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Original Article

The relationship between the perceived care and rehabilitation and the anxiety level of the hospitalized patients

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Abstract

Aim: The objective of this study is to determine the relationship between "perceived care and rehabilitation", and the "anxiety level" of hospitalized patients. This research also aims to determine the factors affecting this relationship.

Materials and Methods: This descriptive and cross-sectional study was conducted with 205 patients who diagnosed with any disease in Malatya Training and Research Hospital Internal Medicine Department. The participants were selected and admitted using a non-probability sampling method among the patients. Data were collected using patient introduction forms, perceived care and rehabilitation scale, and state-trait anxiety inventory.

Results: We identified a negative relationship between the anxiety of the patients and their perceived care and rehabilitation. The anxiety levels of the patients were slightly above the medium level. Some features such as the education level, income, and inpatient duration of the patients had an impact on the perceived care and rehabilitation scales. The research also revealed that marital statuses, partnership, worries about the risks of the disease are some of the factors affecting the perceived care and rehabilitation, and the anxiety level of the patients.

Conclusion: The research analysis revealed that the improvement in the perception of care and rehabilitation decreases the level of anxiety. Customizing patient care according to the personal experiences of each patient and managing the health care process in this context may decrease the anxiety level and thus may improve the health of the patient.

Keywords: Anxiety; hospitalization; inpatient care; patient; perceived care and rehabilitation

INTRODUCTION

Average individuals carrying an everyday life may become a subject of healthcare with the occurrence of a change in their health status. A disease is a progressive crisis comprised of many anomalies and caused by either physical or psychological factors (1). The patients may visit physicians for the treatment of either acute or chronic diseases. Whatever the reason might be, the hospitalized person eventually assumes the role of a patient (1,2). The path after hospitalization also causes emotional tensions such as worries, anxiety, and crisis within the immediate social environment of the patient (2). Besides, the hospitalization period partially isolates the patients from their everyday contacts and interactions. Negative emotions caused by some factors such as suffering patients in the same environment, unfamiliar atmosphere, inevitable mutual dependency, and unawareness of the medical terminology spoken around may cause anxiety which may in return negatively affect the perceived care (1,3).

As the population increases, the number of chronic patients also increase which also expands the hospitalization period. The delayed hospital discharge and the anxiety of the patient are undoubtedly caused by the quality of the care in the hospital and the patient's perceived care (4, 5). Some shared governance applications will decrease the level of anxiety and increase the level of perceived care. For this purpose, we can involve patients in the caring process, give rights in decision making, inform about the equipment being used, provide a list of emergency point of contact, and plan the discharge date with the patient (5,6). The studies in the literature show that some factors positively affect discharge time, psychology, and mood. These factors may be listed as; patients' awareness about applied care, low level of anxiety, and high life satisfaction (6,7). In order to determine the relationship between "perceived care and rehabilitation", and the "anxiety level" of hospitalized patients; the nature of this relationship and the affecting factors are identified.

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MATERIALS and METHODS

Design
This is a descriptive and cross-sectional study.

The population and the Sample
The population of the research is all the hospitalized patients Malatya Training and Research Hospital Internal Medicine Department between January 8 and March 16, 2020. The minimum sample size is calculated as 198 with a 95% confidence interval where the the universe is unknown (8). We conducted the research with 205 volunteered patients with various diseases who were hospitalized in the Endocrine, Nephrology, and Pulmonary services of Malatya Training and Research Hospital attached to the Province Department of Health. The participants are selected among the volunteered adult patients at the age of 18 years or above, hospitalized at least for one day, and having no communication difficulties such as psychological distress or hearing impairment.

Data Collection Tools
The researchers used Patient Introduction Forms, perceived care and rehabilitation scale, and state-trait anxiety inventory to collect the required data. The research data was collected and compiled by using the survey responses and evaluating them.

Patient Introduction Forms
The Patient Introduction Form, created using the related literature (7-11), consists of the questions about age, gender, marital status, education level, income, partnership, hospital attendant, chronic disease history, inpatient duration, and worries related to their disease.

Perceived Care and Rehabilitation Scale
Wreslle et al. developed this scale in 2006 (9). After Wreslle, Erci et al. adapted it to Turkish for elderly people and applied it to the patients in 2019 (7). The scale was developed using a client-centered approach. This scale has two subscales; "respect and trust factor" and "information and participation". The "respect and trust factor" is the perception of the patient about how he/she is treated by the personnel. The "information and participation" subscale is related to the patients' perception of decision making, information sharing, and governance participation. The subscales thoroughly reveal the patients' evaluation of the perceived care and rehabilitation scale during their hospitalization. This scale can also be applied to the patient by telephone conversation after the discharge. The original survey uses a Five-Point Likert-type Scale with 19 items. Erci et al. assessed the reliability and validity of the adapted scale and invalidated two items for Turkish culture during this process. After eliminating these items, the Turkish version of the scale consisted of 17 items. The participating patients were asked to score each item from 1 to 5 where: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. There are 17 statements in the survey so the total scoring ranges between 17 and 85 points. The increasing score implies the increasing level of geriatric care and rehabilitation quality perceived by the patient. Cronbach's alpha was determined as 0.89 (7). Cronbach's alpha coefficient was set to 0.96 for this research.

Perceived Care and Rehabilitation Scale Adapted for Adult Patients
The perceived care and rehabilitation scale, adapted for elderly patients, is analysed for validity and reliability. Kaiser-Meyer-Olkin test is conducted for construct validity which resulted in KMO of 0.930 and Barlett's test resulted in 3444.78 with p=0.000. The KMO value is expected to be at or above 0.60 and Bartlett's test of Sphericity is expected to be at or above 0.05. Moreover, the scale has two subscales with variances respectively 42.86% and 26.80%. The total variance was calculated as 69.68%. A total variance at or above 40% shows a strong relationship (12). The adequacy of scale is determined depending on the items having a factor loading of 0.30 or above. The scale's factor loading was 0.60 which is well above the threshold value. Cronbach's alpha coefficients of internal consistency were 0.947 for "respect and trust" subscale, 0.907 for "information and participation" subscale, and 0.956 for care and rehabilitation scale that showed that the research has a good level of reliability.

State-Trait Anxiety Scale
Spielberger et al. developed the State-Trait Anxiety Inventory (STAI) in 1970 to determine the state and trait anxiety levels separately (10). STAI is based on Spielberger's two-factor anxiety hypothesis. The State Anxiety Inventory consists of 20 short statements for self-evaluation and reflects how an individual feels at a certain time and condition. The feelings and behaviours included in the statements of the State Anxiety Inventory are rated from 1 to 4 as; (1) None; (2) Mild; (3) Moderate; (4) Severe. The participating patients were requested to select one of them per their evaluation. This scale has 20 statements and the total scoring ranges between 20 and 80 points. The increasing score implies a higher level of anxiety. The reliability coefficient of the scale is identified as 0.94 (11). Cronbach's alpha coefficient was determined as 0.91 for this scale.

Analysis of Collected Data
IBM SPSS 22 is used for statistical analysis with the frequency, percentage, mean, standard deviation, independent t-test, one-way ANOVA, Kruskal Wallis test, Pearson correlation, and exploratory factor analysis to adapt the perceived care and rehabilitation scale (7,9,12).

Principals of Research Ethics
Committee on Scientific Research and Publication Ethics of Inonu University approved this research with the registration number 2020/58. This research complies with the ethical rules of "Respect for Persons", "Respect for Autonomy", and "Privacy and Confidentiality".

RESULTS

The mean age of participants was 53.23±17.23 years, and the mean stay time in the hospital was 6.33±5.55 days. Of all the participating patients, 60.5% were men, 75.6% were married, 22.9% were high school graduates, 74.8% lived with companions (spouse and/or children), 40.5% have a chronic disease, 98% have a companion, and 45.9% have some worries about the risks of the disease (Table 1).

We have reached valuable results that can shed light on the efforts to enhance patient care in hospitals. The research revealed that the gender of the patients has no impact on the perceived care and the anxiety level of the patient (p>0.05) which implies that the factors are equally affecting both genders. However, the social life of the patients is found to be significantly effective in the patients' perception and mood. For instance, marital status is identified to have an impact on measured scales, such as the widowed patients determined to have lower perceived care and rehabilitation scale and higher anxiety scale (p<0.05). Likewise, the patients living without a companion determined to have lower perceived care and

Table 1. Comparison of the Patient's Descriptive Characteristics and Their Perception of Care, Rehabilitation, and Anxiety Level (n=205)

		Perception of Care		Anxiety	
	n (%)	Mean (SD)	p value	Mean (SD)	p-value
Gender			.332		.209
Female	81 (39,5)	66.66(10.39)	t: .973	51.85(8.21)	t: 1.259
Male	124 (60.5)	65.03(12.56)		50.18(9.88)	
Marital Status			.000*		.007*
Married	155 (75.6)	65.88(71.42)	H:22.77	50.69(9.07)	H:12.15
Single	26 (12.7)	71.42(12.40)		48.50(10.31)	
Widowed	20 (9.8)	55.35(14.90)		55.75(8.90)	
Divorced/living apart	4 (2.0)	72.00(10.70)		47.50(3.78)	
Education level			.001*		.384
No literacy	12 (5.9)	68.41(12.23)	H:21.40	49.25(12.31)	H:5.26
Literate	30 (14.6)	60.80(14.43)		53.36(6.71)	
Primary school	62 (30.2)	64.25(12.67)		51.14(10.84)	
Middle School	42 (20.5)	64.21(9.80)		50.61(8.04)	
High school	47 (22.9)	68.93(8.96)		49.55(8.83)	
University and above	12 (5.9)	74.83(6.97)		50.41(8.83)	
Income			.005*		.188
Good	5 (2.4)	74.80(15.64)	H:10.59	42.20(19.01)	H:3.33
Middle	184 (89.8)	66.19(11.13)		50.95(8.58)	
Bad	16 (7.8)	56.87(13.63)		52.25(12.12)	
Partnership			.004*		.002*
Spouse / Spouse and Children	161 (78.5)	65.81(10.71)	13.16	50.45(9.02)	14.45
With her parents	19 (9.3)	72.63(9.90)		47.42(55.78)	
With Children	19 (9.3	59.84(15.77)		55.78(9.10)	
Alone	6 (2.9)	58.33(18.31)		56.50(7.23)	
Chronic illness			.332		.384
Yes	83 (40.5)	64.71(13.02)	t: .972	51.53(10.09)	t: .873
No	122 (59.5)	66.33(10.80)		50.37(8.68)	
Hospital Companion			.474		.602
Yes	201 (98.0)	65.76(11.85)	t: 3.35	50.79(9.35)	.523
No	4 (2.0)	61.50(1.91)		53.25(3.86)	
Worries about the risks			.000*		.000*
Yes	38 (18.5)	56.21(16.12)	H: 36.13	60.28(5.82)	H: 96.34
No	73 (35.6)	71.45(7.69)		43.89(9.25)	
Some	94 (45.9)	65.02(9.51)		52.42(5.65)	
		Mean± SD			
Age (years)		53.23 ±17.23	.378	.603	
			F: 1.062	F:.939	
Duration of stay (days)		6.33 ±5.55	.007*	676	
			F: 1.994	F: 838	

t: independent t test, H: Kruskal-Wallis H test F: ANOVA *p<.05

rehabilitation scales and a high level of anxiety (p<0.05). The research results proved that the social status and education were also effective on the patients' perceptions as the university graduated patients with a decent income are found to have a high care and rehabilitation perception (p<0.05). Another factor causing negative effects was the worries. The results showed that the increasing worries about the risk of the disease caused a decrease in the perceived care and rehabilitation scale, and an increase in the level of anxiety (p<0.05). The duration of hospitalization is also found to have an impact on the perceived care and rehabilitation scale (p<0.05) as depicted (Table 1).

The patients' perceived care and rehabilitation scale, the subdomains "respect and trust", and "information and participation" are determined to be at favourable levels with the values respectively 65.67±11.75, 33.23±5.55, and 32.43±6.64. The anxiety is determined to be at and above the medium level with a mean value of 50.84±9.27 (Table 2).

A negative and strong relationship is identified between "perceived care and rehabilitation" (including the subdomains) and patients' anxiety. It is determined that the perceived care scale decreases as the patients' anxiety increases (p<0.05), (Table 2).

Table 2. The Relationship between Patients' Perceived Care and Rehabilitation and their Anxiety Level

	Mean ± SD	Anxiety	
Anxiety	50.84±9.27	Correlations	Sig. (2 tailed)
Perceived Care and Rehabilitation	65.67±11.75	-.527	p<0.001
Respect and trust	33.23±5.55	-.599	p<0.001
Information and participation	32.43±6.64	-.431	p<0.001

DISCUSSION

The evaluation of the patient information during the hospitalization process may be a critical phase of the management of care and treatment of the patient. Patients' perceived care quality and patient experience have an important role in the treatment of the patient (13). The factors such as caring for the patients, starting communication, and involving the patient in the management of the treatment are assessed to increase the perceived care and decrease the patients' anxiety level (13-16). In this research, we determined that the anxiety level of the patient decreases as the patient's perceived care increases. Baldwin et al. (2019) evaluated the anxiety experiences of the patients after hospitalization. These researches reported patients' anxiety at or slightly above the medium level. Furthermore, in this research, patients' perceived care and rehabilitation scale are determined to be at a good level. Erci et al. (2019) also support this statement in their study (7).

The marital status of the patients is found to have an effect on the perceived care and anxiety level of the patient. The widowed individuals are determined to have low perceived care and rehabilitation score and high anxiety level. Bresley et al. (2018) determined that the marital status of patients with cancer did not affect perceived care and anxiety (16). However, Sanford's study (2020) with other groups showed that widowed patients perceived physician's interest to be low than enough and they were not satisfied with the care of the physician (17). The widowed individuals are generally more susceptible to psychological distress which may be the reason for this perception of inadequate care quality. Moreover, we determined that widowed patients had more anxiety symptoms (18). This may be stemmed from the absence of the lost spouse.

The patients having a university or higher education level with a decent income are found to have a high care and rehabilitation perception. The reason for this may be that they can manage to investigate their disease, understand their medical situation, adapt themselves to the situation, and afford to buy all the necessary health services. The researchers state that the education level of the patients had an effect on the perceived care quality (19-22). The researches revealed that the patients with higher education levels are enabled to apprehend the given information better which resulted in satisfaction from the received care (19, 20). Hence, the result of a systematic composition shows that patients with high socioeconomic status and a high level of education could communicate more actively, and inquire better about the disease and the management period. Thus, they are more satisfied with the provided care. However, if these patients are not given adequate information, it is more likely that they will be disappointed with the results of the treatment (22).

We determined that the duration of the hospitalization affected perceived care and rehabilitation. The researches in the literature showed the same relationship between the hospitalization duration and the perceived care (7, 17, 20). As the duration of the hospitalization prolonged with a well-perceived treatment, patients started evaluating the nursing care quality per their personal requirements (20).

We determined that the patients living alone reflected a low perceived care and rehabilitation score and a high level of anxiety. The cancer patients living alone shared that they encountered emotional and practical barriers while receiving nursing care and many of them told they were worried (23). We discovered that anxiety and depression symptoms were the most significant predictors among patients living alone or having less social interactions. These patients rarely consulted a physician about their health problems (24). One can assess that the perceived care and rehabilitation of such a patient was distorted by anxiety that is caused by a lonely life.

The researches stated that the patients' perceived care and rehabilitation scale decreased and the level of anxiety

increased related to the possible worries about the risks of the disease. Forsman and Ann (2019) stated that the patients experienced worries about the progress of their disease that caused some perception problems (15). Even though the disease was treatable, patients' negative perception of overcoming the disease and the expectation of worse scenarios were the cause of a decrease in perceived care quality and an increase in the level of anxiety and depression (25). In this context, the patient with a negative perception of the treatment also had a low perceived health care quality (26).

LIMITATIONS

This research involves only a certain group of hospitalized patients in a limited period of time and can be generalized only to the region of the research which constitutes the limitations of this research.

CONCLUSION

This research provides evidence showing that the perceived care and rehabilitation scale for elderly people can also be applied to adult groups. In this research, we evaluated the patients' perceived care and rehabilitation and identified a strong relationship with the anxiety level of the patients. Sociodemographic variables of the patients are found to have an effect on patients' perceived care/rehabilitation and the anxiety level. As this research determines the self-evaluation of the patients, the outcomes may help to plan the required measures and initiatives to improve health care. We suggest passing clear and comprehensible information to the patient since otherwise, the possible worries about the complications of the disease will deteriorate the perceived care and the anxiety level. The satisfaction may be increased by evaluating the hospitalization duration and perceived care and rehabilitation. The patients' level of anxiety, affecting their perceived care, differs depending on their experiences. Thus, we suggest healthcare professionals offer specialized and customized care for disadvantaged groups such as patients living alone or patients without a partner.

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