ORIGINAL RESEARCH

Effects of caregiver readiness of relatives caring for stroke patients on their caregiver burden and burnout

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Abstract

Background:

Stroke affects not only patients but also their caregivers. The level of readiness of caregivers to give care has a significant effect on the quality of life and recovery process of their patients. This descriptive cross-sectional study was conducted to determine the effects of caregiver readiness of individuals providing care for stroke patients on their caregiving burden and burnout.

Methods

This study was conducted with 69 individuals who gave care to inpatients receiving stroke treatment in the Neurology Clinic of a hospital between April 2022 and January 2023. Data collection was carried out using the Patient and Caregiver Identification Form, Cheltenham Patient Classification Scale (CPCS), Preparedness for Caregiving Scale (PCS), Bakas Caregiving Outcomes Scale (BCOS), and Burnout Measure (BM). In the comparisons of two independent groups, the Independent Samples t-test was used when numerical variables were normally distributed, and Mann Whitney U test was used when numerical variables were not normally distributed. In the comparisons of more than two independent groups, One-Way ANOVA was used when numerical variables were normally distributed, and Kruskal Wallis test was used when numerical variables were not normally distributed. Pearson Correlation test was used to analyze the relationship between the scores obtained from the scales.

Results

The analysis of the distribution of stroke patients according to the Cheltenham Patient Classification Scale revealed that 44.9% of them were in the Type 2 care group. The mean scores they obtained from the data collection tools were as follows: PCS: 22.20±6.98, BCOS: 54.46±11.80, BM: 2.73±1.33.

Conclusion:

There was a moderately significant negative relationship between the caregivers' BM and PCS scores. Their BM scores decreased as their PCS scores increased. On the other hand, there was a moderately significant positive correlation between their PCS and BCOS scores. As their PCS scores increased, so did their BCOS scores.

Keywords: Burnout; care burden; caregivers; stroke

Introduction

With the increase in diseases, life expectancy, and average human lifespan, the number of people in need of care has increased in parallel with chronic diseases[1]. The number of patients who will need care provided by clinicians specialized in neurological diseases will continue to grow in the coming decades[2]. The prevalence of stroke, one of the most common chronic diseases and the third leading cause of death worldwide, is increasing in the population over 65 years of age[3-5].

Stroke affects not only patients but also their caregivers, especially their family members6. More than half of post-stroke patients are dependent on others because their disability adversely affects their functional mobility and stability, which prevents them from performing activities of daily living and because they need long-term[3,6]. Therefore, caregivers are perceived as the indispensable part of the life of a person with disabilities in general[7].

Providing care to a stroke patient is a stressful process for the caregiver[8]. The burden of care is explained as "negative objective and subjective consequences such as psychological distress, physical health problems, economic problems, social problems, deterioration of family relations and feeling out of control"[9].

A stroke generally occurs acutely, and caregivers are often unready[5]. Physical, emotional, cognitive, and behavioral changes that occur in patients are frightening for families, and caregivers have doubts about how to manage these problems. Caregivers should quickly adapt to sudden changes in their patients' communication skills, mood, and personality, and the burden of care can be overwhelming for them[8]. Caregivers' preparedness for the care of stroke patients is important for the continuity of care[10]. Giving regular training to caregivers who are not ready to give care on how to manage this process, and supporting them after the training can reduce their anxiety and facilitate care management[11].

Preparedness refers to how ready caregivers sense they are for the missions and demands in the caregiving role, such as making an effort to alleviate the stress of caregiving, and providing physical care and emotional support[12]. The increase in the prevalence of stroke increases not only the number of individuals in need of care but also the number of caregivers. Therefore, it is important to conduct research

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on caregivers of individuals with stroke[13].

Methods

This cross-sectional study conducted between April 2022 and January 2023 in the Neurology Clinic of a hospital in Turkey. The aim of this study was to determine the effect of caregiver readiness and dependency level of stroke patients on caregiving burden and burnout.

Participants

We reviewed the records of patients who were hospitalized in the aforementioned hospital's neurology clinic for stroke treatment to determine the population of the study, which revealed that the number of stroke patients was 126. Inclusion criteria were; the patients' relatives who took the most active role in the care of the patients and were directly responsible for the care, whose patient had a stroke for the first time, who had no previous experience of caring for a patient with stroke, who agreed to participate in the study. Exclusion criteria were; caregivers who are not first-degree relatives of the patient, caregivers whose patient has had a stroke before, caregivers who have previous experience of caring for a patient with stroke, caregivers who did not agree to participate in the study. Caregivers of 101 of these patients who had a stroke for the first time and met the inclusion criteria were reached. However, of them, 20 declined to participate in the study and 12 could not be reached after the patient was discharged; therefore, 69 caregivers were included in the sample (response rate 69%). A power analysis was performed for the sample size by using 'G. Power-3.1.9.2' programme. With 0.80 effect size, 0.95 power and 0.05 margin of error, the minimum total sample size was calculated as 47.

Dependent Variable

Mean scores of Bakas Caregiving Outcomes Scale and Burnout Measure.

Independent Variable

The caregivers' descriptive characteristics (such as age, gender,etc.), mean scores of The Cheltenham Patient Classification Scale and The Preparedness for Caregiving Scale.

Instruments

We collected the data with the Patient and Caregiver Identification Form, Cheltenham Patient Classification Scale, Preparedness for Caregiving Scale, Bakas Caregiving Outcomes Scale, and Burnout Measure.

Patient and Caregiver Identification Form

The form developed by the researcher based on the relevant literature and similar studies was administered to question the descriptive characteristics of the patients and caregivers and health-related characteristics of the patients diagnosed with stroke.

The Cheltenham Patient Classification Scale (CPCS)

Yıldırım and Oktay who performed the validity and reliability study of the CPCS developed it to determine patient needs during the 24-hour nursing care (2005). The Cronbach's alpha value of the CPCS was 0.89 in Yıldırım and Oktay's study[14]. The CPCS which consists of four main care criteria (movement, hygiene, nutrition, and mental status) classifies patients into four categories. The minimum and maximum possible sores to be obtained from the CPCS are 1 and 16, respectively. If the participants' score is between 1 and 3, they are classified as Type 1 (Care Group 1), if between 4 and 7 as Type 2 (Care Group 2), if between 8 and 11, as Type 3 (Care Group 3), and if between 12 and 16 as Type 4 (Care Group 4).

Burnout Measure (BM)

Pines & Aronson first developed 21-item BM whose responses are rated on a 7-point frequency scale in 1988 to assess an individual's physical, emotional, and mental exhaustion levels. Then, Pines shortened it to 10 items in 2005 because researchers and practitioners needed an easy-to-use instrument which requires less space and less time to administer and to score[15,16]. The BM was adapted into Turkish by Çapri (2013)[17]. The items are scored from 1 (Never) to7 (Always). The sores obtained from the 10 items are summed and then divided by 10, which yields the score for the overall scale. While a score of ≤2.4 indicates a very low degree of burnout, a score between 2.5 and 3.4 is the indicator of danger signals for burnout, a score between 3.5 and 4.4 indicates that the person is in a state of burnout, a score between 4.5 and 5.4 indicates that the person has a serious burnout problem and a score of ≥5.5 indicates that professional help should be sought as soon as possible18. The Cronbach's alpha correlation coefficient of the BM was 0.93 in Çapri's study and 0.948 in our study.

The Preparedness for Caregiving Scale (PCS)

The scale developed by Archbold and Stewart was adapted into Turkish by Karaman and Karadakovan[1,19]. The eight-item CPS which is a self-rated instrument for caregivers is administered to find out how well caregivers believe that they are prepared are for multiple domains of caregiving. Responses given to the items are rated on a 5-point scale ranging from 0 (not at all prepared) to 4 (very well prepared). The score for the overall CPS is calculated by summing the mean scores for all the items. The higher the score is the more prepared the caregiver feels for caregiving or the lower the score is the less prepared the caregiver feels. The item-total correlation coefficients of the scale ranged from 0.63 to 0.84. The Cronbach's alpha coefficient for the overall CPS was 0.92 in Karaman and Karadakovan's study and 0.951 in our study.

Bakas Caregiving Outcomes Scale (BCOS)

The BCOS developed by Bakas in 1994 to measure changes in the lives of the families of stroke patients consists of 16 items questioning the positive and negative changes in caregivers' lives. Responses given to the items are rated on a 7-point scale ranging from −3 (changed for the worst) to +3 (changed for the best). The minimum and maximum possible scores that can be obtained from the overall BCOS are 15 and 105, respectively. The higher the score obtained from the overall BCOS is the more positive the change is. In other words, the lower the score is the more negative the change is[20]. The scale was adapted into Turkish by Can and Cavlak (2010) while the internal consistency of the scale was 0.90, the intra-class correlation coefficient score for the test-retest reliability coefficient was 0.9621. In our study, we calculated the Cronbach's alpha coefficient as 0.953.

Data Collection

Data were collected with the Patient and Caregiver Identification Form, Cheltenham Patient Classification Scale

and Preparedness for Caregiving Scale, Bakas Caregiving Outcomes Scale and Burnout Measure. While the first three scales were filled in while the patient was in the hospital, the last two scales were filled in after the patient was discharged from the hospital.

Ethical issues

Before the study was started, written approval was obtained from the aforementioned faculty's ethics committee (approval no. 20478486-1037). The study was carried out in accordance with the principles outlined in the Declaration of Helsinki. Written permission was obtained from the management of the hospital where the study was to be carried out. After the caregivers were informed about the purpose and procedures of the study, they were told that participation was voluntary, and that they could withdraw at any time. Then, their written informed consent was obtained.

Statistical analysis

We analyzed the data using the Statistical Package for the Social Sciences (SPSS) 21.00. In the comparisons of two independent groups, the Independent Samples t-test was used when numerical variables were normally distributed, and Mann Whitney U test was used when numerical variables were not normally distributed. In the comparisons of more than two independent groups, One-Way ANOVA was used when numerical variables were normally distributed, and Kruskal Wallis test was used when numerical variables were not normally distributed. Pearson Correlation test was used to analyze the relationship between the scores obtained from the scales.

Results

The mean age of the stroke patients was 67.44±10.52 (Min=46, Max=92) years. Of them, 50.7% were under the age of 67, 50.7% were women, 87% were married, 43.5% had 3-4 children, 47.8% were literate but not a graduate of any school, 59.4% had social security, 71.0% had no chronic disease other than stroke, and 44.9% were in the Type 2 care group in terms of their dependence on others.

As for the caregivers, their mean age was 45.33±11.40 years. Of them, 58.0% were under the age of 45, 53.6 women, %91.3% were married, 30.4% were primary school graduates, 72.5% were children of a stroke patient, 66.7% did not live with a stroke patient.

The distribution of the mean scores obtained from the Burnout Measure (BM), Preparedness for Caregiving Scale (PCS), and Bakas Caregiving Outcomes Scale (BCOS) were presented. The mean score obtained from the Burnout Measure was 2.73±1.33. The mean score obtained from the PCS was 22.20±6.98. The mean score obtained from the BCOS was 54.46±11.80.

As the caregivers' age increased, their mean BM scores increased, and PCS and BCOS scores decreased. There was a statistically significant difference between their scores in terms of the age variable ($p<0.05$). While the male caregivers obtained higher scores from the BM scores than did the

Table 1. Analysis of the Relationship between the Caregivers' Descriptive Characteristics and their BM, PCS and BCOS Scores

Characteristics	n	%	BM			PCS			BCOS		
			Mean±SD (2.73±1.33)	tα / f∞ x²□/ z^Ω	p	Mean±SD (22.20±6.98)	tα / f∞ x²□ / z□	p	Mean±SD (54.46±11.80)	tα / f∞ x²□ / z□	p
≤ 45 years ≥46 years Mean of age:45.33±11.40 (Min:27 Max:72)	40 29	58.0 42.0	2.44±1.10 3.13±1.53	-2.17 □	0.03*	23.80±6.11 20.00±7.59	2.30 □	0.02*	57.25±5.74 50.62±13.41	2.37 □	0.02*
Sex											
Men Women	32 37	46.4 53.6	2.64±1.29 2.81±1.38	-0.523α	0.60	22.75±7.24 21.72±6.81	0.602 α	0.54	55.84±11.42 53.27±12.15	0.901 α	0.37
Marital status											
Married Single	63 6	91.3 8.7	2.86±1.32 1.31±0.18	2.860^Ω	0.00*	21.58±6.88 28.66±4.50	-2.460 ^Ω	0.01*	53.49±11.83 64.66±4.84	-2.282^Ω	0.02*
Educational status											
Illiterate Literate but not graduate of any school Primary school High school University and graduate	3 17 21 16 12	4.3 24.6 30.4 23.3 17.4	4.53±1.12 2.87±1.49 2.78±1.31 2.20±0.86 2.71±1.43	2.155 □	0.07	12.33±7.76 20.11±7.78 22.23±6.52 24.87±4.58 24.90±6.99	2.971 □	0.02*	43.00±13.45 50.17±14.27 54.71±9.93 59.37±6.27 56.41±14.01	2.186 □	0.08
Degree of kinship with the patient											
Spouse Child Relative Grandchild Daughter / son in law	12 50 2 2 3	17.4 72.5 2.9 2.9 4.3	3.84±1.44 2.58±1.22 1.40±0.00 1.85±1.20 2.36±0.90	3.088	0.00*	15.75±8.55 23.02±5.91 32.00±0.00 25.00±1.41 26.00±2.00	-3.489	0.00*	43.58±13.87 56.38±10.32 64.00±0.00 60.00±5.65 56±11.35	-3.600	0.00*
Living with patient											

Table 1 Cont...

Yes No	23 46	33.3 66.7	3.39±1.45 2.40±1.15	3.057 □	0.00*	18.86±7.83 23.86±5.92	-2.960 □	0.00*	48.30±12.77 57.54±10.09	-3.275 □	0.00*
Dependence Level of Stroke Patients											
Type 1 (Independent) Type 2 (needs a help from a nurse) Type 3 (needs a help from two nurses) Type 4 (On strict bed rest /Cannot stand up)	12 31 17 9	17.4 44.9 24.6 13.1	1.81±0.85 2.57±1.02 3.67±1.50 2.73±1.57	15.099	0.00*	27.66±5.43 22.45±5.25 17.76±8.73 22.44±5.52	11.079	0.01*	62.25±6.23 55.48±7.65 45.29±13.94 57.88±15.39	16.558	0.00*

α: Independent samples t test / ∞: ANOVA test □: Mann Whitney U test / Ω : Kruskal Wallis Test *p<0.05

Table 2. Relationship between the Mean Scores obtained from the Preparedness for Caregiving Scale (PCS), Bakas Caregiving Outcomes Scale (BCOS) and Burnout Measure (BM)

		PCS Mean±SD: 22.20±6.98 (Min= 3 Max=32)
BM Mean±SD: 2.73±1.33 (Min=1 Max=6.10)	r/p	-0.824**/0,00
BCOS Mean±SD: 54.46±11.80 (Min= 21 Max=80)	r/p	0.719**/0,00

** The correlation is significant at the p<0.01 level.

female caregivers, the female caregivers obtained higher scores from the PCS and BCOS than did the male caregivers, but the difference was not statistically significant (p>0.05).

While the married caregivers obtained statistically significantly higher scores from the BM than did the single caregivers, the single caregivers obtained statistically significantly higher scores from the PCS and BCOS than did the married caregivers (p<0.05). The caregivers' PCS scores increased significantly as their education levels increased, making a statistical difference.

The BM scores of the spouses caring for the patient and the PCS and BCOS scores of the relatives caring for the patient were statistically significantly higher than were those of the other caregivers (p<0.05).

While the caregivers living with the patient obtained statistically significantly higher scores from the BM than did those who did not live with the patient, the caregivers who did not live with the patient obtained statistically significantly higher scores from the PCS and BCOS than did the caregivers living with the patient (p<0.05).

As is seen in Table 1, the analysis of the highest mean scores of the stroke patients according to their dependence levels revealed that while the caregivers of the patients in the Type 3 Care Group obtained the highest score (3.67±1.50) from the Burnout Measure, the caregivers of the patients in the Type 1 Care Group obtained the highest mean scores from the Preparedness for Caregiving Scale (27.66±5.43) and Bakas Caregiving Outcomes Scale (62.25±6.23). There was a statistically significant difference between the mean scores obtained from the scales in terms of the participants' degree of dependence) (p<0.05, Table 1).

Relationship between the Mean Scores obtained from the Preparedness for Caregiving Scale (PCS), Bakas Caregiving Outcomes Scale (BCOS) and Burnout Measure (BM) was given in Table 2. The caregivers' BM scores decreased as their PCS scores increased, which indicates that there was a moderately significant negative correlation between the scores obtained from both scales (r= -0.824, p<0.01). As the caregivers' PCS scores increased so did their BCOS scores. There was a moderately significant positive correlation between the scores obtained from the PCS and BCOS (r= 0.719, p<0.01).

Discussion

We discussed the results of our study, which revealed the necessity of caregivers' readiness to provide care for stroke patients and the effects of their readiness on their burden and burnout, under four headings with the results obtained in the literature.

Analysis of the Results Related to the Scores Obtained by the Caregivers from the Burnout Measure

Our review of the literature revealed that caregivers experienced emotional burnout[22,23]. In our study, it was found that danger signals for burnout started in caregivers. In their study conducted with stroke patients Parlakoğlu Baştürk and Özdemir (2020) administered the same scale and found a similar result[18].

As the caregivers' age increased, so did their mean BM scores and the difference between their scores in terms of the age variable was statistically significant (p<0.05). In several studies in the literature, it was reported that age did not affect the burnout level[23].

In the present study, the married caregivers obtained statistically significantly higher scores from the BM than

did the single caregivers. This difference is probably due to the fact that the married caregivers ad many additional responsibilities; thus, they experienced burnout more. However, in the literature, there are studies in which marital status were reported not to affect burnout[18,23].

Of the caregivers, those who were the spouses of the patients and those who lived together with the patients had higher burnout levels than did the other caregivers. Given that the spouses and those who lived together with the patients stayed and spent time together with the patients in the same house, and gave care to them continuously, their experiencing burnout more intensely is an expected outcome.

One of the most important factors that increase the burden of care is the patient's degree of dependence[24]. According to the participants' degree of dependence, the participants in the Type 3 care group obtained the highest score from the Burnout Measure. There was a statistically significant difference between the mean scores obtained from the scales in terms of the participants' degree of dependence. The burnout rate was highest in the Type 3 care group, which can be interpreted as the fact that the patients in the Type 4 care group were completely bedridden and did not impose an extra burden on the caregiver for mobilization.

Analysis of the Results Related to the Scores Obtained by the Caregivers from the Preparedness for Caregiving Scale

In the literature, caregivers' high level of readiness for caregiving is reported to affect the recovery and quality of life of stroke patients significantly well[12]. In our study, the participants' readiness to provide care was above the average. Our study results are consistent with the results of studies examining the level of readiness of caregivers of patients with stroke and epilepsy[25,26].

As the caregivers' age increased, their mean PCS score decreased. There was a statistically significant difference between their scores in terms of the age variable. On the other hand, unlike our study results, in Winterling et al.'s study (2021), the age variable did not affect readiness for caregiving[27]. These differences between the results probably stemmed from the differences between the groups' sociodemographic and cultural characteristics, and the social environments in which they live.

In our study, the comparison of the caregivers in terms of their marital status revealed that the single caregivers obtained statistically significantly higher scores from the PCS than did the married caregivers. This difference was an expected outcome because the married caregivers assumed more responsibilities.

It is stated that in addition to economic difficulties, the caregiver's education level is one of the factors affecting the burden of caregiving[28,29]. In our study, the caregivers' PCS scores increased significantly as their education level increased, leading to a statistical difference. This was probably because the caregivers whose education level was low had difficulties in getting information or other support from health professionals during the implementation of the care process. Winterling et al. (2021) reported that caregivers whose education levels were high were more prepared to give care. Our study results and the results of Winterling et al.'s study were consistent[27].

The relatives who gave care to their patients obtained statistically significantly higher scores from the PCS than did the other caregivers. In the literature, it was reported that the degree of kinship between the patient and the caregiver affected the readiness for caregiving[26]. Our study results are compatible with those of Aydın's study (2021).

Of the caregivers, those who did not live with the patient obtained statistically significantly higher scores from the PCS than did the caregivers who lived with the patient Henriksson and Årestedt (2013) reported that the caregivers living with the patient were more prepared to give care. Our study results are consistent with those of Henriksson and Årestedt's study[12].

Given the degree of dependence, the participants who obtained the highest mean score from the PCS were in the Type 1 care group, and the difference between the PCS scores of the groups in terms of their degree of dependence was statistically significant. Of the caregivers, those who gave care to the totally dependent patients suffered from the care burden at the highest level, while those who gave care to the independent patients suffered from the care burden at the lowest level[32]. Our study results were consistent with those in the study results of Ay et al (2017)[32].

Analysis of the Results Related to the Scores Obtained by the Caregivers from the Bakas Caregiving Outcomes Scale (BCOS)

In the holistic health approach, while stroke patients are treated, their relatives should be taken into account too. Changes in stroke patients' lifestyle also cause changes in their caregivers' lifestyle. The overall BCOS score of the caregivers could be considered as moderate. This result indicates that during the caregiving process, the caregivers did not experience a significant change in their lives, either for the better or for the worse. This is probably because the majority of them traditionally accepted caregiving as normal and perceived it as an adopted role. When we examined the studies in which the BCOS was used, the results of the study conducted by Kavga et al. (2021) with stroke patients and another study conducted with caregivers of oncology patients[34] were in parallel with our study[33,34].

The caregivers' mean BCOS scores decreased as their age increased, and the difference between the BCOS scores of the groups in terms of the degree of dependence was statistically significant. On the other hand, in several other studies in the literature, the age variable did not affect the burden of care and did not cause a change in caregivers' lives regarding the effect of the caregiving process[33,34].

These differences between the results probably stemmed from the differences between the groups' sociodemographic and cultural characteristics, and between the levels of the social support that they received.

In our study, the single caregivers obtained statistically significantly higher scores from the BCOS than did the married caregivers. On the other hand, in some studies in the literature, marital status was reported not to affect the burden of care[29,30,31], in some other studies marital status was reported not to cause a change in caregivers' lives regarding the effect of the caregiving process[33,34]. In another study, marital status had a significant effect on the care burden, and married individuals suffered from care burden more[24]. Our study results are consistent with those of Tarı Selçuk and Avcı's study. The differences between the results are thought to have stemmed from the differences between the populations of the studies.

The relatives who gave care to their patients obtained

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statistically significantly higher scores from the BCOS than did the other caregivers. However, in studies in the literature, the degree of kinship between the patient and the caregiver did not affect the burden of care[30,33]. The differences between the results probably stemmed from the differences between intra- family relationships.

Of the caregivers, those who did not live with the patient obtained statistically significantly higher scores from the BCOS than did those who lived with the patient. In their study, Akyar et al. determined that living with the patient did not lead to a change in caregivers' lives regarding the effect of the caregiving process[34]. The differences between the study results were probably due to the differences between the demographic characteristics, economic status, social environment, social support and cultural characteristics of the participants in those studies.

According to their degree of dependence, the participants who obtained the highest mean score from the BCOS were in the Type 1 care group, and the difference between the BCOS scores of the groups in terms of the degree of dependence was statistically significant. Since the burden of caregiving will be lower in the caregivers of the patients whose dependence is the lowest, it can be said that it is an expected result that the caregivers of these patients experienced better changes in their lives during the caregiving process than did the caregivers in the other groups.

Analysis of the Relationship between the Mean Scores Obtained from the Scales by the Caregivers

In the present study, as the caregivers' PCS scores increased, their BCOS scores increased but BM scores decreased. The more the participants felt ready to give care, the better they were able to tolerate the difficulties they were likely to experience; thus, they experienced burnout less and adapted to changes in their lives more easily. In studies conducted with caregivers of patients of different groups, a negative relationship was determined between readiness to provide care and caregiving burden[25,35]. In a study, a negative and significant relationship has been reported between the mean PCS score and stress[26,36]. In a studies conducted in Turkey with caregiver of stroke patients, a positive relationship was determined between the quality of life and social support, a negative significant relationship between their care burden, and quality of life and social support[13] and another study a positive significant relationship has been reported between Preparedness for Caregiving and Spiritual Well-Being[37]. It was also reported that as the caregivers' caregiving burden increased, so did their emotional exhaustion[22,23]. Our results were consistent with those in the literature.

Limitations

The results obtained from this study cannot be generalised to all caregivers since the study was limited to family members who care for stroke patients hospitalised in one hospital. In addition, while the lack of studies examining the effect of caregiver readiness of relatives caring for stroke patients on their caregiver burden and burnout brings originality to the study, it is among the limitations of the study due to the limited resources used in the discussion.

Conclusions

We concluded that the participants' readiness to provide care reduced their burnout, increased the mean score they obtained from the Preparedness for Caregiving Scale and led to changes in their lives for the better. Most family members do not have the necessary knowledge and skills to provide long-term care.

In this process, nurses are expected to perform roles such as training, consultancy, organization and guidance. The effect of caregivers' readiness for care on the burden of care and burnout should be determined and support groups should be activated in this process. Nursing professionals should aim to facilitate the caregiving process by supporting the emotional, spiritual and social needs of caregivers in this process. To ensure the caregivers' readiness to provide care, their communication with the patient, their knowledge about, and attitudes and behaviors towards the disease and caregiving should be observed, they should be helped to develop positive attitudes by focusing on their abilities, and they should be supported for this process. Thus, it is thought that the quality of life of both the patient and the caregiver will increase, and that their burnout and burden of care will decrease. Special programs should be developed to provide social support for caregivers, to reduce their stress, and to improve their relationship with the patient. We recommend that more comprehensive, interventional and qualitative studies should be conducted to support caregivers' readiness to provide care and to reduce their burnout.

According to the results of this study, it is thought that the quality of life of both the

patient and the caregiver will increase, and that their burnout and burden of care will decrease.

References

1.Karaman S, Karadakovan A. İnmeli hastalara bakım veren hasta yakınlarının bakıma hazır oluşluk ölçeği geçerlik ve güvenirlik çalışması. Ege Üniversitesi Hemşirelik Fakültesi Dergisi. 2015; 31(1):1-10. [The Study on The Validity and Reliability of Preparedness for Caregiving Scale in Family Caregivers of Stroke Patients] [in Turkish].

2.Katan M, Luft A. Global burden of stroke. Semin Neurol. 2018; 38(2):208-211. doi: 10.1055/s-0038-1649503.

3.Gok Ugur H, Erci B. The Effect of Home Care for Stroke Patients and Education of Caregivers on the Caregiver Burden and Quality of Life. Acta Clin Croat. 2019; 58(2):321-332. doi:10.20471/acc.2019.58.02.16.

4.Topçuoğlu MA, Tülek Z, Boyraz S, et al. İnme Hemşireliği: Standartlar ve Pratik Uygulamalar Kılavuzu. Türk Beyin Damar Hastalıkları Dergisi. 2020; 26(1): 1-90. [Acute Stroke Nursing: Standards and practical applications Turkish Society of Cerebrovascular Disease and the Society of Neurological Nursing: Joint Strategy Project] [in Turkish]. doi:10.5505/tbdhd.2020.41713.

5.Bin Suliman MA, Chen XW, Ibrahim MI, et al. Estimating the Burden Among Informal Caregivers of Stroke Survivors in East Coast Peninsular Malaysia: A Short-Term Longitudinal Study. Preprints. 2022, 2022100094. doi:10.20944/preprints202210.0094.v1.

6.Utaisang A, Pearkao C, Junsevg K, Sangsaikaew A, Boonkong D, Korcharoenyos C. Experiences of family members in caring of stroke patients: A case study in the border provinces of the upper northeast of Thailand. Open-Access Maced J Med Sci. 2021 19; 9(G):172-179. doi:10.3889/oamjms.2021.7125.

7.Sidek NN, Kamalakannan S, Tengku Ismail TA, et al. Experiences and needs of the caregivers of stroke survivors in Malaysia—A phenomenological exploration. Front. Neurol. 2022; 13: 996620. doi: 10.3389/fneur.2022.996620.

8.Kavi E, Bazrafshan M, Taleghani F, Abolhasani S, Akbari L. Experiences of Strokes' Caregivers: A Qualitative Study. Jundishapur J Chronic Dis Care. 2019; 8(4):e90284. doi:10.5812/jjcdc.90284.

9.Lafcı D, Yıldız E, Toru F, Karakaya D. Kanser hastalarında bakım

yükü ve bakım verenlere etkisi, 2020;7(2): 105-113. [Care burden in cancer patients and its effect on caregivers] [in Turkish].

10.Sözeri Eser İ. (2019). İnmeli Hastalara Bakım Verenlerin Bakıma Hazır Olma Durumunu Etkileyen Faktörlerin İncelenmesi. [Investigation of factors affecting readiness of caregiver for stroke patients]. Master Thesis, Ege University. İzmir. [in Turkish].

11.Özkan ÇG, Bayrak B, Demirbağ BC. Ev Ortamında Yatağa Bağımlı Hastanın Bakım Vericilerinin Bakım Yükü ve Kaygı Düzeyine Yönelik Hemşirelik Girişimleri. Halk Sağlığı Hemşireliği Dergisi. 2022; 4(1): 89-101. [Nursing Intervention to Care Burden and Anxiety Level of Caregivers of Bedridden Patients at Home] [in Turkish]. doi:10.54061/jphn.964777.

12. Henriksson A, Årestedt K. Exploring Factors and Caregiver Outcomes Associated with Feelings of Preparedness For Caregiving in Family Caregivers in Palliative Care: A Correlational, Cross-Sectional Study. Palliative Medicine. 2013; 27(7): 639-646. doi: 10.1177/0269216313486954.

13. Kars Fertelli T, Özkan Tuncay F. İnmeli Bireye Bakım Verenlerde Bakım Yükü, Sosyal Destek ve Yaşam Kalitesi Arasındaki İlişki. JAREN. 2019;5(2):107-115. [Relationship between Care Burden, Social Support and Quality of Life in Caregivers of Individual with Stroke] [in Turkish]. doi:10.5222/jaren.2019.52386.

14.Yıldırım D, Oktay S. (2005). İki Farklı Hastanede Hasta Tiplerine Göre Hemşirelik Bakım Süreleri Arasındaki Farkın Belirlenmesi. Hemşirelik Dergisi, 13(55): 21-36. [Determination of the Nursing Care Time Respect to Patient Type in Two Different Hospitals] [in Turkish].

15.Malach Pines A., Aronson E. Career burnout: Causes and cures. New York: Free Press: 1988.

16.Malach Pines A. The burnout measure short version (BMS). International Journal of Stress Management. 2005; 12(1): 78–88. doi:10.1037/1072-5245.12.1.78.

17.Çapri, B. Tükenmişlik Ölçeği-Kısa Formu ile Eş Tükenmişlik Ölçeği-Kısa Formu'nun Türkçe Uyarlaması ve Psikoanalitik-Varoluşçu Bakış Açısından Mesleki ve Eş Tükenmişlik İlişkisi. Kuram ve Uygulamada Eğitim Bilimleri. 2013; 13(3): 1393-1418. [The Turkish Adaptation of the Burnout Measure-Short Version and Couple Burnout Measure -Short Version and the Relationship between Career and Couple Burnout Based on Psychoanalytic-Existential Perspective]

18.Parlakoğlu Baştürk Ö. (2020). İnmeli Hastalara Bakım Veren Bireylerin Kişilik Özelliklerinin Bakım Verme Yükü ve Tükenmişlik Düzeylerine Etkisi. [The Effect Of Personality Characteristics of Caregivers of Stroke Patients on Caregiving Burden and Burnout Levels]. Master Thesis, Uludağ University, Bursa. [in Turkish].

19.Archbold PG, Stewart BJ. Family caregiving inventory. Unpublished manuscript, Oregon Health Sciences University, School of nursing, Department of Family Nursing, Portland; 1986.

20.Bakas, T. (1994) Bakas Caregiving Outcomes Scale: Development and psychometric analysis. 18.th Annual Midwest Nursing Research Society Conference, Milwauke.

21.Can T. Bakas Bakım Verme Ölçeği'nin Türkçeye uyarlanması, geçerlilik ve güvenirliliği. [Reliability and Validity of Turkish Version of Bakas Caregiving Outcomes Scale]. Doctoral Thesis, Pamukkale University. Denizli. [in Turkish].

22.Egici MT, Kök Can M, Toprak D. ve ark. Palyatif Bakım Merkezlerinde Tedavi Gören Hastalara Bakım Veren Bireylerin Bakım Yükleri ve Tükenmişlik Durumları. JAREN. 2019;5(2):123-131. [Care Burden and Burnout Status of Caregivers Whose Patients are Treated in Palliative Care Centers] [in Turkish]. doi:10.5222/jaren.2019.38247.

23.Saraçoğlu E, Altay B, Dönmez D. Kanserli Hastalara Bakim Veren Aile Üyelerinin Bakim Verme Yükü ve Tükenmişlik Düzeyleri. Akademik Sosyal Araştırmalar Dergisi. 2022; 10(124): 370-382. [Care Burden and Burnout Levels in Caregivers Family Members of Cancer Patients] [in Turkish]. doi: 10.29228/ASOS.54970.

24.Tarı Selçuk K, Avcı D. Kronik Hastalığa Sahip Yaşlılara Bakım Verenlerde Bakım Yükü ve Etkileyen Etmenler. SDÜ Sağlık Bilimleri Enstitüsü Dergisi. 2016; 7 (1): 1-9. [The Care Burden of Caregivers Caring for Elderly with Chronic Diseases and Affecting Factors] [in Turkish].

25. Bahçecioğlu Turan G, Dayapoğlu N, Özer Z. Evaluation of Care Burden and Caregiving Preparedness in Caregivers of Patients With Epilepsy: A Sample in Eastern Turkey. Epilepsy Behav. 2021;124:108370. doi: 10.1016/j.yebeh.2021.108370.

26.Aydın, A. (2021). İnmeli Hastaların Bakım Vericilerinin Bakım Vermeye Hazır Oluşluğu ve Algıladıkları Stres. [Preparedness of caregivers giving care to stroke patients for caregiving and the stress they perceive]. Doctoral Thesis, Marmara University. İstanbul. [in Turkish].

27.Winterling J, Kisch A, Alvariza A, Årestedt K, Bergkvist K. Preparedness for Family Caregiving Prior to Allogeneic Hematopoietic Stem Cell Transplantation. Palliative and Supportive Care. 2022; 20: 519–526. doi: 10.1017/S1478951521001346.

28.Mollaoğlu M, Özkan Tuncay F, Kars Fertelli T. İnmeli Hasta Bakım Vericilerinde Bakım Yükü ve Etkileyen Faktörler, DEUHYO. 2011; 4 (3):125-130. [Care burden of care givers of stroke patients and related factors] [in Turkish].

29.Orak OS, Sezgin S. Kanser Hastasına Bakım Veren Aile Bireylerinin Bakım Verme Yüklerinin Belirlenmesi. Psikiyatri Hemşireleri Dergisi. 2015; 6(1): 33-39. [Caregiver Burden in Family Members of Cancer Patients] [in Turkish]. Doi: 10.5505/phd.2015.02986.

30.Gündüz Saraç F. (2020). Alzheimer Hastalarının Fonksiyonel Kapasitesinin ve Bakım Verenin Duygusal Zekâ Düzeyinin Bakım Verme Yükü ile İlişkisi. [Relationship of the Alzheimer Patients' Functional Capacity and The Caregiver's Emotional Intelligence Level with the Caregiving Burden]. Master Thesis, Pamukkale University. Denizli. [in Turkish].

31.Ural Z, Ayyıldız M. Evde Bakım Vericilerin Bakım Vermedeki Yeterlilik Düzeyleri ile Bakım Yüklerinin Karşılaştırılması. Samsun Sağlık Bilimleri Dergisi. 2021;6(1):163-172. [The Comparison Between the in Home Caregivers' Sufficiency Level of Caring and Their Burden of Caregiving] [in Turkish]. doi: 10.47115/jshs.856946.

32.Ay S, Ünübol H, Ezer S, Omay O, Hızlı Sayar G. Yaşlı Hastalara Bakım Verenlerin Bakım Verme Yükleri ve Başa Çıkma Biçimleri ile Depresyon ve Anksiyete Düzeyleri Arasındaki İlişkinin Değerlendirilmesi, Fam Pract Palliat Care. 2017; 2(3):38-44. [Evaluation of the relationship between caregiver burden, coping styles and levels of anxiety and depression in caregivers of old age patients] [in Turkish]. doi: 10.22391/920.335720.

33.Kavga A, Kalemikerakis I, Faros A, Milaka M, Tsekoura D, Skoulatou M, Tsatsou I, Govina O. The Effects of Patients' and Caregivers' Characteristics on the Burden of Families Caring for Stroke Survivors. Int. J. Environ. Res. Public Health. 2021; 18(14): 7298. doi: 10.3390/ijerph18147298.

34.Akyar İ, Korkmaz F, and Atakul E. Yaşlı Onkoloji Hastalarına Bakım Veren Bireylerin Yaşamında Oluşan Değişikliklerin Belirlenmesi. Mersin Üniversitesi Sağlık Bilimleri Dergisi. 2017; 10(3): 158-167. [Caregiver outcomes of geriatric oncology patients] [in Turkish]. doi:10.26559/mersinsbd.307344.

35.Maheshwari PS, Mahal RK. Relationship of Preparedness and Burden Among Family Caregivers of Cancer Patients in India. J Health Med Nurs. 2016;22: 35-44.

36.Camicia M, Lutz BJ, Joseph JG, et al. Psychometric Properties of the Preparedness Assessment for the Transition Home After Stroke Instrument. Rehabil Nurs. 2021; 46(2):113-121. doi: 10.1097/RNJ.0000000000000310.

37.Özkan Tuncay F. The Relationship Between Preparedness for Caregiving and Spiritual Well-Being in the Carers of Stroke Patients: A Case Study in Türkiye. J Relig Health. 2024; 63(4):2760-2776. doi: