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Effectiveness of a Training Program for the Prevention of Pressure Ulcers on Caregivers of Elderly Patients

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Introduction: The aim of this study is to evaluate the impact of face-to-face education on pressure ulcer prevention and care provided to caregivers of patients with pressure ulcers in home healthcare services, specifically on the progression of the ulcers and their effects on the patients.

Methods: This prospective, analytical intervention study assessed the training program implemented using the presentation teaching strategy for caregivers of patients with pressure ulcers, from the perspective of the patient and caregiver. The participants were 91 patients with pressure ulcers in the Home Health Care Unit and 91 caregivers. The data collection tool, consisted of questions regarding sociodemographic data prepared by researchers and questioning the knowledge of caregivers' knowledge about pressure ulcer. The Barthel Index, Pressure Ulcer Scale for Healing, Braden Risk Assessment Scale, and Care Assessment Inventory provided by family members were used to assess the level of dependence in patients' daily living activities.

Results: The patients' average age was 77.21±13.26 years and 58.2% of them were women. The caregivers' average age was 53.32±11.45 years and 83.5% of them were women. A statistically significant increase was observed between knowledge scores before and after training ($p<0.001$). Indicating that the training positively affects the caregivers' level of knowledge. Factors such as a private room, caregiver support, caregiver competence, and caregiving difficulties were significantly related to changes in knowledge scores.

Conclusion: Training programs for caregivers on pressure ulcer handling in home health care patients are effective and should be planned from a broader perspective to include caregivers within the family.

Keywords: home care services, pressure sore, patient care, health education

Introduction

Home health care services (HHCS) are generally provided by the medical teams at home where older people with disabilities and bedridden patients, as well as patients who have problems reaching health institutions live.[1] Besides the health care service that individuals need, HHCS also provides services such as training and counseling to patients and their relatives. For family members who provide long term care, the training and counseling provided by the health care team will directly affect care adequacy and as a reflection of this, the quality of care. Within the scope of the home care, not only the patient, but also the caregiver and other family members need to be considered.[2]

The global prevalence of pressure ulcers is a significant health issue, especially among elderly and bedridden patients who require home care. Studies conducted worldwide emphasize that pressure ulcers are frequently seen in these patient groups and can lead to serious complications. In this context, the implementation of effective training programs for the prevention and treatment of pressure ulcers is of great importance. Pressure ulcer is a pathology with high morbidity and mortality, usually observed in the immobile patient group with chronic diseases.[3,4] This study aims to investigate why hands-on, face-to-face education for caregivers might be more effective in preventing pressure ulcers and improving the quality of care. Face-to-face education is one of the most effective methods for providing caregivers not only with theoretical knowledge but also with practical skills. For this reason, face-to-face education has been preferred over online

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or written materials. During face-to-face training, caregivers gain hands-on experience, receive immediate feedback, and can directly ask questions to experts, making the learning process more effective. This approach may help caregivers better understand and overcome the challenges they face in the caregiving process. Caregivers are generally female family members.[5] Receiving care from relatives positively affects patients physical and psychological well-being. However, studies indicate that caregivers and patients face problems and need expert help owing to their lack of knowledge about caregiving. Which can have a negative impact on both caregivers and patients.[6,7]

This study aims to evaluate the impact of face-to-face education on pressure ulcer prevention and care among caregivers of patients receiving home healthcare services, focusing on the ulcers' progression and effects on patients.

Methods

This was a prospective, analytical, intervention study. Ethics committee approval granted by Bozyaka Research and Training Hospital Ethics committee on 27/07/2022 (Decision no: 2022/117). The current study was conducted under the Declaration of Helsinki. The descriptive study was conducted between August and October 2022 in İzmir, Bozyaka province. Of the 91 patients and caregivers were visited by the Bozyaka Training and Research Hospital home health-care team. There were 3500 patients receiving Bozyaka Training and Research Hospital home health-care services. The minimum necessary sample size was calculated for at least 72 people with 80% power, a 95% confidence (d=0.05) interval, and a 5% (p=0.05, q=0.95) acceptable margin of error.

Participants

Inclusion criteria for admission to the study are determined as follows: the patient has a pressure ulcer at any stage, is constantly cared for by their family, and in the same house throughout the study (three months). Additionally, the caregiver is 18 years of age or older, capable of understanding the questions, and directly responsible for the care of the bedridden patient. The fact that the house is far away, language problems, quitting the training and the loss of the patient have been taken as exclusion criteria.

Data Collection

As a data collection tool, a questionnaire prepared by the researchers was used, which included sociodemographic questions and six questions assessing the caregivers' knowledge about pressure ulcer. In addition, Barthel Index, Pressure Ulcer Scale for Healing (PUSH), Braden Risk Assessment Scale, and a care assessment inventory provided by family members were used to assess the level of dependence in patients' daily living activities.

All questionnaires were administered to caregivers during patients visits at home. Pre-training questionnaires for all caregivers were completed within a one-month period. Subsequently, pressure ulcer care training was provided to the caregivers via the face-to-face presentation method in a two-hour period in the hospital conference hall. Four weeks after the training, a follow-up survey containing knowledge questions and the Pressure Ulcer Scale for Healing (PUSH) to assess the condition of the sores was administered again at the patients' homes.

Measures

Pressure Ulcer Knowledge Scale

This scale, developed by the researchers through a literature review, consists of 6 questions designed to assess caregivers' knowledge levels about pressure sores. The questions cover information related to the care, risk factors, and treatment of pressure sores.

Caregiving Assessment Inventory by Family Members

This inventory was developed in 2000 by Prof. Dr. Yea-Ing Lotus Shyu from Chang Gung University and was adapted into Turkish by Cingil and Gözüm in 2008, with its validity and reliability tested. It is an inventory used by healthcare professionals to evaluate family caregiving capacity based on observation. The inventory categorizes family caregiving factors into four sub-dimensions.

Caregiver's Knowledge about the Patients

This section measures the caregiver's understanding of the situations and actions required for the patients, which can affect caregiving activities. A low score in this sub-dimension indicates a low level of knowledge about the patients, with a minimum and maximum score range of 7–35.

Difficulties Experienced in Caregiving

This section assesses the degree of difficulty the caregiver feels regarding the tasks they need to perform for the patients. A high score in this sub-dimension means that the caregiver finds caregiving challenging, with a minimum and maximum score range of 6–30.

Caregiving Resources

A low score in this sub-dimension indicates insufficient caregiving resources, with a minimum and maximum score range of 7–21.

Caregiver's Self-Expectations

This section measures the caregiver's level of fulfillment of their self-expectations in their caregiving role. A low score in this sub-dimension suggests a low level of self-expectation regarding caregiving adequacy, with a minimum and maximum score range of 5–15.[5]

Pressure Ulcer Scale for Healing (PUSH)

The PUSH consists of three subscales: tissue type, amount of exudate, and pressure sore area. The total score, ranging from 0 to 17, reflects information about the ulcer's condition, with an increasing higher score indicating greater severity of the ulcer.[2]

Braden Risk Assessment Scale

The Braden Scale for Predicting Pressure Sore Risk was developed by Braden and Bergstrom, and a validity and reliability study was conducted in Turkey in 1997. The total score ranges from 6 to 23 by adding the subscale scores. A score of 15–16 is considered low risk (for people over 75 years of age, a score of 15–18 is considered low risk), a score of 13–14 is considered moderate risk, and a score of 12 or lower is considered high risk.[2]

Barthel Index

Developed by Mahoney and Barthel in 1965 and modified by Shah and et al in 1992, the Barthel Index's Turkish version was adapted by Küçükdeveci et al in 2000. This scale consists of 10 items that assess functions such as feeding, bathing, grooming, dressing, bowel control, bladder control, toilet use, ability to transfer from bed to wheelchair, mobility (walking or wheelchair dependency), and stair climbing. Each item is scored on a scale from 0 to 15, with increments of 5 points depending on the question. The primary purpose of this scale is to determine the extent to which a patient can perform these activities independently without any physical or verbal assistance. Direct testing of the patient is not mandatory; evaluations can be based on direct observation or information obtained from the patient, their relatives, or caregivers such as nurses. The total score ranges from 0 to 100, with higher scores indicating greater independence from others and the ability to manage their own activities. The scoring is categorized as follows: 0–20 points indicate total dependency, 21–61 points indicate severe dependency, 62–90 points indicate moderate dependency, 91–99 points indicate slight dependency, and 100 points indicate total independence.[8]

Statistical Analysis

The data were analyzed using IBM SPSS 25.0 (Statistical Package for the Social Sciences) package program. The descriptive findings are derived by calculating the frequency, percentage, mean, standard deviation, and median values. $p<0.05$ was considered significant for all analyses and the relationships were evaluated within the 95% confidence range.

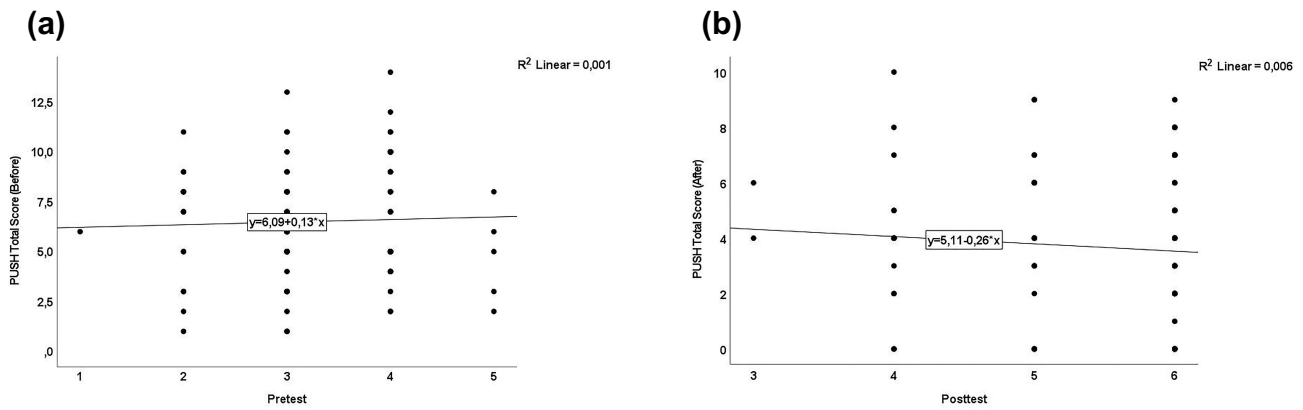

Figure 1 (a) Predicting PUSH total score (before) with pre-test knowledge total score using lineer regression analysis. **(b)** Predicting PUSH total score (after) with post-test knowledge total score using lineer regression analysis.

The pre-test and final test scores and the PUSH 1 and PUSH 2 averages were calculated using the *t*–test in the related groups. The relationship between the pre-test and final test results and the caregivers' sociodemographic characteristics and between the caregivers' sociodemographic characteristics and the PUSH averages were calculated using the *t*–test and Spearman correlation coefficient in independent groups. A model was developed using linear regression analysis to predict the condition of the sore based on the knowledge scores Figure 1a and b.

Results

The study involved 91 patients and 91 caregivers. The average age of the patients is 77.21±13.26, and 58.2% are female. Sociodemographic characteristics of the patients receiving care are presented in Table 1.

The average age of caregivers is 53.32±11.45 years, and 83.5% are female. Regarding the caregiver's relationship closeness with the older adults, 62.6% were cared for by their children, and 17.6% by their spouse. Caregivers'

Table 1 Sociodemographic Characteristics of the Care Recipients

		N	%
Age	77.21±13.26 (min.23- max.102)		
Gender	Male	38	41.8
	Female	53	58.2
Social security	Yes	85	93.4
	No	6	6.6
Educational status	The patient has no info	1	1.1
	Illiterate	23	25.3
	Literate	6	6.6
	Primary school	41	45.1
	Secondary school	10	11.0
	High school	7	7.7
	University	3	3.3

(*Continued*)

Table 1 (Continued).

		N	%
Marital status	Divorced	1	1.1
	Married	35	38.5
	Widowed	52	57.1
	Never married	3	3.3
No. of chronic diseases	1–2	72	78.1
	3–4	18	19.8
	4+	1	1.1
History of hospitalization due to pressure ulcers	Yes	6	6.6
	No	85	92.4
Air mattress	Yes	40	44.0
	No	51	56.0
Braden classification	(<12) high risk	14	15.4
	(13–14) moderate risk	16	17.6
	(15–16) low risk	61	67.0
Barthel Index	(0–20) totally dependent	73	80.2
	(21–61) severely dependent	18	19.8
Total		91	100.0

sociodemographic data and the average scores of the subgroups of the inventory for evaluating care provided by family members are presented in Table 2.

A statistically meaningful relationship was observed between the averages of the knowledge scores taken before and after the pressure ulcers training. The average score of the final test is significantly higher than the pre-test (Figure 2a).

Table 2 Caregivers' Sociodemographic Data

		N	%
Age	53.32±11.45 (min.25- max.85)		
Gender	Male	15	16.5
	Female	76	83.5
Social security	Yes	82	90.1
	No	9	9.9
Marital status	Divorced	4	4.4
	Married	70	76.9
	Widowed	7	7.7
	Never married	10	11.0

(*Continued*)

Table 2 (Continued).

		N	%
Educational status	Literate	2	2.2
	Illiterate	1	1.1
	Primary school	27	29.7
	Secondary school	20	22.0
	High school	28	30.8
	University	13	14.3
Economic status	Income lower than expenditure	54	59.3
	Income equal to expenditure	32	35.2
	Income higher than expenditure	5	5.5
Time spent with older adult	Temporary	6	6.6
	Continuous	85	93.4
Private room for older adult	Yes	65	71.4
	No	26	28.6
Presence of person who will help with care	Yes	66	72.5
	No	25	27.5
Presence of person who will provide care on behalf of caregiver	Yes	74	81.3
	No	17	18.7
Relationship closeness of caregiver	Child (daughter- son) of older adult	57	62.6
	Spouse of older adult	16	17.6
	Paid caregiver	7	7.7
	Other*	11	12.1
Caregiving time (in months) 46.23±47.08 (min.1- max.240)			
No. of people living together ——---------- in the house 3.42±1.24 (min.2- max.8)			
Inventory of Assessment of Care Provided by Family Caregivers			
1) Caregiver's Competence on Care 32.47±2.59 (min.26- max.35)			
2) Difficulties Experienced in Providing Care 26.84±2.65 (min.20- max.30)			
3) Caregiving Resources 15.86±1.37 (min.12- max.18)			
4) Self-expectations of Caregiver 13.65±1.62 (min.10- max.15)			
Total		91	100.0

Note: *Daughter-in-law, sibling, granddaughter.

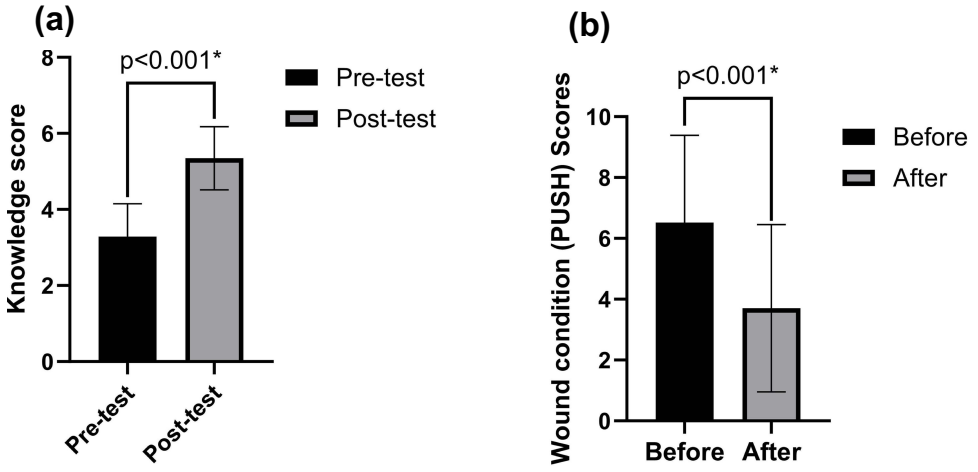

Figure 2 (**a**) Comparison of knowledge score among pre and post test, (**b**) Comparison of wound condition (PUSH) score among before and after. *p<0.05 considered significant.

A similar significant relationship was found between PUSH 1 and PUSH 2, which indicate the severity of the pressure ulcers. The PUSH 1 score is higher than the PUSH 2 score (Figure 2b). The pre- and post-training assessment score averages are reported in Table 3.

In Figure 1A, an attempt was made to predict the condition of the sore using the PUSH measurement test based on the knowledge scores obtained from the pre-test. The regression analysis resulted in the model y=6.09+0.13x. Although an increase in knowledge scores was expected to decrease the sore condition (PUSH) score, a positive correlation was observed in the equation due to the lack of information and education. However, in Figure 1B, an attempt was made to predict the condition of the sore using the PUSH measurement test based on the scores obtained from the post-test. The regression analysis resulted in the model y=5.11–0.26x. At this stage, because information and education were provided, an increase in knowledge scores corresponded with a decrease in the sore condition (PUSH) score, and a positive correlation was observed in the equation.

A significant difference was observed between the caregivers' knowledge score changes and the subscale averages of the following items: Private room for older adults, Presence of a person who will help with care, Caregiver's Competency on Care, and Difficulties in Caregiving. The presence of a person who will help with care and a private room for the older adult are associated with a higher score in the final test assessing the level of knowledge on pressure ulcers. There is a weak and moderate positive relationship between the pre- and final test and average scores of the following subscales: Caregiver's Competency on Care, and Difficulties in Caregiving. No significant relationship was found between the sociodemographic characteristics of the caregiver and the change in knowledge score. The sociodemographic characteristics of the caregivers and the changes in the knowledge score according to the assessment inventory of the care provided are presented in Table 4.

Table 3 Pre- and Post-Training Assessment Score Averages

Variables	Mean±SD	p	Power (Effect Size)
Knowledge score			
Pre-test	3.29±0.86	<0.001*	1.000 (2.44)
Final test	5.35±0.83		
Wound condition			
PUSH 1	6.52±2.87	<0.001*	1.000 (1.00)
PUSH 2	3.70±2.75		

Note: *p<0.05 considered significant.

Table 4 Caregivers' Sociodemographic Characteristics and Changes in Knowledge Score According to Care Assessment Inventory

		Pre-test	p	Final test	p
Age[a]		−0.127	0.232	−0.091	0.392
Gender	Male	3.33±0.97	0.835	5.00±1.06	0.074
	Female	3.28±0.84		5.42±0.77	
Social security	Yes	3.26±0.85	0.356	5.37±0.83	0.627
	No	3.56±0.88		5.22±0.83	
Marital status	Single	3.38±0.80	0.549	5.14±0.91	0.193
	Married	3.26±0.87		5.41±0.80	
Educational status	Primary school and below	2.90±0.80	0.002	5.17±0.87	0.139
	Above primary school	3.48±0.82		5.44±0.80	
Economic status	Income lower than expenditure	3.28±0.87	0.700	5.46±0.77	0.258
	Income equal to expenditure	3.25±0.80		5.16±0.95	
	Income higher than expenditure	3.60±1.14		5.40±0.54	
Relationship closeness of the caregiver	First-degree relative	3.18±0.80	0.030	5.34±0.86	0.744
	Other[#]	3.76±0.97		5.41±0.71	
Time spent with the older adult	Temporary	3.83±1.16	0.278	5.83±0.40	0.145
	Continuous	3.25±0.83		5.32±0.84	
Private room for the older adult	Yes	3.26±0.81	0.698	5.46±0.83	0.047*
	No	3.35±0.97		5.08±0.79	
A person who will help in care	Yes	3.32±0.88	0.549	5.47±0.74	0.028*
	No	3.20±0.81		5.04±0.97	
A person who will take your place	Yes	3.32±0.89	0.306	5.43±0.81	0.054
	No	3.12±0.69		5.00±0.86	
Caregiving time[a]		0.018	0.868	−0.002	0.982
No. of people in the house[a]		−0.092	0.387	−0.047	0.661
Inventory of Assessment of Care Provided by Family Caregivers					
1) Caregivers's Competency on Care		0.441	**<0.001***	0.456	**<0.001***
2) Difficulties in Caregiving[a]		0.245	0.019*	0.212	0.044*
3) Caregiving Resources[a]		0.091	0.391	0.131	0.216
4) Self-expectations of Caregiver[a]		0.097	0.362	0.191	0.070

Note: a: Spearman correlation coefficient. [#]2nd degree relative, paid caregiver. *p<0.05 considered significant.

Discussion

Home care is an important link in the handling of home health care patients with chronic ulcers.[9,10] Family caregivers' ulcer handling behaviors will affect the patient's disease progression and quality of life (QoL).[11] Additionally, family

members who provide home care also play a key role in the clinical decision-making process of the patient-centered treatment.[12]

In our study on average, half of the information about pressure ulcer care, risk factors and treatment was unknown to the caregivers before the training. After the training, almost all of the questions were answered correctly, which indicates a significant increase in awareness about the subject. Numerous meta-analyses and systematic reviews document that the effectiveness of training provided to caregivers is positive for patients and caregivers.[13] Pressure ulcers occur in bedridden patients for many reasons, such as poor nutrition, poor hygiene, and inactivity, and the severity of existing ulcers may increase. The training in the prevention of pressure ulcers should not be limited only to health care professionals, but the patient and the caregiver should also be included in the process to reduce the risk. The risk of pressure ulcers can only be minimized in this way, especially for patients with existing long-term care needs, such as home health care patients.[14] We provided training to patients and their caregivers both during our study and during our visits within the scope of home care services.

The use of the PUSH scale to assess the severity of the ulcers in home care units, to plan the follow-up and treatment of patients with pressure ulcers, is in line with the recommendations of the US National Pressure Ulcer Advisory Panel (NPUAP).[2] We used the PUSH scale before and after the training to assess the effectiveness of pressure ulcer-related training administered to the caregivers. The severity of the pressure ulcer decreased statistically after training. Avcı et al conducted a systematic review and determined training practices improved caregivers' competence level, well-being and QoL and patients' hospitalization, family's perception of care burden and depression rates also decreased.[15] Providing care-related training by medical personnel to family members responsible for caring for individuals in need of care at home provides psychosocial support and provides benefits for the patient by improving effective cooperation. Additionally, it also contributes to caregivers in terms of protecting their own health. Although the training and interventions may vary depending on the characteristics of the individuals who will receive the training, caregivers are satisfied with the work they do and develop an insight into the service they provide in any intervention.[9,16]

Based on the subscales of the inventory assessing the care provided by family members, the caregiver's competence regarding the individual they care for was high. Most caregivers in our study consist of first-degree relatives of older adults. For this reason, they may treat the patients more carefully. The difficulties in caregiving were found to be high. It should be noted that the caregivers in our study need support, even if they are first-degree relatives, in the care they provide to patients with pressure ulcers. After the training, caregivers felt more competent about providing care, and the difficulties in caregiving also decreased. Studies on the effectiveness of the training given to caregivers in Turkey, have determined that the training given to those of bedridden patients is effective in increasing their level of knowledge about care, caregiving competence and resources, and reducing the difficulties in caregiving and caregiver burden.[6,17] Our findings are also in line with the literature.

A significant relationship was observed between the changes in the caregivers' knowledge scores after the training and the presence of a private room for the older adult and of a person who will help with care. The presence of a private room for the older adult shows that the necessary care and importance are provided to the patient by the caregivers. The caregivers who provide this setting may be more cooperative for any kind of intervention that will be for the benefit of the patient and. Such caregivers benefit more from the training. The presence of a person who will help with care makes the caregiver more willing and effective in providing care. Long-term care by a single person is likely to lead to exhaustion. This may also be important in terms of the general condition and health of the patients. After the training, caregivers' competence regarding care increased; while, the difficulties in caregiving decreased. For non-professional caregivers providing pressure ulcer care at home may also be a stressful experience. The lack of sufficient knowledge and skills may result in unintentional harm to the patient or negatively affect the healing process of the ulcers. This risk is directly related to a lack of ulcer care knowledge and skills. Therefore, appropriate training to caregivers must be provided to ensure that they have the necessary skills and knowledge to provide chronic ulcer care at home.[9,18]

More than half of the patients receiving care were female patients. According to the World Health Organization (WHO) data, the average life expectancy of women is longer than that of men, and as the average life expectancy increases, chronic diseases and the need for HHCS also increase.[19] Similar studies conducted in Turkey also found that the number of female patients receiving home HHCS is higher and the rate varies between 41.6% and 86.9% (20). The

average age of the patients in our study was 77.21±13.26. The average age of those in similar study was 78.29 (78.28 ±14.51).[2] Our results are also in line with the patient profile reported in the literature and home health care statistics.[17,20]

All participating patients had pressure ulcers. According to the Index of Activities of Daily Living, almost all were totally dependent and bedridden. Only 44.0% had an air mattress. For the patients who are bedridden and at risk of pressure ulcers and who are unable to change positions manually frequently, active support surfaces are recommended rather than standard mattresses and highly qualified reactive foam mattresses.[21] However, owing to the socioeconomic status of the patient and their relatives less than half (44%) had an air mattresses, which can reduce the risk of pressure ulcers.

According to our study, the majority of caregivers are primary school graduates and married women over the age of 50. Furthermore, the majority of them had low sociocultural and socioeconomic levels. A review of the literature revealed that most caregivers are married middle aged women. This situation can be explained by the fact, in Turkey men are more involved in working life and thus, the duty of caring for the patient falls to women in the family. A common opinion exist in Turkish society that a woman should take on family responsibilities as a natural duty.[22] Kuzay found that 65.6% of caregivers were female, 52.2% were middle-aged, 87.8% were married, and 51.1% were primary school graduates.[23] According to these results, caregivers with a low level of education are left alone with the problems of this patient group, which even a trained health professional may have difficulty coping with. In addition, the severity of pressure ulcers of patients of caregivers with a high educational status decreased after the training. This indicates that caregivers with a high level of education benefit more from the training.

Our study also revealed that more than half of the caregivers were children of the patients. And the spouses took the second place. Adıgüzel et al reported that 42.5% of care is provided by first-degree relatives and other family members.[24] Kuzay stated that 47.8% of caregivers are the patient's children.[23] Huang et al conducted a systematic review of 16 studies on the effects of home-based chronic ulcer care training for patients and caregivers, and established that the majority were women (66.0%), and the family relationship was, in general, spouse or son/daughter (41.4% and 41.1%, respectively) or other family members (17.5%). Chronic ulcer care for patients with dementia or older adults is largely provided by family members at home.[9,10] Considering the inevitability of death of a spouse in old age and the old age of the surviving spouses, it is common for the first- and second-degree relatives, such as children and siblings, to be more involved in the patient care process in Turkey. Research has emphasized that providing care support to older adults in need of care by individuals close to the family or family members may be useful.[25]

As the population ages worldwide, caregivers within the family will play an increasingly important role in the home care of older adults. The effects of interventions aimed at further strengthening the caregiver/family require investigation.[9]

Limitations

This study was conducted in a single center with no control group.

Conclusion

This study revealed that home-based ulcer care training for caregivers is effective in changing ulcer and caregiver knowledge. As a result, the severity of pressure ulcers of patients' decreased and gradually healed. Preventive measures are the best treatment protocol to prevent the formation of pressure ulcers, especially in older patients in need of home care, whose QoL this study aimed to improve. Caregiver training is one of the most important steps to prevent the formation of and to treat possible pressure ulcers. While the study mentions that training improved caregivers' competency and reduced difficulties, studies that evaluate more detailed information on how to support caregivers beyond training should be planned. In this context, strategies such as emotional support mechanisms, enhanced psycho-social support programs, and structured respite periods for caregivers could be considered. We believe that our study will contribute to research on the effectiveness of training related interventions on caregivers helping patients with pressure ulcers.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors declare no conflicts of interest in this work.

References

1. Solmaz T, Altay B. Home care services for the elderly. *J Health Acad*. 2019;6(2):150–157.
2. Salar OB, Tuncer O. Investigation of Pressure Ulcers Frequency and Risk Factors of Patients Registered to Home Health Unit. *Turk J Fam Med Prim Care*. 17(4):479–488. doi:10.21763/tjfmpc.1300394
3. Gencer ZE, Ozkan O. Pressure Ulcers Surveillance Report. *J Turk Intensive Care*. 2015;13(1):26–30. doi:10.4274/tybdd.81300
4. Çayır Y. Home health care. *Turk J Fam Med Prim Care*. 2020;14(1):147–152.in Turkish. doi:10.21763/tjfmpc.693164
5. Ogur Z, Gozum S, Tas E, Yalcındag N, Alpak M, Hayran O. The Effect of Training Given to Family Members Caring for Dependent Patients Receiving Home Health Services on Patients and Caregivers: a Randomized Controlled Study.Turk. *J Fam Med Prim Care*. 2019;13(3):318–334.in Turkish. doi:10.21763/tjfmpc.446108
6. Adib-Hajbaghery M, Ahmadi B. Caregiver Burden and its Associated Factors in Caregivers of Children and Adolescents with Chronic Conditions. *Int J Comm Based Nurs Midwifery*. 2019;7(4):258–269. doi:10.30476/IJCBNM.2019.73893.0
7. Oedekoven M, Amin-Kotb K, Gellert P, Balke K, Kuhlmey A, Schnitzer S. Associations between informal caregivers' burden and educational level. *Gerontopsych Geriatric Psyc*. 2019;32(1):19–29. doi:10.1024/1662-9647/a000199
8. Kankaya H, Karadakovan A. The Effects of Daily Life Activity Levels on the Quality of Life and Life Satisfaction of Elderly. *Gümüshane Univ J Health Scien*. 2017;6(4):21–29.
9. Huang Y, Hu J, Xie T, et al. Effects of Home-Based Chronic Wound Care Training for Patients And Caregivers: a Systematic Review. *Int Wound J*. 2023;20:3802–3820. doi:10.1111/iwj.14219
10. Reinhard S. Home Alone Revisited: family Caregivers Providing Complex Care. *Innov Aging*. 2019;3(1):747–748. doi:10.1093/geroni/igz038.2740
11. Lo SF, Chuang ST, Liao PL. Challenges and Dilemmas of Providing Healthcare to Patients in Home Care Settings with Hard To-Heal Wounds. *Hu Li Za Zhi*. 2021;68(4):89–95. doi:10.6224/JN.202108_68(4).11
12. Messenger G, Taha N, Sabau S, AlHubail A, Aldibbiat AM. Is There a Role for Informal Caregivers in the Management of Diabetic Foot Ulcers? A Narrative Review. *Diabetes Ther*. 2019;10(6):2025–2033. doi:10.1007/s13300-019-00694-z
13. Magnusson L, Hanson E. Supporting Frail Older People and Their Family Carers at Home Using Information and Communication Technology: cost Analysis. *J Adv Nurs*. 2005;51(6):645–657. doi:10.1111/j.1365-2648.2005.03541.x
14. Tezcan B, Gülseven Karabacak B. Towards Better Outcomes in Pressure Injury Prevention: evidence-Based Practices. *BAUN Health Sci J*. 2021;10(1):49–54. in Turkish.
15. Avcı Y D, Gozum S, Ozer Z. Interventions to Improve Caregiving Competence of Families of Stroke Patients: systematic Review. *Turk J Fam Med Prim Car*. 10(3):164–174. in Turkish. doi:10.21763/tjfmpc.46799
16. Holm M, Carlander I, C.j F, et al. Delivering and Participating in a Psychoeducational Intervention for Family Caregivers During Palliative Homecare: a Qualitative Study from Perspectives of Health Professionals and Family Caregivers. *BMC Palliat Care*. 2015;14:16. doi:10.1186/s12904-015-0015-1
17. Cingil D, Gozum S, Bodur S. The Effect of the Training Given to Family Members Caring for the Dependent Elderly on the Caregiving Competency and Elderly Care Knowledge Level. *Anatolian Jo Nu HeSci*. 2015;18(4):259–267.in Turkish. doi:10.17049/ahsbd.82368
18. Jika BM. Supporting Family Caregivers in Providing Care. *New Vistas*. 2021;7(2):21–25. doi:10.36828/newvistas.144
19. Pan American Health Organization/World Health Organization. Health of older persons; 2017. Available from: https://www.paho.org/salud-en-las-americas-2017/?p=1627. Accessed October 30, 2024
20. Catak B, Kılınc A, Badıllıoglu O, Sutlu S, Sofuoglu A, Aslan D. Profile of Elderly Patients Receiving Home Health Services in Burdur and Health Services Provided at Home. *Turk J Public Health*. 2012;10(1):13–21. in Turkish.
21. Saghaleini SH, Dehghan K, Shadvar K, Sanaie S, Mahmoodpoor A, Ostadi Z. Pressure ulcer and nutrition. *Indian J Crit Care Med*. 2018;22(4):283–289. doi:10.4103/ijccm.IJCCM_277_17
22. Gelmez OSO. The convicts of familialized care: experiences of care giver women within the home care practice. *Journal of Fe*. 2015;7(2):58–71.in Turkish. doi:10.1501/Fe0001_0000000143
23. Ilce A, Kuzay H. Characteristics of Chronic Wound Care Providers in Home Care and Determination of the Methods Used in Chronic Wound Care. *J Health Care Rehabil*. 2023;2(1):1–9. in Turkish.

24. Adıguzel E, Tek N. Evaluation of Nutritional Status of Individuals Receiving Home Care Services According to the Reasons for Receiving Care. *Elder Probl Res J*. 2018;11(1):34–40. in Turkish.
25. Ventura AD, Burney S, Brooker J, Fletcher J, Ricciardelli L. Home-Based Palliative Care: a Systematic Review of The Self-Reported Unmet Needs of Patients and Carers. *Palliat; Med*. 2014;28(5):391–402. doi:10.1177/0269216313511141

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