

Original Article

Wound Diagnosis in Home Care Patients and Evaluation of Care Provided by Family Members

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Abstract

Objective: The aim of this study was to evaluate the diagnosis of wounds and the care provided by family members in patients enrolled in a home health unit.

Method: The study was cross-sectional, correlational and descriptive. The sample consisted of patients (n=131) and their caregivers (n=131) enrolled in a home health unit in a district located in the Western Black Sea region. Data were collected using the Descriptive Information Form, Braden Pressure Ulcer Risk Prediction Scale, Wound Diagnosis and Monitoring Form, Wound Assessment Form and Inventory for Evaluation of Care Given by Family Members. Number, percentage, mean, standard deviation, descriptive tests and Spearman Correlation Analysis were used in data analysis.

Results: Of the caregivers who participated in the study, 63.4% were female, 44.3% were in the 56-65 age group, 39.7% were housewives, and 71% were primary school graduates. Pressure sores were observed in 9.1% of patients and diabetic wounds in 0.8%. The total score of the Inventory for Evaluation of Care Provided by Family Members ranged between 45 and 86, with a mean score of 63.01. There was a moderately significant positive correlation between the Braden Pressure Ulcer Risk Assessment Scale score and the Caregiver's Level of Knowledge about the Care Recipient ($r=0.374$) and Caregiving Resources ($r=0.305$). There was a low level significant positive correlation ($r=0.250$) between the Braden Pressure Ulcers Risk Assessment Scale and Caregiver's Expectations from Him/herself, and a moderate level significant negative correlation ($r=-0.398$) between Caregiving Difficulties.

Conclusion: The findings reveal that the care competence of family members in the home care process varies and the quality of care for the prevention of pressure sores should be improved. We recommend the establishment of regular training programs for caregivers, especially to increase awareness of pressure sore risk and prevention.

Keywords: Home care patient, wound, pressure sore, caregiver

Introduction

The increase in life expectancy at birth and in old age has led to an increase in the proportion of the elderly population in society. Elderly individuals experience various health

problems such as cancer, hip fracture, stroke and dementia at higher rates compared to young people and this increases their care and support needs. At the same time, the likelihood of individuals developing chronic

diseases increases with advancing age (Tuncer & Eryilmaz, 2024; Riss, Schnepf, & Imhof, 2019). However, factors such as the increase in care costs, the spread of chronic diseases and insufficient hospital bed capacities have increased the importance of home care services. With the contribution of technological developments, home care services have become one of the main components of holistic health services (Ugur & Erci, 2019; Durgun, Turan, & Kaya, 2020). In Turkey, home care services are officially defined by the “Regulation on Home Health-Care Services”, which entered into force in 2005. These services cover not only the patient but also the family members who care for the patient (Kiran & Güçlü, 2022; Sezek, Cubukcu, & Mudersioğlu, 2023).

The common characteristic of groups in need of home care services is that they need comprehensive care due to their dependent lives and limited mobility. This increases the incidence of chronic wounds in these individuals (Atagun et al., 2011; Kuzay & Ilce, 2023). Chronic wounds are lesions that usually last longer than four weeks and are characterized by damage to the skin and subcutaneous tissue. The increase in the aging population with social development significantly increases the incidence of chronic wounds such as pressure sores, venous wounds and diabetic foot wounds (Lumbers, 2020; Huang et al., 2023).

Pressure sores are caused by damage to the skin and underlying soft tissue due to prolonged tissue deformation. This process progresses leading to disruption of cell homeostasis, cell death and inflammatory response. These wounds, which develop mostly due to mechanical loading, can cause serious complications in individuals with limited mobility (Gefen, 2018; Gabisoy et al., 2022). Pressure sores lead to serious health problems by causing pain, decreased quality of life and increased risk of secondary infection (Mäki-Turja-Rostedt et al., 2018).

Family caregivers are responsible for maintaining activities of daily living such as rehabilitative care, enteral nutrition, medication monitoring, personal hygiene and safety requirements. The responsibility of caring for individuals with chronic diseases is mostly undertaken by family members,

relatives or neighbors. However, the care process does not only consist of providing physical support, but also includes psychosocial and emotional support (Dagdeviren et al., 2020). Therefore, it is of great importance that caregivers are made aware of the process and equipped with the necessary skills. Otherwise, the care process can be physically, emotionally and economically challenging for both the patient and the caregiver (Sezek, 2021; Dagdeviren et al., 2020).

The wound management behaviors of family caregivers directly affect the progression of the patient's disease and quality of life. In addition, caregivers play an important role in the clinical decision-making process of patient-centered treatment. However, applying wound care at home can be a very stressful process for individuals who do not have sufficient knowledge and experience (Lo, Chuang, & Liao, 2021; Tuncer, Yilmaz, & Mert, 2024). If caregivers do not have sufficient knowledge and skills, they may unknowingly harm the patient and negatively affect the wound healing process. Therefore, the knowledge and skill levels of caregivers regarding wound care are directly related to the occurrence of pressure sores (Lo, Chuang, & Liao, 2021; Huang et al., 2023; Tuncer, Yilmaz, & Mert, 2024).

How effectively home health services are provided at the institutional level is not the only factor that determines the quality of care; the care responsibility assumed by family members is also an important component of this process. Reducing the rate of hospital readmission, accelerating the recovery process and minimizing the risk of complications in patients requiring home care is possible not only through professional care services, but also through the effective participation of patients and their relatives in the long-term care process. Therefore, family members should have sufficient knowledge about wound care in order to effectively carry out home health services (Ogur et al., 2019; Dagdeviren et al., 2020).

In the literature, there are studies on the care burden of caregivers and the physical, emotional and economic burdens they experience during the caregiving process (Dagdeviren et al., 2020; Oner & Karabulutlu,

2023; Bilgehan & Inkaya, 2021; del-Pino-Casado et al., 2021; Utz & Warner, 2022). In a systematic review, Stansfeld et al. examined factors related to the sense of competence in family caregivers of people living with dementia (Stansfeld et al., 2019). In another study, the importance of examining the experiences of family caregivers was emphasized and it was pointed out that research in this field is limited (Kutahyalı and Senturk, 2024). In the literature, there is no study evaluating the relationship between the wound conditions of home care patients and the care provided by their caregivers. This study aimed to diagnose the wound condition, which is one of the most common problems encountered in home care patients, and to evaluate its relationship with the care provided by family members.

Method

Type of Research: The study was cross-sectional, correlational, and descriptive.

Universe-Sample: The accessible population of the study consisted of all patients registered to the home health unit in a district located in the Western Black Sea region and their caregivers. It was aimed to reach the entire accessible population with the convenience sampling method. Accordingly, the sample consisted of 131 patients registered to the home health unit in the district and their 131 caregivers.

Data Collection Tools: Data were obtained using the Descriptive Information Form, Inventory for Assessment of Care Provided by Family Members, Braden Pressure Ulcer Risk Prediction Scale, Wound Diagnosis and Monitoring Form, and Wound Assessment Form.

Family Members Introductory Information Form. It consists of a total of 9 questions about the family members, including gender, age, marital status, educational status, employment status, closeness to the patient, how many years they have been caring for the patient, the presence of other caregivers, and if any, who or whom they are.

Inventory for Assessing Care Provided by Family Members. The validity and reliability study of the Inventory for the Evaluation of Care Given by Family Members developed by Shyu et al. (2000) for the Turkish population was conducted by Cingil and Gozum (2008).

The first three sections reflect the nurse's observations, and the last section reflects the caregiver's expectations. These sections are;

I. Caregiver's level of knowledge about the care recipient. This section measures the caregiver's level of understanding of the situations that may affect his/her caregiving actions for the care recipient. The items examined in this section assess the caregiver's level of understanding of the care recipient's physical condition, safety problems caused by the environment for the care recipient, factors affecting the care recipient's emotional state, cognitive functions, personality, communication ability, and comfort needs. A low score in this subscale indicates that the caregiver has a low level of knowledge about the individual they care for. The scores that can be obtained from this section are 7-35 (Cingil & Gozum, 2008).

II. Difficulties in caregiving. This section measures the degree of difficulties the caregiver feels about what they need to do for the care recipient. The items examined in this section measure the degree of difficulty caused by lack of cooperation with the care recipient, disagreements between family members, environmental factors that cannot be changed, instability in the care recipient's condition, previous relationship with the care recipient, confusion and serious condition of the care recipient. The scores that can be obtained from this section are 6-30. A high score in this subscale means that the caregiver has difficulty in providing care (Cingil & Gozum, 2008).

III. Caregiving resources. This section measures the ability of the caregiver to achieve a desirable level of caregiving and the adequacy of the caregiver's support. The items examined in this section measure the caregiver's ability to make decisions about the care recipient's condition, willingness to care for the care recipient, appropriateness of the caregiving process, respect for the care recipient, doing the best for the care recipient, and thinking for the care recipient. The scores that can be obtained from this section are 7-21 (Cingil & Gozum, 2008).

IV. Self-expectations of the caregiver. This section measures the level of realization of the caregiver's self-expectations while fulfilling the caregiving role. The items examined in this section measure the level of realization of the caregiver's self-expectations regarding the

caregiver's ability to care for the care recipient, ability to manage the physical needs of the care recipient, ability to manage the comfort needs of the care recipient, ability to meet the emotional needs of the care recipient, ability to manage the exercise and activity needs of the care recipient. The scores that can be obtained from this section are 5-15 (Cingil & Gozum, 2008). Inventory Chronbach's Alpha coefficients are between 0.88 and 0.78, in this study Chronbach's Alpha coefficients were found between 0.97 and 0.95.

Braden Pressure Ulcer Risk Prediction Scale. The Braden Pressure Ulcer Risk Assessment Scale was developed by Bergstrom et al. (1987) to determine the risk of developing pressure ulcers. This scale was adapted into Turkish and its validity and reliability study was conducted by Oguz and Olgun (1997). The scale consists of six sub-dimensions (stimulus perception, activity, mobility, moisture, nutritional status and friction/tearing) and each sub-dimension is evaluated in certain score ranges: the first five sub-dimensions are scored between 1 and 4 points, and friction/tearing is scored between 1 and 3 points. The total score is calculated by summing the scores obtained from the sub-dimensions and this value varies between 6 and 23. As the score obtained from the scale decreases, the risk of developing pressure sores increases. Individuals with a total score of 13-14 are considered to be in the medium risk group, while those with a score of 15-16 are considered to be in the low risk group. The findings of both studies show that the validity and reliability of the scale are high (Kiraner et al., 2016). In this study, the Cronbach's alpha value of the scale was 0.89.

Wound Diagnosis and Follow-up Form.

The form was created in line with the relevant literature and includes questions about demographic data, body mass index, health history, allergy status, system diagnosis (presence of respiratory problems, use of respiratory aids, diet, excretory status, urinary/fecal incontinence, physical disability, use of aids, immobility, pain, edema, loss of sensation/loss of sensation, state of consciousness, impaired skin integrity), vital signs, interventions and materials that pose pressure risk (Yara Ostomi ve Inkontinans Hemşereleri Derneği, 2011).

Wound Assessment Form. In the form created in line with the relevant literature, the

type of wound, duration of formation, localization, pocketing, characteristics of the exudate (amount, color, density, presence of odor), condition of the wound bed, skin around the wound, infection findings are questioned (Yara Ostomi ve Inkontinans Hemşereleri Derneği, 2011).

Data Collection Process: Data were collected between April 22-August 31, 2024. The data was collected through face-to-face interviews and observation in the participants' home environment.

Data Evaluation: Data were evaluated using the SPSS 26.0 statistical package program. Kolmogorov-Smirnov and Shapiro-Wilk tests analyzed the normal distribution of the data. As a result of the analysis, it was determined that the data did not show normal distribution. Number, percentage, mean, and standard deviation were used in descriptive tests. Spearman Correlation Analysis was used to examine the relationship between variables. The results were interpreted regarding the direction and strength of the relationship between the variables, and the statistical significance level was evaluated considering $p < 0.05$.

Ethical Aspects: Official permission was obtained from the relevant University's Social and Human Sciences Ethics Committee (Date: 14.03.2024 and Protocol no: 2024-SBB-0124) and the Provincial Health Directorate to conduct the study. Permission to use the scale was obtained from the authors of the scale validity-reliability studies. Participation in the study was voluntary. The patients and caregivers who would participate in the study were informed and included in the sample with a written informed consent form.

Results

In this study, the characteristics of caregivers and patients were analyzed separately. Among the caregivers, 63.4% were female, 44.3% were in the 56-65 age group, 39.7% were homemakers, and 71% were primary school graduates. Most of the caregivers had direct kinship ties with the patient, with the highest proportions being a daughter (27.5%), son (22.1%), and spouse (17.6%). Forty-five percent of the caregivers had cared for the patient for over 5 years and constituted the largest group. While 22.1% of the caregivers stated that other people also provided care to

the patient, the majority (77.9%) performed this task alone (Table 1).

Table 1. Descriptive Characteristics of Caregivers (n:131)

Characteristics		n	%
Gender	Female	83	63.4
	Male	48	36.6
Age	18-34 years	6	4.6
	35-45 years	13	9.9
	46-55 years	31	23.7
	56-65 years	58	44.3
	66 years and over	23	17.5
Marital Status	Married	105	80.2
	Single	26	19.8
Employment	Not working	13	9.9
Status	Housewife	52	39.7
	Civil servant	4	3.1
	Retired	40	30.5
	Self-employed	22	16.8
Level of	Illiterate	7	5.3
Education	Primary	93	71.0
	Secondary	25	19.1
	Undergraduate	6	4.6
	and postgraduate		
Proximity to the Patient	Daughter	36	27.5
	Son	29	22.1
	Spouse	23	17.6
	Parent	6	4.6

	Grandchild	6	4.6
	Relative	3	2.3
	Distant family members	5	3.8
	Daughter-in-law	23	17.5
Duration of Patient Care	Less than 1 year	21	16.0
	Between 1 year and 5 years	51	38.9
	More than 5 years	59	45.1
Other Caregivers	Yes	29	22.1
	No	102	77.9

Among the home care patients who participated in the study, 70.2% were female, 83.7% were over 66 years of age, and 64.1% were primary school graduates. It was determined that 75.6% of the patients were of normal weight, 78.6% had chronic heart diseases, and 60.3% used anticoagulants. 84.7% of the patients were conscious, and 96.2% were orally fed. While the rate of

patients with physical disabilities was 61.8%, the rate of immobility was 30.5%, and most of them had urinary/fecal incontinence (74%). The mean vital signs of home care patients were respiratory rate 19.75/min, pulse 71.75/min, systolic blood pressure 124.77/mmHg, diastolic blood pressure 73.88/mmHg, peripheral oxygen saturation 94.91% (Table 2).

Table 2. Descriptive Characteristics of Home Care Patients (n:131)

Characteristics		n	%	Characteristics		n	%
Gender	Female	92	70.2	Pain	Present	32	24.4
	Male	39	29.8		Absent	99	75.6
Age	16-34 years	2	1.6	Education al status	Illiterate	31	23.7
	35-45 years	5	3.9		Primary education	84	64.1
	46-55 years	5	3.9		Secondary education	12	9.1
	56-65 years	9	6.9		Undergraduate and postgraduate	4	3.1
	66 years and older	110	83.7				

Use of walking aids	Yes	78	59.5	Body mass index	<18.5 kg/m ²	14	10.7
	No	53	40.5		18.5-24.9 kg/m ²	99	75.6
					25-29.9 kg/m ²	15	11.5
					30-34.9 kg/m ²	3	2.2
Immobility	Yes	40	30.5	Loss of sensation/loss of feeling	Present	56	42.7
	No	91	69.5		Absent	75	57.3
Current Health Problems	Heart disease	103	78.6	Drugs used	Anticoagulant	79	60.3
		53	40.5		Antihypertensive	70	53.4
	Diabetes Mellitus				Antidiabetic	45	34.3
	Cerebrovascular accident	27	20.6		Analgesic	30	22.9
					Sedatives	24	18.3
	Respiratory system diseases	18	13.7		Antibiotic	23	17.6
					Steroid	9	6.9
	Circulatory system diseases	13	9.9		Insulin	8	6.1
					Anti-inflammatory	6	4.6
	Malnutrition	13	9.9		Other**	8	6.1
	Cancer	9	6.9				
	Depression	9	6.9				
	Chronic renal failure	5	3.8				
	Spinal cord injuries	4	3.1				
		4	3.1				
	Obesity	28	21.4				
	Other *						
State of consciousness	Clear consciousness	111	84.7	Allergy status	Present	4	3.1
					Absent	127	96.9
	Confused	16	12.2				
	Delirium	2	1.6				
	Latergia	2	1.5				
Impairment of skin integrity	Yes	13	9.9	Edema	Present	22	16.8
	No	118	90.1		Absent	109	83.2

Use of respiratory aids/therapy	Yes	14	10.7	Respiratory problem	Present	19	14.5
	No	117	89.3		Absent	112	85.5
Mode of nutrition	Oral	126	96.2	Urinary/fecal incontinence	Present	97	74.0
	Tube feeding	2	1.5		Absent	34	26.0
	Gastrostomy	3	2.3				
Physical disability status	Yes	81	61.8	Diarrhea	Present	4	3.1
	No	50	38.2		Absent	127	96.9
Motor loss	Hemiplegia	30	22.9	Interventions and materials that pose pressure risk	Patient diaper	92	70.2
	Paraplegia	8	6.1		Endotracheal tube	1	0.8
	Quadriplegia	4	3.1		Nasogastric catheter	2	1.5
	Other	27	20.6		Foley catheter	35	26.7
	None	62	47.3		Plaster	1	0.8
Continuous Variables		Min-Max	Mean (SD)		Min-Max	Mean	(SD)
Vital signs	Respiratory rate (min)	16-26	19.75(2.6)	Systolic blood pressure (mm/Hg)		124.77	19.5
				Diastolic blood pressure (mm/Hg)		73.88	8.1
					90-170		
					50-90		
	Pulse rate (beats/min)	55-98	71.75(10.0)	Oxygen saturation(%)	88-99	94.91	3.2

*Alzheimer's, Dementia, Hypothyroidism, Epilepsy ** Antithyroid drugs, Anticonvulsant drugs

Of the patients with wounds, 92.3% had pressure sores, and 7.7% had diabetic wounds. According to the duration of the wounds, 38.5% had wounds that had been

present for 70-140 days, 53.9% had pocketing, and 38.4% had a small amount of exudate. Serous exudate was the most common type, with a rate of 53.9%. The skin around the wound appeared healthy in 46.2% of the wounds (Table 3).

Table 3. Wound Characteristics in Home Care Patients (n:13)

Features	n	%	Features	n	%
Wound Type			Wound Bed		
Pressure wound	12	92.3	Moist	6	46.2
Diabetic wound	1	7.7	Dry	6	46.2
			Wet	1	7.6
Formation Time(days)			Pocketing		
21 days-48 days	8	61.5	Present	7	53.9
70-140 days	5	38.5	Absent	6	46.1
Size			Signs of Infection		
Width(1 cm-3 cm)	13	100	Odor	4	30.8
Height(0.5cm-3 cm)	13	100	Edema	4	30.8
Depth(0.5-1cm)	7	53.9	Redness	8	61.5
Exadata Amount			Skin Around the Wound		
None	6	46.2	Healthy		
Less less	5	38.4	Wet	6	46.2
Moderate	2	15.4	Edematous Crusting	2	15.4
Color				4	30.8
Serous	7	53.9		1	7.7
Hemorrhagic	0	0			
Density					
Normal	7	53.9			
Odor					
Present	4	30.8			
Absent	9	69.2			

In-home care patients (n=12) with pressure wounds, the rates of Stage I and Stage II wounds were the same, at 41.67%, and 16.67% of the patients had Stage III pressure injuries. The most common site was the

sacrum, which had a rate of 66.67%. Other common sites were the coccyx (16.67%), right heel (16.67%), left heel (16.67%), spine (8.33%), and proper iliac process (8.33%). (Table 4).

Table 4. Characteristics of Pressure Sores (n:12)

Features	n	%
Phase		
Phase I.	5	41.67
Phase II.	5	41.67
Phase III.	2	16.67
Pressure sore sites*		
Sacrum	8	66.67
Coccyx	2	16.67
Right heel	2	16.67
Left heel	2	16.67
Spine	1	8.33
Right iliac process	1	8.33

*one patient had pressure sores at more than one site.

According to the Braden Pressure Ulcer Risk Assessment Scale, 45.8% of home care patients were low-risk, 19.8% were medium-risk, and 34.4% were high-risk patients. The mean scores of the Braden Pressure Ulcer Risk Assessment sub-dimensions were as follows: sensory perception 2.92 ± 0.80 , moisture 2.28 ± 1.09 , activity 2.24 ± 0.91 , mobility 2.56 ± 0.70 , nutrition 2.47 ± 0.57 , friction and tearing 2.05 ± 0.70 and total mean score 14.51 ± 3.936 . (Table 5).

Table 5. Patients' Pressure Ulcer Risk Status According to Braden Pressure Ulcer Risk Assessment Scale (n:131)

Risk Class	n	%
15-16 points (Low Risk)	60	45.8
13-14 points (Medium Risk)	26	19.8
12 points or less (High Risk)	45	34.4

Continuous Variables	Available from Scale Min-Max.	Achieved Min.-Max.	mean±SD
Sensory perception	1.00-4.00	1.00-4.00	2.92±0.800
Humidity	1.00-4.00	1.00-4.00	2.28±1.097
Activity	1.00-4.00	1.00-4.00	2.24±0.910
Mobility	1.00-4.00	1.00-4.00	2.56±0.703
Nutrition	1.00-4.00	1.00-4.00	2.47±0.573
Friction and tearing	1.00-3.00	1.00-3.00	2.05±0.705
Scale total score	6.00-23.00	7.00-22.00	14.51±3.936

It was determined that the knowledge level score (20.02±8.20) of the caregiver family members about the individual they care for was high, the difficulties experienced in caregiving score (8.05±3.42) was low. (20.39±7.48) was high, the caregiving resources score (14.56±4.82) was moderate, and the score of what the caregiver expects from him/herself (8.05±3.42) was low.

Table 6. Mean Scores of the Inventory for Evaluation of Care Provided by Family Members

Sub-dimension and Total Score	Available from Scale Min-Max.	Achieved Min.-Max.	mean±SD
Caregiver's Level of Knowledge about the Individual in Care	7.00-35.00	7.00-35.00	20.02±8.20
Difficulties in Caregiving	6.00-30.00	6.00-30.00	20.39±7.48
Care Giving Resources	7.00-21.00	7.00-21.00	14.56±4.82
What the Caregiver Expects from Him/herself	5.00-15.00	5.00-15.00	8.05±3.42
Scale total score	25.00-101.00	45.00-86.00	63.01±10.67

There was a moderately significant positive relationship between the total score of the Braden Pressure Ulcers Risk Assessment Scale and the Caregiver's Level of Knowledge about the Care Recipient ($r=0.374$) and Caregiving Resources ($r=0.305$). There was a low

level of significant positive correlation ($r=0.250$) between the Braden Pressure Ulcers Risk Assessment Scale and the Caregiver's Expectations from Him/herself and a moderate level of significant negative correlation ($r=-0.398$) between Caregiving Difficulties.

Table 7. The Relationship Between the Braden Pressure Ulcer Risk Assessment Scale and the Sub-Dimensions of the Inventory for Assessing Care Provided by Family Members

Scales		Braden Pressure Ulcer Risk Assessment Scale	Caregiver's Level of Knowledge about the Care	Difficulties in Caregiving	Care Giving Resources	Expectations of the Caregiver
Braden Pressure Ulcer Risk Assessment Scale	r	1.000	.374**	-.398**	.305**	.250**
	p		.000	.000	.000	.000
Caregiver's Level of Knowledge about the Care Recipient	r	.374**	1.000	-.741**	.844**	.735**
	p	.000		.000	.000	.000
Difficulties in Caregiving	r	-.398**	-.741**	1.000	-.747**	-.676**
	r	.305**	.844**	-.747**	1.000	.794**
Expectations of the Caregiver	r	.250**	.735**	-.676**	.794**	1.000
	p	.000	.000	.000	.000	

* <0.05 ; ** <0.01 ; Spearman Correlation Analysis; low-level relationship: 0.01 - 0.29, medium-level relationship: 0.30 - 0.70, high-level relationship: 0.71 - 0.99.

Discussion

In this study, the wound status of home care patients, injury risks and the evaluation of the care provided by family members were discussed. The majority of the caregivers who participated in the study were female, in the advanced age group, housewives and primary school graduates. The sociodemographic characteristics of the participants are similar to other studies on caregivers (Ogur et al., 2019; Dagdeviren et al., 2020; Seyhan & Dursun, 2023; Uygun & Taylan, 2018; Sari et al., 2025). Most of the caregivers had direct kinship ties with the patient, with the highest

proportion being the daughter (27.5%), son (22.1%) and spouse (17.6%). Looking at the literature, it is seen that it is mostly family members who undertake the duty of caregiving (Deng et al., 2023; Choi, Lee, & Yu, 2024).

Most of the home care patients who participated in the study were female, over 66 years of age and had primary education. The fact that the majority of the patients were women can be explained by the difference in the life expectancy of women and men. These findings in the study overlap with the characteristics of home care patients reported

in the literature (Ogur et al., 2019; Altay, Erkan, & Avcı, 2018; Anker-Hansen et al., 2024; Csikai & Patyán, 2022). The majority of home care patients had chronic heart disease and were on anticoagulants. Aker, in his study on home health patients, stated that the majority of his patients were elderly and required chronic disease follow-up, cerebrovascular and cardiovascular diseases were the leading chronic diseases, and these patients received long-term anticoagulant treatment (Aker, 2022). Most of the patients had urinary/fecal incontinence. This is a frequently encountered situation in the literature (Salar and Tuncer, 2023; Musa et al., 2019; Seyhan and Dursun, 2023; Anker-Hansen et al., 2024, Alaseem et al., 2024).

In this study, 9.16% of home care patients had pressure sores and 0.8% had diabetic wounds. In a study conducted by Bottega et al. in Italy with elderly patients receiving home care services, the prevalence of pressure sores was 26% (Bottega et al., 2023). Haavisto et al. reported the prevalence of pressure sores in long-term care facilities or nursing homes as 9.5% to 12% (Haavisto et al., 2022). In our country, the incidence of pressure sores is high, and the incidence of the possibility of developing new wounds in acute conditions varies between 4% and 38% (Seyhan and Dursun, 2023). In home health patients, the rate was reported to be between 0-29% (Sahin et al., 2017). In this study, the fact that the consciousness of most of the patients was clear and their mobilization levels were relatively good suggested that the rate of pressure sore development did not increase. In addition, the continuity of home care health services in the region where the study was conducted may also be effective in this result.

The most common site of pressure sores was the sacrum (66.67%), followed by the coccyx (16.67%) and heel (8.33%). This finding has been reported similarly in previous studies and it is known that the sacral and heel regions are at risk, especially in patients requiring prolonged bed rest (Haavisto et al., 2022; Li et al., 2020; Seyhan and Dursun, 2023).

It was observed that most of the patients with pressure sores (41.67%) had pressure sores in the early stages (Stage 1 and Stage 2). Similarly, in the study conducted by Sahin et al. pressure sores were frequently seen on the

sacrum and heel, mostly in Stage 1 and Stage 2 (Sahin et al., 2017). In Salar and Tuncer's study investigating the frequency of pressure sores in home health patients, Stage 1 and Stage 2 pressure sores were found most frequently (Salar & Tuncer, 2023).

According to the Braden Pressure Ulcer Risk Assessment Scale, 34.4% of the patients were in the high risk group. The low mean scores of the sub-dimension and total scores of the patients indicate that they are at risk for pressure ulcer formation. Similarly, when we look at the literature, it is seen that the risk of pressure sore development is high in patients receiving long-term home care services (Ferrell et al., 2000; Alaseem et al., 2024). These rates are in parallel in our study.

It was found that the level of knowledge of caregivers by family members about their patients was generally high, but this level of knowledge varied among caregivers. In the literature, it has also been reported that the level of knowledge of caregivers about patient care may differ, and the level of knowledge is higher especially in individuals with higher education level and previous care experience (Ogur et al., 2019; Cingil, Gozum, & Bodur, 2015). In their study, Sari et al. show that family caregivers in a large city in Indonesia have significant knowledge deficits and inadequate practices in preventing pressure sores. In the same study, it was reported that knowledge and attitude showed a positive correlation with implementation skills (Sari et al., 2025). In their meta-analysis study on patients with dementia, Laver et al. found that education led to a decrease in caregiving burden (Laver et al., 2017). Carperelli et al. stated that some family caregivers need guidance to help them provide quality care (Carperelli et al., 2024). Seyhan and Dursun reported that caregivers of 120 pressure sore patients who were followed and treated within the home health services unit had low levels of knowledge and awareness of pressure sores (Seyhan & Dursun, 2023).

When the difficulties experienced by the caregivers were evaluated, it was found that they generally had a high level of difficulty, but the wide ranges in the standard deviations suggested that there were individual differences. In the literature, it has been reported that long-term patient care creates

physical and psychological burden on caregivers and this burden may vary depending on individual, social and economic factors (Oh et al., 2024; Liu et al., 2020). Especially in our study, 45% of the caregivers had been caring for the patient for more than 5 years, suggesting that the burden of care increased over time. According to the study of Uygun and Taylan, time-dependency, physical and total burden increases as the years of caregiving increase (Uygun & Taylan, 2018).

In this study, it was concluded that as the level of knowledge and resources of the caregiver increased, the pressure sore risk assessment scores also increased. Low knowledge and awareness of caregiver family members leads to a decrease in the ability of caregiver family members to prevent pressure injury and ultimately to an increased risk of the patient developing pressure injury. The importance of family caregivers in pressure injury prevention needs to be recognized and their role should be clearly defined in pressure injury prevention guidelines (Rafiei et al., 2021). However, a moderate negative correlation was found between the pressure ulcer risk assessment scale and difficulties experienced in the caregiving process. This finding suggests that family members who experienced more difficulties in the caregiving process scored lower on the pressure ulcer risk assessment scale. There was a low level positive and significant relationship between the pressure ulcer risk assessment scale and the expectations of the caregiver. This suggests that an increase in the expectations of the caregiver towards him/herself

Research West Black Sea may also increase the pressure ulcer risk assessment scores.

Limitations of the Study: The study was conducted with home care patients and caregivers in a district in the Western Black Sea Region. The results of this study may not be generalizable to larger populations or to communities with different socioeconomic and cultural characteristics. Since the research was conducted in a district with a small population, it may limit the evaluation of the results of the study from a broader perspective.

Conclusions and Recommendations: In this study, 9.16% of home care patients had pressure sores, and 0.8% had diabetic wounds. As a result of the evaluation of the care provided by family members, it was seen that caregivers had a moderate level of caregiving competence. The findings reveal that the care competence of family members in the home care process varies, and the quality of care for the prevention of pressure sores should be improved. It may be useful to support caregivers in terms of their level of knowledge, the difficulties they experience, the resources they use, and their expectations.

This study shows that pressure ulcer risk assessment in home care patients is positively affected by the caregiver's level of knowledge and resources. However, difficulties experienced during the caregiving process may negatively affect this assessment. Therefore, increasing education and support programs for caregivers may play an important role in reducing the risk of pressure ulcers. Health professionals should provide regular follow-up and guidance services to prevent caregivers from being alone in the home care process. Effective management of the home care process will improve patients' care processes and alleviate the difficulties experienced by caregivers. A multidisciplinary approach should be adopted to improve the quality of home care and prevent complications such as wounds, and both patients and caregivers should be supported.

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