

Factors Influencing Readiness for Hospital Discharge among Cancer Patients: A Descriptive Study

Nazlı ÖZTÜRK* Fatma ARIKAN** Burcu ÇELİK KOCABIYIK*** Hasan Şenol COŞKUN****

* Research Assistant, Akdeniz University, Faculty of Nursing, Antalya, Turkey. ORCID: 0000-0003-2108-0735

** Associate Professor, Akdeniz University, Faculty of Nursing, Antalya, Turkey. ORCID: 0000-0003-0481-1903

*** Registered Nurse, Akdeniz University Hospital, Antalya, Turkey. ORCID: 0000-0003-4166-9408

**** Professor, Akdeniz Sağlık Vakfı Yaşam Hospital, Antalya, Turkey. ORCID: 0000-0003-2969-7561

ABSTRACT

This study aimed to examine factors influencing readiness for hospital discharge among cancer patients. A descriptive, cross-sectional study design was used. The sample of the study consisted of 118 cancer patients who were planned to be discharged and volunteered to participate in the study. Patient Information Form and Readiness for Hospital Discharge Scale/Short Form were used to collect data. Descriptive statistics and Backward Linear Regression were used for data analysis. The mean age of the patients was 54.40±14.38 years, 53.3% had gastrointestinal cancer, 56% were stage III and stage IV. 50% of patients were unsure of their condition or were hopeless about their disease course. In this study, it was determined that variables such as the presence of metastases, stage 2,3,4 cancer, compliance with drug therapy, history of receiving education about discharge, hopeless thinking about the progression of the disease, age, income status and willingness to be discharged influence readiness for discharge in various sub-dimensions in cancer patients. The discharge preparations of the patients in the medical oncology clinic should be supported with planned personalized discharge training and should include their families.

Keywords: Cancer, nursing, patient discharge

Kanser Hastalarında Hastaneden Taburcu Olmaya Hazıroluşu Etkileyen Faktörler: Tanımlayıcı Bir Çalışma

ÖZET

Bu çalışma, kanser hastalarında taburcu olmaya hazıroluşu etkileyen faktörleri incelemeyi amaçlamıştır. Tanımlayıcı, kesitsel bir çalışma tasarımı kullanılmıştır. Araştırmanın örneklemini taburcu edilmesi planlanan ve araştırmaya katılmaya gönüllü olan 118 kanser hastası oluşturmuştur. Verilerin toplanmasında Hasta Bilgi Formu ve Taburcu Olmaya Hazır Olma Ölçeği/Kısa Form kullanılmıştır. Veri analizi için tanımlayıcı istatistikler ve Backward Linear Regresyon kullanılmıştır. Hastaların yaş ortalaması 54.40±14.38, %53.3'ü gastrointestinal kanser, %56'sı evre III ve evre IV'tür. Hastaların %50'si durumlarından emin değildir veya hastalık seyri konusunda umutsuzdur. Bu çalışmada; metastaz varlığı, evre 2,3,4 kanser, ilaç tedavisine uyum, taburcu olma konusunda eğitim alma öyküsü, hastalığın seyri hakkında umutsuz düşünce, yaş, gelir durumu ve taburcu olmaya istekli olma durumunun kanser hastalarında taburculuğa hazıroluşluğu çeşitli alt boyutlarda etkilediği belirlenmiştir. Tıbbi onkoloji kliniğinde hastaların taburculuk hazırlıkları planlı, bireye özgü taburculuk eğitimleri ile desteklenmeli ve ailelerini de kapsmalıdır.

Anahtar Sözcükler: Kanser, hemşirelik, taburculuk

Sorumlu yazar/Corresponding author: ozturknaz@outlook.com

Geliş tarihi/Date of receipt: 18.12.2022

Kabul tarihi/Date of acceptance: 04.07.2023

Atıf için/To cite: Öztürk, N., Arıkan, F., Çelik Kocabiyik, B., & Coşkun, H.Ş. (2023). Factors influencing readiness for hospital discharge among cancer patients: A descriptive study. *Kırşehir Ahi Evran University Journal of Health Sciences*, 7(3), 136-148.



Content of this journal is licensed under a Creative Commons Attribution NonCommercial 4.0 International License.

INTRODUCTION

Cancer is an important health problem all over the world. Life expectancy is increasing worldwide, and due to the aging population, the incidence of cancer is predicted to increase by 62% by 2040 (Aunan et al., 2017; Lundereng et al., 2020). There were 16.9 million cancer survivors in the United States in 2019 (Han et al., 2021). In addition to the increase in cancer incidence, nowadays, cancer-related survival rates have increased in parallel with the advances in medicine (Galvin et al., 2017). However, the treatment and care environment of cancer patients has also changed, and patients often continue to be treated in outpatient centers rather than hospitals (Galvin et al., 2017; Rooeintan et al., 2019). While this approach causes patients to be discharged from the hospital without a full recovery; if the process is not managed well, re-admissions to the hospital cause an economic burden on the family and healthcare systems, leading to increased mortality and morbidity rates (Galvin et al., 2017; Rooeintan et al., 2019).

It is important that cancer patients have a high level of readiness for discharge because their care needs continue after discharge. In addition, the burden of providing home care needs during the recovery period falls on the patient and family members (Kaya et al., 2018a; Wallace et al., 2016). Readiness for discharge is defined as a combination of psychological, physiological, and social factors, including knowledge about discharge, coping skills, personal situation and expected support (Bahr et al., 2020). Patients' readiness for discharge; Safe discharge includes adequate recovery to allow for physical stability, functional ability, ability to manage self-care at home, and coping skills (Kaya et al., 2018a; Wallace et al., 2016). The length of stay is defined as the number of days between admission to the hospital and discharge. It is an important performance indicator and efficiency measure for hospitals. A shorter length of stay has positive effects on cost-effectiveness an increase in bed capacity (Nowak et al., 2019).

There are studies in the literature stating that the length of stay was shortened by 25% between 2000 and 2017 (Borghans et al., 2008; Nowak et al., 2019). Effective cost management, improvement of health services, and transfer of a part of the treatment and care process to home care services and the social sector are involved in shortening the hospitalization period (Lu et al., 2012; Nowak et al., 2019). In order to increase the readiness of cancer patients for discharge, it is important that the discharge planning be done from the first time the patient is hospitalized, and the coordinated work of the units that provide hospital and community-based rehabilitation services (Dorney et al., 2017). Preparation for discharge begins with the patient's hospitalization. It is a process that includes the collection of data by the relevant health professionals, the determination of the current and potential problems of the patient, and the evaluation of the training and effectiveness planned for the solution of the identified problems (Lundereng et al., 2020; Uslusoy et al., 2021). In this process, oncology nurses have a key role in the good planning and implementation of discharge planning. In this context, the Nursing Regulation of the Ministry of Health of the Republic of Turkiye, published in the Official Gazette in 2011, emphasizes the importance of the education and consultancy roles of the oncology nurse (Ministry of Health, 2011).

Although there are studies in the literature examining readiness for discharge in patients who have undergone laryngectomy, in children who have undergone cardiac surgery, and in patients who have undergone surgery for colorectal cancer, no study has been found on readiness for discharge in cancer patients in general (Poh et al., 2020; Yang et al., 2020; Zhao et al., 2020). In this study, unlike other studies; the effects of independent variables such as cancer patients' thoughts about the course of the disease, receiving discharge education, economic status, cancer stages and presence of metastases on their readiness for discharge were evaluated. This study aims to examine the factors influencing readiness for discharge in cancer patients.

MATERIAL AND METHOD

Study Type

This is a descriptive, cross-sectional study.

Population and Sampling

The targeted population of the research consisted of cancer patients hospitalized in two medical oncology

clinics of a university hospital in Türkiye. G*Power statistical analysis was used to determine the sample size. When calculating the sample size, the minimum sample number to be reached for a Cohen's effect size of $w = 0.5$ with $\alpha = 0.05$ and 0.80 power was determined as 84 people (Cohen, 1992). Inclusion criteria included the patients being aged 18 and above, volunteering to participate in the study, being hospitalized in the oncology clinic and having a discharge plan ready, ability to speak and understand Turkish, and being on the day of discharge. A total of 118 patients who met the inclusion criteria comprised the sample of the study.

Data Collection Tools

Patient information form: The Patient Information Form was created by the researchers based on the data contained in the relevant literature (Dorney et al., 2017; Yang et al., 2020; Zhao et al., 2020). The first part of the patient information form consists of sociodemographic data (age, gender, marital status, economic status, place of residence). The second part consists of data about the disease (medical diagnosis, duration of diagnosis, stage, presence of metastases, receiving education at discharge, access to health services, compliance with medication, patient's thoughts about the course of the disease, presence of a caregiver after discharge, willingness to be discharged).

Readiness for hospital discharge scale/short form: Readiness for Hospital Discharge Scale/Short Form was developed by Weiss et al. to assess a patient's readiness for discharge (Weiss et al., 2014). The validity and reliability studies for its Turkish language version were performed by Kaya et al (Kaya et al., 2018b). The scale consists of four dimensions and eight items, which are evaluated on a scale of 0 to 10 (Weiss et al., 2014). The subdimensions of the scale are the patient's personal status, knowledge, coping ability, and expected support. If the sum of the scores from these subdimensions is ≥ 7 , the patient is assessed as ready for discharge, and if it is < 7 the patient is considered not ready for discharge (Kaya et al., 2018b; Lau et al., 2016; Weiss et al., 2014). In our study, the Cronbach's alpha value was found to be 0.85.

Data Collection

The targeted population of the research consisted of cancer patients hospitalized in two medical oncology clinics of a university hospital in Turkey. Data were collected between December 2019 and June 2020. The questionnaires used in the data collection were filled through the face-to-face interview method. It took an average of 15 minutes to complete the questionnaires before discharge from the oncology clinic.

Data Analysis

The analysis of the data collected during the study was carried out on a special computer using the licensed software package BM SPSS Statistics version 23 (IBM SPSS Statistics, IBM Corporation). Descriptive data are presented in the table as mean, number and percentage. The Shapiro-Wilk and Kolmogorov-Smirnov tests were used to determine whether the data conformed to the normal distribution. The parametric test was used because of the data was normally distributed. The effects of independent variables such as age, gender, marital status, economic status, presence of metastases, compliance with drug therapy, willingness to be discharged, presence of caregivers after discharge, and patient's thoughts about the course of the disease on readiness for discharge were analyzed by linear regression.

Ethical Committee Approval

The ethics approval was obtained from the Akdeniz University's Scientific Research and Publication Ethics Committee (Date: October 2nd, 2019, No: 912). Consent was obtained from the participants online. This study was conducted based on the principles of the World Medical Association Declaration of Helsinki. Written permission for the study was obtained from the chief physician of the hospital for the study (Number: 26708535-900-E.152444). The permission was also obtained for the scales used in the research. Participation in the study was based on the principle of voluntary participation, and all patients were informed about the precautions taken to protect their privacy and maintain the confidentiality of research data. The written and verbal consent was obtained from the patients.

RESULTS

The mean age of the patients was 54.40 ± 14.38 ; 66.9% were male, 52.5% were secondary school graduates, 82.2% were married, 79.7% were unemployed; 74.6% were at the middle-income level, 58.5% were living in the city center. Their cancer type was gastrointestinal system cancer 53.3%, median diagnosis time of 55.9% was 0-1 year, 33.1% had stage IV cancer and 78.0% had metastasis. 65.3% of them stated that they could adapt to drug treatment. Regarding the prognosis of their cancer, half reported hope of recovery, while the other half had low or very weak hopes of recovery. More than half of the patients did not receive any training on discharge, 85.6% had a caregiver to take care of them after discharge, and 72.0% were willing to be discharged (Table 1).

Table 1. Distribution of Patients by Sociodemographic and Disease-Related Characteristics

	n	%
Age $X \pm SD = 54.40 \pm 14.38$		
Gender		
Female	39	33.1
Male	79	66.9
Education		
Literate	9	7.6
Secondary school	62	52.5
High school	38	32.2
University	9	7.6
Marital Status		
Married	97	82.2
Single	21	17.8
Employment Status		
Employed	24	20.3
Unemployed	94	79.7
Income Status		
High income	13	11.0
Middle income	88	74.6
Low income	17	14.4
Residential Area		
Village	24	20.3
Town	25	21.2
City	69	58.5

Table 1. Distribution of Patients by Sociodemographic and Disease-Related Characteristics (continued)

Medical Diagnosis		
Lung cancer	25	21.2
Head and neck cancer	5	4.2
Gastrointestinal (GI) cancer	63	53.3
Breast cancer	11	9.3
Urogenital cancer	11	9.3
Other	3	2.5
Time to Diagnosis		
0-1 year	66	55.9
1-5 years	43	36.4
5-10 years	6	5.1
10 years and above	3	2.5
Stage		
I	26	22.0
II	26	22.0
III	27	22.9
IV	39	33.1
Metastasis		
Yes	92	78.0
No	26	22.0
Education on Hospital Discharge		
Yes	53	44.9
No	65	55.1
Easy Access to Healthcare Services		
Yes	90	76.3
No	28	23.7
Adherence to Drug Therapy		
Yes	77	65.3
No	41	34.7
Patient Perception of Disease Progression		
Patient thinks their condition is getting better.	59	50.0
Patient is unsure if their condition is getting better.	33	28.0
Patient is hopeless that their condition will get better.	26	22.0
Presence of a Caregiver after Discharge		
Yes	101	85.6
No	17	14.4
Patient Willingness for Discharge		
Yes	85	72.0
No	33	28.0

The readiness for hospital discharge scale/short form sub-dimensions averages, minimum and maximum scores of the patients are shown. The mean score of Personal Status sub-dimension is 11.1 ± 5.8 . The knowledge sub-dimension score average is 9.1 ± 5.0 . The coping ability sub-dimension mean score is 12.2 ± 5.4 . The average of expected support sub-dimensions was 12.9 ± 5.9 . The mean total score of the scale is 45.5 ± 17.0 (Table 2).

Table 2. Readiness for Hospital Discharge Scale/Short Form Sub-Dimensions

Readiness for hospital discharge scale	Mean \pm SD	Minimum- Maximum
Personal Status	11.1 ± 5.8	0-20
Knowledge	9.1 ± 5.0	0-20
Coping Ability	12.2 ± 5.4	0-20
Expected Support	12.9 ± 5.9	0-20
Total	45.5 ± 17.0	8-80

Table 3 shows the comparison findings of sociodemographic characteristics and readiness for hospital discharge scale sub-dimensions. Accordingly, it was determined that there was no statistically significant difference between the averages of gender, education, marital status, residential area and the sub-dimensions of the scale ($p>0.05$). In addition, in patients under the age of 65; a statistically significant difference was found between personal status, coping ability sub-dimension mean scores and scale total score averages. ($p<0.05$). It was determined that there was a statistically significant difference between unemployed and personal status, coping ability sub-dimension mean scores and total scale mean scores ($p<0.05$). (Table 3)

Table 3. Comparison of Sociodemographic Characteristics and Readiness for Hospital Discharge Scale/Short Form Sub-Dimensions

Sociodemographic Characteristics	Readiness for Hospital Discharge Scale				
	Personal Status	Knowledge	Coping Ability	Expected Support	Total
Under 65	11.9±5.8	9.6±5.0	13.2±5.1	12.9±5.9	47.7±16.9
65 years and older	8.8±5.2	7.8±4.6	9.4± 5.2	13.1±5.7	39.2 ±15.8
Z, p	-2.606; 0.009	-1.647; 0.100	-3.359; 0.001	-0.120; 0.904	-2.682; 0.007
Gender					
Female	10.8±6.3	9.6±5.1	11.9±5.2	12.7±6.3	45.2±18.7
Male	11.2±5.6	8.9±4.9	12.4±5.5	13.0±5.7	45.7±16.2
t, p	-0.332; 0.741	0.666; 0.507	-0.428; 0.670	-0.275; 0.784	-0.151; 0.881
Education					
Literate	11.0±7.5	6.5±6.3	10.4±6.4	14.0±4.9	42.0±18.5
Secondary school	10.4±5.9	9.4±4.6	11.9±5.6	11.8±6.1	43.6±17.0
High school	11.8±5.5	9.8±4.7	13.3±4.6	13.7±5.5	48.8±16.5
University	12.4±4.9	7.3±6.2	11.7±5.9	16.6±4.6	48.2±17.4
KW, p	1.706; 0.636	4.418; 0.220	2.286; 0.515	7.667; 0.053	3.313; 0.346
Marital Status					
Married	10.7±5.7	8.8±4.9	11.8±5.3	13.0±5.8	44.5±16.7
Single	12.6±6.2	10.5±5.1	14.1±5.6	12.7±6.4	50.0±17.8
Z, p	-1.403; 0.161	-1.670; 0.095	-1.919; 0.055	-0.181; 0.857	-1.474; 0.140
Employment Status					
Employed	13.5±4.6	9.8±4.7	15.5±3.2	14.7±4.6	53.6±11.2
Unemployed	10.4±6.0	9.0±5.0	11.4±5.5	12.5±6.1	43.4±17.6
Z, p	-2.210; 0.027	-0.674; 0.500	-3.174; 0.002	-1.529; 0.126	-2.836; 0.005
Residential Area					
Village	10.2±6.2	8.9±5.4	12.0±5.5	14.2±5.8	45.5±16.9
Town	11.4±6.5	9.0±4.7	12.0±6.4	12.7±5.9	45.1±19.5
City	11.2±5.5	9.3±4.9	12.4±5.0	12.6±5.9	45.6±16.3
KW, p	0.611; 0.737	0.421; 0.810	0.089; 0.956	1.696; 0.428	0.027; 0.987
Income Status					
High income	10.7±5.2	10.3±5.0	12.3±4.6	13.3±6.4	46.7±12.3
Middle income	11.6±5.8	9.5±4.9	12.5±5.3	13.5±5.7	47.2±17.6
Low income	8.4±5.9	6.2±4.2	10.8±6.5	10.0±6.0	35.5±13.5
KW, p	4.363; 0.113	8.745; 0.013	0.848; 0.654	5.348; 0.069	6.982; 0.030

Z: Mann Whitney U, t: Bağımsız gruplarda t test, KW: Kruskal Wallis

The patient's having stage II cancer was found to explain the subdimension personal status by 28% and coping ability by 30% ($\beta=4.956$, $\beta=5.197$, $p<0.001$). The presence of metastasis in patients explained the subdimension personal status by 28% and coping ability by 30% ($\beta=-4.462$, $\beta=-4.427$, $p<0.001$). The patient's adherence to drug therapy explained the subdimension personal status by 28% ($\beta=-2.439$, $p<0.001$). The hopelessness about the disease progression was found to explain the subdimension personal status by 28%, the subdimension knowledge by 15%, and the subdimension coping ability by 30% ($\beta=-3.266$, $\beta=-2.669$, $\beta=-2.951$, $p<0.001$) (Table 4).

Table 4. Linear Regression Analysis Between Scale Sub-Dimension Scores and Descriptive Characteristics

Enter Model	Personal Status		Knowledge		Coping Ability		Expected Support	
	Unstandardized Coefficients		Unstandardized Coefficients		Unstandardized Coefficients		Unstandardized Coefficients	
	β	p	β	p	β	p	β	p
Constant	11.972	<0.001	9.695	0.001	13.814	0.001	6.468	0.234
Age	-0.047	0.282	-.017	0.683	-0.080	0.049	0.003	0.949
Gender	0.382	0.717	1.246	0.205	0.204	0.832	-0.354	0.735
Employment Status	0.321	0.829	-.257	0.853	1.319	0.333	-0.597	0.685
Income Status (low)	-0.917	0.532	-2.361	0.086	0.696	0.605	-0.603	0.679
Income Status (high)	-0.797	0.599	.742	0.599	-0.259	0.852	0.962	0.522
Stage II	4.956	0.043	1.423	0.529	5.197	0.021	-0.593	0.806
Stage III	1.643	0.490	-.456	0.837	2.775	0.204	-4.064	0.087
Stage IV	2.167	0.357	1.288	0.556	3.156	0.144	-3.294	0.159
Metastasis	-4.462	0.047	-1.967	0.343	-4.427	0.031	1.431	0.516
Education about Hospital Discharge	0.628	0.544	1.669	0.085	0.746	.431	-0.205	0.841
Easy Access to Healthcare Services	0.391	0.748	-.207	0.855	1.421	0.204	0.438	0.717
Adherence to Drug Therapy	-2.439	0.047	-1.543	0.175	-1.904	0.089	0.864	0.474
Patient Perception of Disease Progression (good)	0.552	0.636	.868	0.424	-0.034	0.975	0.773	0.504
Patient Perception of Disease Progression (hopeless)	-3.266	0.020	-2.669	0.041	-2.951	0.022	-1.214	0.380
Presence of a Caregiver after Discharge	0.827	0.595	0.123	0.932	0.627	0.660	7.366	<0.001
Patient Willingness for Discharge	0.825	0.556	-0.503	0.700	0.701	0.585	2.103	0.132
Adjusted R²	0.285		0.152		0.304		0.311	

In cancer patients, the independent variables of having stage II cancer, presence of metastasis, adherence to drug therapy and hopelessness about the disease progression, explained the personal status subdimension by 31% ($\beta=-3.756$, $\beta=-4.045$, $\beta=-2.925$, $\beta=-4.147$, respectively; $p<0.05$). On the other hand, the independent variables of low-income status, history of receiving education about discharge, and hopelessness about the disease progression were found to explain the subdimension knowledge by 17% ($\beta=-2.618$, $\beta=2.079$, $\beta=-3.491$, respectively, $p<0.05$). The independent variables of having stage II cancer, presence of metastasis, adherence to drug therapy and hopelessness about the disease progression explained the subdimension coping ability by 33% ($\beta=-0.100$, $\beta=2.615$, $\beta=-2.436$, $\beta=-2.363$, $\beta=-3.453$, respectively, $p<0.05$). In our cancer patients, the independent variables of having stage III cancer, having stage IV cancer, having a caregiver after discharge, and willingness to be discharged from the hospital were found to explain the subdimension expected support by 35% ($\beta=-3.133$, $\beta=-2.476$, $\beta=6.939$, $\beta=2.490$, respectively, $p<0.05$) (Table 5).

Table 5. Regression Model Based on Backward Linear Regression Method for Factors Affecting the Readiness for Discharge in Patients with Cancer

Factors	Variables	Unstandardized Coefficients				95% Confidence Interval for B		Adjusted R ²
		B	SE	t	p value	Lower Bound	Upper Bound	
Personal Status	(Constant)	18.283	1.592	11.483	<0.05	15.129	21.437	0.314
	Stage 2	3.756	1.120	3.354	0.001	1.538	5.975	
	Metastasis <i>yes</i>	-4.045	1.110	-3.643	<0.001	-6.245	-1.845	
	Adherence to Drug Therapy <i>yes</i>	-2.925	0.983	-2.977	0.004	-4.872	-0.978	
	Perception of Disease Progression <i>hopeless</i>	-4.147	1.141	-3.636	<0.001	-6.407	-1.887	
Knowledge	(Constant)	9.391	.663	14.158	<0.05	8.077	10.704	0.175
	Income Status <i>low</i>	-2.618	1.212	-2.160	0.033	-5.018	-0.217	
	Education about Hospital Discharge	2.079	0.858	2.422	0.017	0.379	3.780	
	Perception of Disease Progression <i>hopeless</i>	-3.491	1.017	-3.434	0.001	-5.506	-1.477	
Coping Ability	(Constant)	22.985	2.126	10.813	<0.05	18.773	27.197	0.330
	Age	-0.100	0.033	-3.041	0.003	-0.165	-0.035	
	Stage 2	2.615	1.038	2.519	0.013	0.558	4.672	
	Metastasis <i>yes</i>	-2.436	1.142	-2.134	0.035	-4.699	-0.174	
	Adherence to Drug Therapy <i>yes</i>	-2.363	0.909	-2.599	0.011	-4.165	-0.561	
	Perception of Disease Progression <i>hopeless</i>	-3.453	1.064	-3.246	0.002	-5.561	-1.345	
Expected Support	(Constant)	6.785	1.367	4.964	<0.05	4.077	9.493	0.357
	Stage 3	-3.133	1.131	-2.769	0.007	-5.374	-0.891	
	Stage 4	-2.476	1.034	-2.394	0.018	-4.526	-0.427	
	Presence of a Caregiver after Discharge <i>yes</i>	6.939	1.444	4.807	<0.001	4.080	9.799	
	Patient Willingness for Discharge <i>yes</i>	2.490	1.144	2.177	0.032	0.224	4.756	

DISCUSSION

As the stage progresses in cancer patients, the treatment and care needs of the patients tend to intensify and so the level of dependence on others increases (Roeeintan et al., 2019; Uğur et al., 2014). It is vital to meet the home care needs of palliative care patients, especially those at stage III and IV, as they should organize the care at home after discharge and other health care services according to the constantly changing situation of the patient (Uğur et al., 2014). In a study examining the factors affecting the readiness to be discharged of families who care for patients with advanced cancer, it was reported that the patient's physical performance status, the desire to be discharged, the difficulties of home care, and the presence of someone to help family members at home affect the readiness to be discharged (Huang et al., 2022). The discharge program that nurses will create for patients consists of understanding the needs and demands of patients and their families, informing them, supporting their participation in decisions, and collaborating with other health professionals (Aoyanagi et al., 2022). For this reason, oncology nurses should consider the variables that affect discharge from the hospital and make nursing plans.

In a study on readiness for hospital discharge in cancer patients receiving oral chemotherapy at home, 74.2% of the patients reported that they were ready to be discharged. In addition, it was reported that the employment status and location of the majority of patients affected their readiness for discharge (Chen et al., 2022). Similarly, in our study, it was determined that cancer patients were ready to be discharged and employment status affected readiness to be discharged. In this study, we determined that a patients having stage II cancer explained the subdimensions of personal status and coping ability of the Readiness for Hospital Discharge Scale/Short Form by 31% and 33%, respectively. Having stage III and IV cancer, on the other hand, explained the subdimension expected support by 35%. In addition, the presence of metastasis explained the personal status and coping ability subdimensions by 31% and 33%, respectively. In cases of advanced cancer stage or metastasis, patients experience difficulties in meeting their self-care needs depending on the organ or body part where metastasis occurs. It has been stated that advanced-stage cancer patients have difficulties in applying self-care practices taught during self-care education (Deng & Murphy, 2016).

The patients' adherence to drug therapy explained the personal status and coping ability subdimensions by 31% and 33%, respectively, in our study. Cancer is currently considered a chronic disease that requires compliance with drug therapy in the management of symptoms related to cancer and treatment side effects. However, according to data from the World Health Organization, approximately 50% of individuals with chronic diseases comply with drug therapy (Hromadkova et al., 2012; Trindade et al., 2011). In our study, 65.3% of cancer patients stated that they were able to adhere to drug therapy. High adherence to drug therapy among cancer patients is an expected result. Encouraging drug adherence positively affects the readiness of patients for discharge, so patients should be supported by oncology nurses who are health professionals at every stage of the treatment process.

In our study, patient hopelessness about the disease progression was found to explain the subdimensions knowledge and coping ability by 17% and 33%, respectively. Cancer patients and survivors have to cope with many physical and emotional stressors during the disease process. A study by Ravindran et al. (2019) compared certain variables like perceived stress, coping ability, quality of life and hopelessness between cancer patients and survivors, finding that cancer patients used more ineffective coping methods than survivors during the illness and that their quality of life decreased as their level of hopelessness increased (Ravindran et al., 2019).

In this study, it was determined that history of receiving education about hospital discharge explained the subdimension coping ability by 17%, while willingness for discharge explained the subdimension expected support by 35%. Such results could be attributed to the fact that 72% of our patients were willing to be discharged and that 55.1% of them did not receive any training about hospital discharge (Table 1). In the quasi-experimental study by Salmani et al. (2018), who examined the effect of discharge planning on the quality of life in patients with breast cancer, well-programmed discharge training was given to the experimental group from time of hospitalization to the sixth week after discharge. At the end of the training, it was determined that the quality of life of the experimental group

was higher than that of the control group (Salmani et al., 2018). In a previous study examining patients in internal medicine and surgical clinics, it was stated that age, gender, marital status, educational status, and duration of stay at home after discharge were predictors of their readiness for discharge from the hospital (Kaya et al., 2018a). More studies are needed to better discuss the factors affecting readiness for hospital discharge in cancer patients. Finally, in this study, the readiness of patients in the medical oncology clinic for discharge was influenced by the presence of metastatic cancer, patient age, low-income status, patient compliance and hope, and their willingness for discharge education. These results are similar to others in the literature, but our study is different from the others in terms of evaluating the inpatient population in the medical oncology clinic, and therefore, contributes to the literature on this subject.

CONCLUSION

It was concluded that factors like advanced cancer stage, hopelessness about the disease progression, presence of metastasis, presence of a caregiver at home after discharge, history of receiving education about hospital discharge, patient age, and low-income status could affect the readiness for discharge among cancer patients. Considering the individual and clinical characteristics of cancer patients, oncology nurses should give more importance to the support of patients in the preparation process for discharge. Planned discharge training should be provided to each patient and their caregivers to prevent unplanned readmissions of cancer patients.

ETHICAL COMMITTEE APPROVAL

The ethics approval was obtained from the Akdeniz University's Scientific Research and Publication Ethics Committee (Date: October 2nd, 2019, No: 912).

AUTHOR'S CONTRIBUTION

Idea/concept: NÖ, FA, BÇK, HŞC; Design: NÖ, FA; Consultancy: NÖ, FA, BÇK, HŞC; Data collection and/or Data Processing: BÇK, NÖ; Analysis and/or Interpretation: NÖ, FA; Literature review: NÖ, FA; Writing of the article: NÖ, FA; Critical review: NÖ, FA, BÇK, HŞC

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

FINANCIAL DISCLOSURE

This study has not been financed by any institutional organization.

REFERENCES

- Aunan, J. R., Cho, W. C., & Soreide, K. (2017). The biology of aging and cancer: a brief overview of shared and divergent molecular hallmarks. *Aging and Disease*, 8(5), 628-642. <https://doi.org/10.14336/ad.2017.0103>
- Aoyanagi, M., Shindo, Y., & Takahashi, K. (2022). General Ward Nurses' Self-Efficacy, Ethical Behavior, and Practice of Discharge Planning for End-Stage Cancer Patients: Path Analysis. *Healthcare*, 10(7), 1161. <https://doi.org/10.3390/healthcare10071161>
- Bahr, S. J., Bang, J., Yakusheva, O., Bobay, K. L., Krejci, J., Costa, L., Ronda, H., Morris, H., Danielle, S., & Weiss, M. E. (2020). Nurse continuity at discharge and return to hospital. *Nursing Research*, 69(3), 186-196. <https://doi.org/10.1097/nnr.0000000000000417>
- Borghans, I., Heijink, R., Kool, T., Lagoe, R. J., & Westert, G. P. (2008). Benchmarking and reducing length of stay in Dutch hospitals. *BMC Health Services Research*, 8, 1-9. <http://dx.doi.org/10.1186/1472-6963-8-220>
- Chen, Y., Chen, Y., Qin, T., Fu, G., & Bai, J. (2022). Associations of readiness for hospital discharge with symptoms and non-routine utilization of post-discharge services among cancer patients receiving

oral chemotherapy at home: A prospective study. *Journal of Oncology Pharmacy Practice*, 29(5), 1135-1143. <https://doi.org/10.1177/10781552221100720>

Cohen, J. (1992). Statistical power analysis. *Current Directions in Psychological Science*, 1(3), 98-101. <https://doi.org/10.1111/1467-8721.ep10768783>

Deng, J., & Murphy, B. A. (2016). Lymphedema self-care in patients with head and neck cancer: A qualitative study. *Supportive Care Cancer*, 24(12), 4961-4970. <https://doi.org/10.1007/s00520-016-3356-2>

Dorney, K. M., Growdon, W. B., Clemmer, J., Rauh-Hain, J. A., Hall, T. R., Diver, E., Boruta, D., del Carmen, M.G., Goodman, A., Schorge, J.O., Horowitz, N., & Clark, R. M. (2017). Patient, treatment and discharge factors associated with hospital readmission within 30 days after surgery for vulvar cancer. *Gynecologic Oncology*, 144(1), 136-139. <https://doi.org/10.1016/j.ygyno.2016.11.009>

Uslusoy, E., Tezcan, M., & Korkmaz, M. (2021). The priorities of discharge training according to lung cancer patients and health care workers: a descriptive study. *Journal of Basic Clinical Health Sciences*, 5(3), 85-92. <https://doi.org/10.30621/jbachs.912942>

Galvin, E. C., Wills, T., & Coffey, A. (2017). Readiness for hospital discharge: A concept analysis. *Journal of Advanced Nursing*, 73(11), 2547-2557. <https://doi.org/10.1111/jan.13324>

Han, X., Robinson, L. A., Jensen, R. E., Smith, T. G., & Yabroff, K. R. (2021). Factors associated with health-related quality of life among cancer survivors in the United States. *Cancer Spectrum*, 5(1), 1-8. <https://doi.org/10.1093/jncics/pkaa123>

Hromadkova, L., Soukup, T., Cermakova, E., & Vlcek, J. (2012). Drug compliance in patients with systemic scleroderma. *Journal of Clinical Rheumatology*, 31(11), 1577-1583. <https://doi.org/10.1007/s10067-012-2050-0>

Huang, R. Y., Lee, T. T., Lin, Y. H., Liu, C. Y., Wu, H. C., & Huang, S. H. (2022). Factors Related to Family Caregivers' Readiness for the Hospital Discharge of Advanced Cancer Patients. *Journal of Environmental and Public Health*, 19(13), 8097. <https://doi.org/10.3390/ijerph19138097>

Kaya, S., Sain Guven, G., Aydan, S., Kar, A., Teleş, M., Yıldız, A., Koca, G., Kartal, N., Korku, C., Ürek, D., Bilgin Demir, İ., & Toka, O. (2018a). Patients' readiness for discharge: Predictors and effects on unplanned readmissions, emergency department visits and death. *Journal of Nursing Management*, 26(6), 707-716. <https://doi.org/10.1111/jonm.12605>

Kaya, S., Sain Guven, G., Teleş, M., Korku, C., Aydan, S., Kar, A., Kartal, N., Koca, G.Ş., & Yıldız, A. (2018b). Validity and reliability of the Turkish version of the readiness for hospital discharge scale/short form. *Journal of Nursing Management*, 26(3), 295-301. <https://doi.org/10.1111/jonm.12547>

Lau, D., Padwal, R. S., Majumdar, S. R., Pederson, J. L., Belga, S., Kahlon, S., BscPharm, M.F., Boyko, D., McAlister, F.A., & McAlister, F. A. (2016). Patient-reported discharge readiness and 30-day risk of readmission or death: a prospective cohort study. *The American Journal of Medicine*, 129(1), 89-95. <https://doi.org/10.1016/j.amjmed.2015.08.018>

Lu, W., Greuter, M. J. W., Schaapveld, M., Vermeulen, K. M., Wiggers, T., & De Bock, G. H. (2012). Safety and cost-effectiveness of shortening hospital follow-up after breast cancer treatment. *The British Journal of Surgery*, 99(9), 1227-1233. <https://doi.org/10.1002/bjs.8850>

Lundereng, E. D., Dihle, A., & Steindal, S. A. (2020). Nurses' experiences and perspectives on collaborative discharge planning when patients receiving palliative care for cancer are discharged home from hospitals. *Journal of Clinical Nursing*, 29(17-18), 3382-3391. <https://doi.org/10.1111/jocn.15371>

Ministry of Health. Nursing Regulation of the Ministry of Health of the Republic of Turkey. (2011). Retrieved from <https://www.resmigazete.gov.tr/eskiler/2011/04/20110419-5.html> on June 1st, 2023.

Nowak, M., Lee, S., Karbach, U., Pfaff, H., & Gross, S. E. (2019). Short length of stay and the discharge process: preparing breast cancer patients appropriately. *Patient Education and Counseling*,

102(12), 2318-2324. <https://doi.org/10.1016/j.pec.2019.08.012>

Poh, P. F., Lee, J. H., Loh, Y. J., Tan, T. H., & Cheng, K. K. F. (2020). Readiness for hospital discharge, stress, and coping in mothers of children undergoing cardiac surgeries: a single-center prospective study. *Pediatric Critical Care Medicine*, 21(5), 301-310. <https://doi.org/10.1097/pcc.0000000000002276>

Ravindran, O. S., Shankar, A., & Murthy, T. (2019). A comparative study on perceived stress, coping, quality of life, and hopelessness between cancer patients and survivors. *Indian Journal of Palliative Care*, 25(3), 414. https://doi.org/10.4103/ijpc.ijpc_1_19

Rooeintan, M., Khademi, M., Toulabi, T., Nabavi, F. H., & Gorji, M. (2019). Explaining postdischarge care needs of cancer patients: a qualitative study. *Indian Journal of Palliative Care*, 25(1), 110. https://doi.org/10.4103/ijpc.ijpc_164_18

Salmani, S., Imanipour, M., & Nasrabadi, A. N. (2018). The implementation of a discharge planning to improve quality of life in breast cancer patients: a quasi-experimental study. *Archives of Breast Cancer*, 5(4), 163-167. <https://doi.org/10.32768/abc.201854163-167>

Trindade, A. J., Ehrlich, A., Kornbluth, A., & Ullman, T. A. (2011). Are your patients taking their medicine? Validation of a new adherence scale in patients with inflammatory bowel disease and comparison with physician perception of adherence. *Inflammatory Bowel Diseases*, 17(2), 599-604. <https://doi.org/10.1002/ibd.21310>

Uğur, O., Elcigil, A., Arslan, D., & Sonmez, A. (2014). Responsibilities and difficulties of caregivers of cancer patients in home care. *Asian Pacific Journal of Cancer Prevention*, 15(2), 725-729. <https://doi.org/10.7314/apjcp.2014.15.2.725>

Wallace, A. S., Perkhounkova, Y., Bohr, N. L., & Chung, S. J. (2016). Readiness for hospital discharge, health literacy, and social living status. *Clinical Nursing Research*, 25(5), 494-511. <https://doi.org/10.1177/1054773815624380>

Weiss, M. E., Costa, L. L., Yakusheva, O., & Bobay, K. L. (2014). Validation of patient and nurse short forms of the Readiness for Hospital Discharge Scale and their relationship to return to the hospital. *Health Services Research*, 49(1), 304. <https://doi.org/10.1111/1475-6773.12092>

Yang, J., He, Y., Jiang, L., & Li, K. (2020). Colorectal patients' readiness for hospital discharge following management of enhanced recovery after surgery pathway: A cross-sectional study from China. *Medicine*, 99(8), 19219. <https://doi.org/10.1097/md.00000000000019219>

Zhao, H., Feng, X., Yu, R., Gu, D., & Zhang, X. (2020). Factors influencing readiness for hospital discharge among patients undergoing laryngectomy. *International Journal of Nursing Practice*, 26(5), 12875. <https://doi.org/10.1111/ijn.12875>