al., 2022). In previous studies, it was found that female gender, low education level, financial problems, not taking time for their health, poor mental health, low social support, and excessive time devoted to caregiving have been linked to elevated levels of caregiver burden (Abdollahpour et al., 2012; Achilike et al., 2020; Ahmad Zubaidi et al., 2020; Bekdemir & İlhan, 2019; Kamalzadeh et al., 2022; Karakurt et al., 2020; Ruisoto et al., 2020; Shiba et al., 2016; Tsai et al., 2021).

The presence of multiple chronic diseases and the degree of dependence on daily living activities among older adults have been reported as factors contributing to heightened caregiver burden (Kim et al., 2012; Shiba et al., 2016; Tsai et al., 2021). The burden of care increases further when an older person is hospitalized due to a health problem, as this indicates their health is deteriorating and they are under stress, including the conditions in the hospital (Kalaycı & Özkul, 2019; Lan et al., 2021). It is particularly important to reduce caregiver burden because caregiver burden negatively affects caregivers' health outcomes and caregiving performance (Ahmad Zubaidi et al., 2020; Bekdemir & İlhan, 2019). It is crucial to plan interventions to reduce the burden of caregiving. This is of great importance in reducing the burden of care on families, enabling caregivers to provide higher quality care, maintaining the well-being of caregivers and care recipients, and contributing to the establishment of health policies for home care services (Selçuk & Avcı, 2016). For this, the burden of care on caregivers of older adults and the associated factors should be identified as the first step. When reviewing the literature, it is apparent that although there are many studies on caregiver burden, most of these studies are conducted on individuals in different chronic disease groups. There is a small number of studies on caregiver burden whose entire population consists of caregivers of older people (Kalınkara & Kalaycı, 2017; Or & Kartal, 2019; Selçuk & Avcı, 2016). In this context, this study aimed to evaluate caregiver burden and the factors associated with caregiver burden in family caregivers of older adults.

Research Questions

1. What is the level of caregiver burden experienced by caregivers of older adults?
2. Is there a correlation between caregivers' mental health, social support, and caregiver burden?
3. What factors serve as predictors of caregiver burden among caregivers of older adults?

Methods

Study Design

This study is a cross-sectional study. The STROBE checklist was used for reporting.

Sample

The research was conducted between February and November 2020, involving older adults aged 65 and above, along with their caregivers, within the Internal Medicine units of a hospital located in İstanbul, Türkiye. Sample size determination utilized the GPower 3.1.9.4 program, indicating a minimum requirement of 117 older adults for 95% power at a 95% confidence interval (Effect size (d) = 0.306) (Bekdemir & İlhan, 2019). Ultimately, the study comprised 140 older adults and their respective caregivers who fulfilled the inclusion criteria. Caregivers were required to be 18 years or older, to be primary caregivers for older adults, and willing to volunteer to participate.

Data Collection Tools

The data collection instruments utilized in this study included the caregiver information form, Zarit Burden Interview, Multidimensional Scale of Perceived Social Support, General Health Questionnaire, older adult information form, and the Katz Activities of Daily Living Scale.

Caregiver Information Form

The form, prepared by the researchers, consists of 16 questions, including age, gender, education status, marital status, family income, own income, employment status, health perception, presence of chronic disease, having regular health check-ups, taking care of his/her own health, quitting his/her job to provide care, kinship relationship with an older adult, duration of care, care hours, and where care is provided.

The Older Adults Information Form

The form consists of six questions: age, gender, educational status, income, chronic diseases and whether they have their own room.

Zarit Burden Interview (ZBI)

ZBI was developed to evaluate the stress experienced by caregivers of a person or elderly in need of care (Zarit et al., 1980). The ZBI was tested for validity and reliability for the Turkish population by İnci and Erdem (2008), yielding a Cronbach's alpha coefficient of 0.95. Comprising 22 items, the ZBI scores range from 0 to 88, with higher scores indicating greater subjective and objective burden (İnci & Erdem, 2008; Zarit et al., 1980). In this study, the Cronbach's alpha coefficient for the ZBI was found to be 0.81.

Multidimensional Scale of Perceived Social Support (MSPSS)

Multidimensional Scale of Perceived Social Support developed by Zimmet et al. (1988), was subjected to a validity and reliability study for the Turkish population by Eker et al. (2001), resulting in a Cronbach's alpha coefficient of 0.89. Assessing perceived social support adequacy across three sources (family, friends, and significant others), the MSPSS comprises three sub-dimensions and 12 items. Higher scores on the scale indicate greater perceived social support (Eker et al., 2001). In the present study, the Cronbach's alpha coefficient for the MSPSS was determined to be 0.90.

General Health Questionnaire (GHQ-12)

GHQ-12, developed by David Goldberg (1979), had its Turkish version's validity and reliability established by Kilic et al. (1997), yielding a Cronbach's alpha coefficient of 0.78. GHQ-12 was developed to identify common acute mental illnesses in the community. A method called the GHQ type of scoring is used in the scoring of the questionnaire, where the first two columns are scored as 0 and the last two columns as 1. The questions ask

about symptoms over the past few weeks and have four choices ("much less than usual, less so than usual, same as usual, more so than usual"). High scores obtained from the scale indicate an increased incidence of mental problems (anxiety and depression). The GHQ-12 queries symptoms experienced over the past few weeks, offering four response choices. Elevated scores on the scale signify an increased likelihood of mental health issues such as anxiety and depression (Kilic et al., 1997). In this study, the Cronbach's alpha coefficient for the GHQ-12 was 0.61.

Katz Index of Independence in Activities of Daily Living (Katz ADL)

The Katz Activities of Daily Living (ADL) index evaluates individuals' dependence on performing essential activities for daily living. This instrument comprises six questions about bathing, dressing, toileting, transferring, continence, and feeding. Scores on the Katz ADL index range from 0 to 6, indicating dependence; 7 to 12, semi-dependence; and 13 to 18, independence (Gümüş & Ünsal, 2014). The reliability of the Katz ADL index for the Turkish population was assessed by Gümüş and Ünsal (2014), yielding a Cronbach's alpha coefficient of 0.84. In this study, the Cronbach's alpha value for the Katz ADL was determined to be 0.90.

Statistical Analysis

Data were analyzed using the Statistical Package for Social Sciences version 25.0 software (IBM Corp.; Armonk, NY, USA). The conformity of the variables to normal distribution was assessed using the Kolmogorov–Smirnov test. Since the *p*-value was >.05, it was concluded that the data fit the normal distribution. Descriptive statistics (frequency, percentage, mean, standard deviation) were used to summarize and characterize the sample. The independent sample *t*-test, one-way ANOVA, and Pearson correlation analysis were used to analyze the data. Multiple regression analysis was performed to determine the factors associated with caregiver burden. Variables that showed a significant relationship with ZBI in bivariate analysis were included in the model. Age, gender, marital status, economic status, employment status, regular health check-up status, MSPSS score, and GSA-12 score of caregivers; age, gender, educational status, income, and dependency status of older adults were included in the regression model. Significance was evaluated at the $p < .05$ level.

Ethical Considerations

Ethics committee approval was obtained from the Bezmialem Vakıf University Non-Interventional Research Ethics Committee (Approval no: 1548, Date: January 29, 2020). Institutional permission was obtained before the start of the study. The study was performed in accordance with the Declaration of Helsinki. Participants were informed about the study, and their verbal and written consent was obtained.

Results

The mean age of the caregivers participating in the study was 49.20 ± 10.75 years, 72.9% were female, 30.7% were high school graduates, 75% were married, family income of 47.1% was less than their expenses, and 56.4% were unemployed. Further characteristics of the caregivers are detailed in Table 1. The mean

Table 1.
Sociodemographic and Caregiving Characteristics of Caregivers (n = 140)

Characteristics		**Mean ± SD**	
Age		49.20 ± 10.75 (29–69)	
Caregiving duration (months)		23.72 ± 23.43 (1–96)	
Daily caregiving duration (hours)		13.93 ± 7.84 (4–24)	
		n	**%**
Gender	Female	102	72.9
	Male	38	27.1
Educational status	Primary school	67	47.9
	High school	43	30.7
	University	30	21.4
Marital status	Married	105	75
	Single	23	16.4
	Divorced/widowed	12	8.6
Family income	Income less than expenses	66	47.1
	Income equal to expenses	61	43.6
	Income more than expenses	13	9.3
Own income	Yes	97	69.3
	No	43	30.7
Employment status	Employed	61	43.6
	Unemployed	79	56.4
Health perception	Poor	45	32.1
	Average	78	55.7
	Good	17	12.1
Presence of chronic diseases	Yes	37	22.9
	No	103	77.1
Regular health check-ups	Yes	110	78.6
	No	30	21.4
Takes care of his/her own health	Yes	103	73.6
	No	29	20.7
	Sometimes	8	5.7
Caregiver quitted his/her job to provide care	Yes	24	17.1
	No	115	82.9
Home where the care is provided	Caregiver's home	51	36.4
	Home of the sick/older person	89	63.6
Kinship relationship with an older adult	Mother/father	99	70.8
	Spouse	2	1.4
	Brother/sister	23	16.4
	Mother-in-law	16	11.4
Total		140	100

Note: Katz ADL = Katz Index of independence in activities of daily living.

age of older adults receiving care was 73.50 ± 6.47 years, 68.6% were female, 38.6% were literate, 47.1% had income equal to expenses, 39.3% had heart disease, 69.3% had their own room and 67.9% were dependent in daily living activities (Table 2).

The mean ZBI score was 30.65 ± 9.31, and the mean GHQ-12 score was 4.02 ± 2.43. Family support from MSPSS sub-dimensions was 18.97 ± 4.99; friend support was 17.12 ± 5.48; support from a significant other was 16.50 ± 5.19, and total MSPSS mean score was 52.61 ± 14.00 (Table 3). There was a weak negative correlation between ZBI and MSPSS and Katz ADL (p < .01) (Table 4). A weak positive correlation was found between ZBI and GHQ-12 (p < .01). Correlations between other scales are presented in Table 5.

Multiple regression analysis was performed to determine the factors associated with caregiver burden. Katz ADL, MSPSS, GHQ-12 scores, and other variables that showed a significant relationship with ZBI in bivariate analyses were taken as independent variables. A significant relationship was found between caregiver burden and Katz ADL (β = −.579, p < .001), older adults' age (β = −.462, p < .001), caregiver's gender (β = .250, p < .001), MSPSS (β = −195, p < .01), whether the caregiver had regular health check-ups (β = −.156, p < .05), and GHQ-12 (β = .147, p < .05), respectively. These variables explain 56.3% of the total variance for the caregiver burden (R^2 = .563, p < .001) (Table 5).

Table 2.
Older Adults' Socio-Demographic Characteristics and Dependency Status (n = 140)

Characteristics		Mean ± SD	
Age		73.50 ± 6.47 (65–90)	
		n	**%**
Gender	Female	96	68.6
	Male	44	31.4
Educational status	Illiterate	37	26.4
	Literate	54	38.6
	Primary	42	30
	High school	7	5
Income	Income less than expenses	61	43.6
	Income equal to expenses	66	47.1
	Income more than expenses	13	9.3
Chronic diseases	Cancer	43	30.7
	Heart diseases	55	39.3
	Nephrological diseases	8	5.7
	Other chronic diseases	34	24.3
Does the patient have his/her own room	Yes	97	69.3
	No	43	30.7
Dependency of older adults according to Katz ADL	Independent (0–6)	8	5.7
	Semi-dependent (7–12)	37	26.4
	Dependent (13–18)	95	67.9
Total		140	100

Note: Katz ADL = Katz Index of independence in activities of daily living.

Table 3.
Mean Scores of ZBI, GHQ-12, and MSPSS (n = 140)

Scales	Lower-Higher Values	Min-Max	Mean ± SD
ZBI	0–88	12–50	30.65 ± 9.31
GHQ-12	0–12	0-–11	4.02 ± 2.43
MSPSS			
Family subscale	4–28	5–28	18.97 ± 4.99
Friend subscale	4–28	4–27	17.12 ± 5.48
Significant other Subscale	4–28	7–26	16.50 ± 5.19
MSPSS total	7–84	21–81	52.61 ± 14.00

Note: GHQ-12 = General Health Questionnaire (GHQ-12); MSPSS = Multidimensional Scale of Perceived Social Support; ZBI = Zarit Burden Interview.

Discussion

While caring for older adults provides appropriate care and a supportive environment for them, family caregivers have to make changes in their lives, do not have enough time for themselves, and experience caregiver burden as a result (Kalınkara & Kalaycı, 2017; Or & Kartal, 2019). Our findings indicate that caregivers of the older adults included in this study experienced a moderate level of caregiver burden. This outcome aligns with similar findings reported in previous studies examining caregiver burden (Bekdemir & İlhan, 2019; Lan et al., 2021; Tulek et al., 2020; Wu et al., 2021). The female gender of the caregiver and poor mental health affect the caregiver's burden negatively. Regular health check-ups received by caregivers, high social support, and increasing age and dependency of the older adults receiving care reduce caregivers burden.

Given that the majority of participants were women, it's noteworthy that in our society, women primarily assume the responsibility for meeting the needs and caring for dependent older adults within the family (RTMFLSS, 2018). This trend aligns with previous studies where a majority of caregivers were also

Table 4.
Correlations Between ZBI, MSPSS, GHQ-12, and Katz ADL (n = 140)

Scales	1	2	3
1. ZBI			
2. MSPSS	−0.250**		
3. GHQ-12	0.348**	−0.346**	
4. Katz ADL	−0.437**	−0.214*	0.32

Note: *p < .05. **p < .01 Pearson correlation analysis. GHQ-12 = General Health Questionnaire (GHQ-12); Katz ADL = Katz Index of independence in activities of daily living; MSPSS = Multidimensional Scale of Perceived Social Support; ZBI = Zarit Burden Interview.

Table 5.
Regression Analysis of Factors Associated With Caregiving Burden of Caregivers (n = 140)

Characteristics	R^2	ΔR^2	F	p	B	β	t	p
Constant	0.563***	0.544	28.616	.001***	106.443		9.592	.000***
Gender of caregiver					5.208	0.250	3.679	.000***
Whether the caregiver has regular health check-ups					−3.537	−0.156	−2.376	.019*
Age of older adults					−0.666	−0.462	−6.027	.000***
MSPSS					−0.129	−0.195	−3.075	.003**
GHQ-12					0.561	0.147	2.300	.023*
Katz ADL					−1.709	−0.579	−6.850	.000***

*p < .05. **p < .01. ***p < .001. *Note:* MSPSS = Multidimensional Scale of Perceived Social Support; GHQ-12 = General Health Questionnaire (GHQ-12); Katz ADL = Katz Index of Independence in Activities of Daily Living.

women (Bekdemir & İlhan, 2019; Lan et al., 2021; Wu et al., 2021; Sabzwari et al., 2016; Yu et al., 2015). Female gender has been consistently identified as a risk factor for caregiver burden in the literature (Adelman et al., 2014). Our study further corroborates this finding, demonstrating that gender significantly predicts caregiver burden, with female caregivers experiencing a higher burden compared to males. Similar observations have been reported in prior studies indicating a higher burden among female caregivers (Abdollahpour et al., 2012; Ruisoto et al., 2020). However, conflicting results exist, with some studies showing no significant difference in caregiver burden by gender, while others suggest that the burden may be higher for male caregivers (Lan et al., 2021; Sabzwari et al., 2016; Tulek et al., 2020; Wu et al., 2021). This discrepancy may be attributed to varying levels of inclination among male caregivers toward caregiving and domestic responsibilities.

The literature has reported that caregiver burden hinders the caregivers' health outcomes and caregiving performance (Shiba et al., 2016). Since caregiving is a long process and cannot be sustained without family support, efforts should be made to reduce the caregiver burden for the health and well-being of caregivers and older adults. The study demonstrated that regular health check-ups were a significant determinant of the caregiver burden, with those who attended regular health check-ups having less care burden.

Caregivers who neglected their own health also exhibited a higher burden of caregiving. This finding is consistent with a previous study which reported that caregivers experienced reduced caregiver burden when they prioritized their own health (Bekdemir & İlhan, 2019). The fact that caregivers cannot spare time for their health causes a worsening of their health status and increases the caregiver burden.

The regression analysis revealed that the age of the older adults was a significant predictor of caregiver burden, indicating that as the age of the older adults receiving care increased, the caregiver burden decreased. This may be attributed to the increasing dependence of older adults on others for daily activities as they age, leading caregivers to accept their role more readily, thereby perceiving a lower burden. However, contrary to our findings, some studies did not find a significant relationship between the age of the care recipient and caregiver burden (Bekdemir & İlhan, 2019; Kamalzadeh et al., 2022; Tulek et al., 2020).

Additionally, caregivers of older adults who were semi-dependent in their daily living activities experienced a higher burden compared to those caring for independent or dependent older adults. It was determined that the dependence of the older adults was a significant predictor of the caregiver burden, with the burden of the caregiver decreasing as the dependency of the older adults increased. Bekdemir and İlhan's (2019) study also supports the results of this study. In another study, the functional independence of the elderly was an essential determinant of the caregiver burden for male caregivers but had no significant effect on female caregivers (Ruisoto et al., 2020). A further study found that the caregiver's emotional load decreased as the patients' dependency level increased (Taşdelen & Ateş, 2012). We believe these results are due to the caregiver's acceptance that older adults need them, and they have no other choice as they become more dependent. Unlike the results of this study, there have been reports of increasing caregiver burden with increasing levels of dependency on the patient being cared for (Abdollahpour et al., 2012; Kim et al., 2012). These findings suggest that there is a need for qualitative studies with caregivers to clarify how the dependency status of older adults affects caregiver burden.

In this study, the participants' social support was average, and they obtained the highest social support from the family. Karakurt et al. (2020) study, supports our results. In Turkish culture, caring for older adults and patients within the family is traditionally expected behavior and is perceived as a responsibility (Kalınkara & Kalaycı, 2017; RTMFLSS, 2018). This may explain why social support mainly comes from other family members. It is also stated in the literature that social support decreases care burden (Rahayu & Yona, 2019). This study underscored the significance of social support as a determinant of caregiver burden, revealing that as social support increased, caregiver burden decreased. Similarly, previous studies have reported less caregiver burden with increased social support (Karakurt et al., 2020; Tsai et al., 2021; Yu et al., 2015).

Caregiving adversely affects the caregiver's physical and psychological well-being (Del-Pino-Casado et al., 2019). In the study by Kalınkara and Kalaycı (2017), burnout increased as the

caregiver burden increased, and the caregiver burden caused emotional exhaustion and depersonalization. In the literature, depression is reported as a risk factor for caregiver burden (Adelman et al., 2014). The caregivers participating in this study also appeared to be at risk for mental problems based on their GHQ-12 scores. This study revealed that the mental health of caregivers emerged as a significant determinant of caregiver burden, with deteriorating mental health correlating with heightened levels of burden. Consistent with prior research findings (Achilike et al., 2020; Ahmad Zubaidi et al., 2020; Kamalzadeh et al., 2022), it was evident that caregiver burden increased alongside worsening depressive symptoms and mental health issues. Such findings underscore the critical role of mental health as a pivotal determinant of caregiver burden, highlighting the potential adverse effects on both caregiver and care recipient health. Prolonged exposure to caregiver burden may pose long-term risks, emphasizing the necessity of implementing interventions to alleviate burden levels. Strategies may include assessing caregivers' mental states, providing targeted interventions and support programs, and offering training and consultation services to mitigate the burden. Supporting caregivers throughout the caregiving journey can play a crucial role in safeguarding their mental well-being.

Study Limitations

The study's results are limited to older patients aged 65 and over and their caregivers in the institution where the research was conducted. Therefore, the results can be generalized to this sample. Data were collected based on the caregivers and patients' self-reports. The Cronbach's alpha coefficient of the GHQ-12 (0.61) is acceptable, which is a limitation of the study.

Conclusions and Recommendations

The study determined that caregivers had a moderate caregiver burden. The female gender of the caregiver and poor mental health negatively affected the caregiver burden. Regular health check-ups received by caregivers and good social support were associated with a lower caregiver burden. Older age and higher dependency of older adults were associated with a lower caregiver burden.

Reducing the caregiver burden for the caregivers is essential for the health of older adults and caregivers. Improved health systems and social services can reduce caregiver burden. In addition to regular home visits and monitoring of older adults by primary health care institutions and home health and care units in secondary care settings, providing training and counseling to caregivers can significantly contribute to decreasing caregiver burden. Specialized geriatric home care nurses play a crucial role in reducing caregiver burden through their essential duties. It is important to recognize that caregiving can negatively impact the long-term health of caregivers. Therefore, priority should be given to education programs aimed at improving caregivers' health, along with encouraging them to undergo regular health checks. Efforts to improve caregivers' mental health should involve early diagnosis initiatives to identify mental health issues promptly and refer caregivers to relevant institutions for appropriate support. Caregivers should also be encouraged to utilize their family, friends, and other social supports to receive assistance at home and to seek appropriate social support services.

For future studies, we recommend researching the effectiveness of interventions developed considering the various factors influencing caregiver burden in reducing this burden. Such studies can provide valuable insights into the most effective strategies for supporting caregivers and improving their well-being.

Availability of Data and Materials: The data that support the findings of this study are available on request from the corresponding author.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Bezmialem Vakıf University (Approval no: 1548, Date: January 29 2020).

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

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