

## Original Article

## The Relationship Between Care Dependency Level and Satisfaction with Nursing Care of Neurological Patients in Turkey

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### Abstract

**Aim:** The aim of this study was to determine the relationship between care dependency level and satisfaction with nursing care of neurology patients in Turkey.

**Methods:** This was a descriptive study which was administered to a convenience sample of 204 neurology patients. The study population consisted of all patients admitted to Ataturk University. Data were collected by using Demographic Form, The Care Dependency Scale (CDS), The Newcastle Scale of Satisfaction with Nursing (NSSN). The data were analyzed by using the statistical software SPSS, version 22. A descriptive analysis was carried out to describe the characteristics of the patients and examine the Care Dependency Scale and Nursing Care Satisfaction Scale items.

**Result:** It was determined that 39.7 % of patients are in the age group of 61-80 years and most of the patients are male (55.4%), married (79.1%), literate-primary school graduates (83.3%). The mean score of the patients' care addiction scale was  $59.98 \pm 23.49$  and the mean score of the nursing care satisfaction scale was  $78.18 \pm 15.92$ . In the study, the relationship between the average score of Care Dependency Scale and Nursing Care Satisfaction Scale was examined by Pearson Correlation Analysis and the results are given in Table 5. It was found that there was a positive relationship between care dependence and nursing care satisfaction, It was found that there was a statistically significant increase in nursing care satisfaction scale score ( $p < 0.05$ ).

**Conclusion:** There was a positive correlation between Care Dependency and Newcastle Scale of Satisfaction with Nursing of neurology patients ( $r: 0.954, p: 0.004$ ).

**Key Words:** Care dependency, satisfaction with nursing care, neurological patients

### Introduction

Patient satisfaction is a multidimensional concept that includes service presentation, interaction of patients and service providers, service presence, continuity, service provider competence and communication characteristics. (Tokem, 2005). Therefore, patient satisfaction is an integral part of the quality of care (Laschinger, 2005). Nurses are responsible for the care of a healthy or sick individuals, but the people who need care are usually ill. (Dinc, 2010) The long-term relationship of the nurse with the patient allows the patient to feel more secure and the nurse has a very important role in patient satisfaction. (Buyukyoruk, 2010). Many

factors affecting patient satisfaction are defined. The patient's age, gender, educational level, (Uzun, 2003, Ozer A, 2007), social status, cultural background, ethnic structure, support that the nurse has received, respect, courtesy, clear answer to questions, and nurse accessibility satisfaction are important indicators (Uzun, 2003, Buyukyoruk, 2010). Nursing care satisfaction was first described by Risser in 1975 as "harmony of ideal nursing care and nursing care that the patient actually received" (Tan, 2009). Considering the factors affecting satisfaction in the presentation of nursing services enables patients to feel valued in fulfilling their expectations and care needs, to adapt to

treatment, to regain their health, increase their health and improve their quality of life (Tugut N, 2013). Care Dependency is defined as "support" which is provided by professionals to patients who are low self-care and dependent on care needs, and the main purpose of this support is to ensure his independence in self-care practices (Dijkstra, 1996, Dijkstra, 2005). Nurses care patients who are different care dependency level. As the care needs of dependent and independent patients are different, so nursing care expectancies and expectations may be different. The most important way of determining independence in Activities of Daily Living (ADL) is to question bathing, feeding, putting on and taking out clothes, entering and leaving the bed, moving and lifting the toilet. (Civi, 2000).

The most important connecting point between patient and institution is nursing services. The success of nursing services is an important factor affecting the hospital satisfaction (Evans LM, 1998). For this reason, the satisfaction of patients occurs with the perception of nursing care during the period from hospitalize to discharge (Okumus H, 1993). Neurosurgery is a clinic where patients hospitalize who more dependent due to reasons such as urgent surgical interventions, unconsciousness, prolonged bedtime and advanced age (Arslan, 2011, Geckil, 2008). The caregiver role of the nurse is to prepare the special care plan for the disease process and to take measures to restore the socio-emotional well-being of the patient (Lowe G, 2012).

**Aim:** The aim of this study was to determine the relationship between care dependency level and satisfaction with nursing care of neurology patients in Turkey.

**Methods:** This was a descriptive study which was administered to a convenience sample of 204 neurology patients. Data were collected from June to August 2017. The study population consisted of all patients admitted to Ataturk University.

**Instruments:** Data were collected by using *Demographic Form*, *The Care Dependency Scale (CDS)*, *The Newcastle Scale of Satisfaction with Nursing (NSSN)*. *Demographic Form* had 12 questions consisted of the patients; age, gender, educational level, insurance coverage,

hospitalization ward, length of hospital stay, previous history of hospitalization.

*The Care Dependency Scale (CDS)* is a tool to assesment the care dependency status of patients. The CDS has 15 items which measure human needs such as eating and drinking, sense of rules and values, continence, hygiene, mobility, getting dressed and undressed, body temperature, communication, day/night pattern, daily activities, recreational activities, contact with others, and learning ability. CDS items descript five care dependency criteria. Low scores means that patients are completely dependent on care and high scores indicate that patients are almost independent of care. The CDS are assessed by a 5-point Likert scale. The range of total score is between 15 and 75 points. Sum scores are between 15 and 24 means that completely care dependent, score between 25 and 44 shows to a great extent care dependent, 45–59 classified as partially care dependent, score between 60 and 69 indicates to a limited extent care dependent and 70–75 as almost care independent (Dijkstra, 2005)

*The Newcastle Scale of Satisfaction with Nursing (NSSN)* is tool which is used to assess patients' experiences and satisfaction levels. It also was used compare between clinic managers, patient rooms, hospitals and clinics; before and after activities, to control the standards.

The validity and reliability of *NSSN* was made by Uzun and the Cronbach  $\alpha$  coefficient of scale was founded as 0.94. (Uzun, 2003).

### Data analysis

The data were analyzed by using the statistical software SPSS, version 22. The analysis was only performed on 204 completed data series. A descriptive analysis was carried out to describe the characteristics of the patients and examine the Care Dependency Scale and Nursing Care Satisfaction Scale items.

### Ethical Considerations

A university-affiliated institutional review board approved the study. We explained the aim and the process of the study to the participants and guaranteed the confidentiality of their personal data. Participation in and withdrawal from the study were voluntary. All the participants signed an informed consent before taking part in the study.

## Results

It was determined that 39.7 % of patients are in the age group of 61-80 years and most of the patients are male (55.4%), married (79.1%), literate-primary school graduates (83.3%). In addition, 46.6 % of patients are still working and 63.7% had health insurance. 44.1% of the patients lived with their spouse and children,

33.8% of them supported their spouse. 32.8% were obliged to look after their spouse and children. 84.3% of the patients had at least one health problem and 55.4% were interested in their own health. It was determined that 73.5% of the patients stayed in hospital between 1-7 days (Table 1).

**Table 1.** Descriptive Characteristics of Neurology Patients

Characteristic	N	(%)
<b>Gender</b>		
Woman	91	44.6
Male	113	55.4
<b>Age</b>		
18-40 years	42	20.6
41-60 years	50	24.5
61-80 years	81	39.7
81 and over	31	15.2
<b>Marital status</b>		
Married	163	79.9
Single	41	20.1
<b>Education Status</b>		
Primary education	170	83.3
High school and over	34	16.7
<b>Health Assurance</b>		
Yes	130	63.7
No	74	36.3
<b>Occupation</b>		
Housewife	79	38.7
Working	95	46.6
Retired	30	14.7
<b>Living Together</b>		
Alone	19	9.3
Spouse	46	22.5
Spouse and children	90	44.1
Children	26	12.7
Other	23	11.3
<b>Persons Obligated to Look</b>		
Itself	49	24.0
Spouse and children	67	32.8
Partner	53	26.0
Other	35	17.2
<b>Health Problem Status</b>		
Yeah	172	84.3
No	32	15.7
<b>Self-Healing</b>		
Yes	113	55.4
No	91	44.6
<b>Support Receive Status</b>		
No	37	18.1
My partner	69	33.8
My children	64	31.4
Others	34	16.7

<b>Length of stay Hospital</b>		
1-7 days	150	73.5
8-18 days	30	14.7
16 days and over	24	11.8
<b>Total</b>	<b>204</b>	<b>100.0</b>

**Table 2.** Comparison of Care Dependency and Nursing Care Satisfaction Scale Average of Neurology Patients' Descriptive Characteristics

	N	Care Dependency Scale	Nursing Care Satisfaction Scale
		X±SD Test and p	X±SD Test and p
<b>Gender</b>			
Woman	91	57.63±23.32	78.78±16.18
Male	113	61.87±23.58	77.69±15.76
		t:1.280 p: 0.202	t:0.481 p: 0.631
<b>Age</b>			
18-40 years	42	74.78±15.09	74.52±16.20
41-60 years	50	66.50±22.15	82.04±14.89
61-80 years	81	56.0±22.40	76.74±16.75
81 and over	31	39.80±21.05	80.67±13.82
		F: 19.370 <b>p:0.000</b>	F:2.232 p:0.086
<b>Marital status</b>			
Married	163	58.13±23.79	78.60±15.24
Single	41	67.34±21.00	76.48±18.50
		t: 2.267 <b>p: 0.024</b>	t: 0.761 p: 0.448
<b>Education Status</b>			
Primary education	170	58.54±23.47	78.60±15.67
High school and over	34	67.17±22.62	76.05±17.18
		t:1.970 <b>p: 0.050</b>	t: 0.851 p: 0.396
<b>Health Assurance</b>			
Yes	130	62.49±23.21	78.22±15.84
No	74	55.56±23.50	78.10±16.17
		t: 2.040 <b>p: 0.044</b>	t:0.049 p: 0.961
<b>Occupation</b>			
Housewife	79	56.72±23.24	79.01±15.99
Working	95	64.34±22.27	78.65±15.76
Retired	30	54.73±26.15	74.50±16.28
		F: 3.217 <b>p: 0.042</b>	F: 0.950 p: 0.388
<b>Health Problem Status</b>			
Yeah	172	60.19±23.29	78.83±15.91
No	32	58.91±24.89	74.81±15.80
		t:0.285 p: 0.776	t: 1.328 p: 0.186

**Table 3.** Comparison of Care Dependency and Nursing Care Satisfaction Scale Score Average according to Care Related Characteristics of Neurology Patients

	<b>Care Dependency Scale</b>	<b>Nursing Care Satisfaction Scale</b>
	<b>N</b>	<b>X±SD</b>
		<b>X±SD</b>
		<b>Test and p</b>
<b>Persons Obligated to Look</b>		
<b>After</b>		
Itself	49	56.78 ±24.36
Spouse and children	67	60.52 ±23.37
Partner	53	63.40 ±22.85
Other	35	58.08 ±4.01
		F: 0.499
		p: 0.688
		F: 0.752
		p: 0.158
<b>Living Together</b>		
Alone	19	60.42 ±26.33
Spouse	46	54.84 ±25.07
Spouse and children	90	63.34 ±22.18
Children	26	50.46 ±21.02
Other	23	67.47 ±21.89
		KW:13.622
		<b>p: 0.009</b>
		KW: 2.791
		p: 0.593
<b>Self-Healing</b>		
Yes	113	72.64 ±15.51
No	91	44.25 ±22.22
		t:10.719
		<b>p: 0.000</b>
		t: 0.181
		p: 0.857
<b>Support Receive Status</b>		
No	37	70.97 ±19.33
My partner	69	64.71 ±22.58
My children	64	45.35 ±20.52
Other	34	65.94 ±22.35
		F: 15.286
		<b>p: 0.000</b>
		F: 0.471
		p: 0.703
<b>Length of Stay Hospital</b>		
1-7 days	150	63.76 ±21.56
8-18 days	30	52.30 ±26.44
16 days and over	24	45.95 ±24.55
		KW: 14.753
		<b>p: 0.001</b>
		KW: 0.998
		p:0.607

Table 4. Mean scores of the patients' care dependency scale and the nursing care satisfaction scale

Scales	Items Number	Max-min values	X±SD
Care Dependency Scale	17	17-85	59.98 ±23.49
Nursing Care Satisfaction Scale	19	37-100	78.18 ±15.92

**Table 5.** Relationship between Care Dependency and Nursing Service Satisfaction Score Averages of Neurology Patients

Scales	Care Dependency
Satisfaction with Nursing Care	r: 0.954  <b>p: 0.004</b>

The average scores of care dependency scale were compared according to patients' gender and health problem, No statistically significant difference was found ( $p > 0.05$ ). In the study, the average scores of dependency scale was compared with the descriptive characteristics, the mean scores of care dependency scores of patients older than 81 years old, single, primary school graduate, non-health care and retirement patients were significantly lower ( $p < 0.001$ ). There is no statistically significant difference between descriptive characteristics of neurology patients and nursing care satisfaction scale scores ( $p > 0.05$ ). (Table 2).

In the study, when the average scores of care dependency scale were compared according to the presence of the patients who were obliged to look after the patients; No statistically significant difference was found ( $p > 0.05$ ). All the characteristics related to care of neurological patients were compared with the average scores of nursing care satisfaction scale in the study; No statistically significant difference was found ( $p > 0.05$ ). When the average scores of the care dependency scale were compared with the care characteristics of the patients; patients who were living with their children, who were not interested in their own health status, who were supported only by their children and who were hospitalized on the 16th day were found significantly lower than the other groups ( $p < 0.001$ ). (Table 3). Table 3 shows the comparison of care-dependency and nursing care satisfaction scale point average according to the

care-related characteristics of neurology patients. In the study, when the average scores of care dependency scale were compared according to the presence of the patients who were obliged to look after the patients; No statistically significant difference was found ( $p > 0.05$ ). (Table 3). When all the characteristics related to care of neurological patients were compared with the average scores of nursing care satisfaction scale in the study; No statistically significant difference was found ( $p > 0.05$ ). (Table 3). When the average scores of the care dependency scale were compared with the care characteristics of the patients, ( $p < 0.001$ ), the mean scores of care dependency scores of patients who were living with their children, who were not interested in their own health status, who were supported only by their children and who were hospitalized on the 16th day were found to be significantly lower ( $p < 0.001$ ). (Table 3).

The mean score of the patients' care dependency scale was  $59.98 \pm 23.49$  and the mean score of the nursing care satisfaction scale was  $78.18 \pm 15.92$  (Table 4).

In the study, the relationship between the average score of Care Dependency Scale and Nursing Care Satisfaction Scale was examined by Pearson Correlation Analysis and the results are given in Table 5. It was found that there was a positive relationship between care dependence and nursing care satisfaction, It was found that there was a statistically significant increase in nursing care satisfaction scale score ( $p < 0.05$ ).

There was a positive correlation between care dependency and Nursing Satisfaction of neurology patients ( $r: 0.954, p: 0.004$ .)

### Discussion

In this study that was conducted to determine the relationship between satisfaction with the nursing care and the care dependency levels of the patients in neurology clinic, no significant difference was found between the mean care dependency scale (CDS) scores according to the gender ( $p > .05$ ) (Table 2). Although no significant relationship was found also in the studies by Korhan et al. (2013) and many of the other studies report significant similarities (Korhan, 2013, Sahbaz M, 2006, Civi, 2000, Caljouw M. A, 2014). The fact that no significant difference was found in terms of gender in this study may indicate that the health problem is the main determinant at the care dependency level, and that nurses provide care services equally to both group without any gender discrimination.

The difference between the age groups of the patients and the mean CDS score was found to be statistically significant (Table 2). In line with our study results, it was found that there are other studies that show the condition of dependency increases as the age advances (Muszalik M, 2011, Korhan, 2013). The condition of dependency was found to increase especially at the age of 61 and above. With aging, it is believed that the level of care dependency in this age group increases due to the decrease in functional status especially in the geriatric age group.

When the educational status and mean CDS score was compared, it was found that the average CDS scores of the patients decrease as the education level decreases (Table 2). A decrease in the average score indicate an increasing dependency. In contrast, it has been determined in a study conducted by Koberich, Lohrmann, Miltaq and Dassen (2015) that there was no change in the level of care dependence of patients after the self-care training program provided to the patients. (Koberich S, 2013). However, the training shows that the patients become more knowledgeable and take responsibility for their own care, and hence have higher level of independence only through an increase in their overall educational level, rather than an increase in a specific topic.

Nursing Care Satisfaction Scale was used to determine the neurological patients' level of satisfaction with nursing care, and the mean score scale was found to be  $78.18 \pm 15.92$ . In many studies conducted in Turkey, it has been seen that patients are satisfied with the nursing care they receive (Oz, 2003, Utlu, 2006, Koc S, 2012, Aksakal T, 2008, Ozer A, 2007). According to the results obtained in this study, neurological patients participating in the study were found to be well satisfied with the nursing care they received. Satisfaction of patients with the nursing care is an important indicator in terms of the quality of the nursing services provided.

As reported in the literature, the age, gender, level of education, social security, previous hospital experience, and the duration of hospital stay may affect patient satisfaction (Ozer A, 2007). In this study, the relationship between the individual characteristics of patients and nursing care satisfaction was investigated, but no statistically significant relationship was found. In similar studies, the data that may affect the patients' level of satisfaction with nursing care and personal characteristics of patients such as age, gender, education, income status, and length of hospital stay have been evaluated and it has been stated that these parameters did not affect the satisfaction with nursing care (Geckil, 2008, Koc, 2012, Kidak L.B, 2008, Utlu, 2006, Ozer N, 2009). The individual characteristics of the patients, their expectations and relatives to get support can affect the satisfaction. In addition, since there were no significant differences between the hospital stays of the patients, no significant difference was found between the patients' duration of hospitalization and satisfaction with the nursing care. Therefore, these results suggest that the service received by the patients was not affected positively or negatively by the number of days spent in hospital.

Many parameters that may affect the level of satisfaction with the nursing care in studies that have been conducted, and the relationships between parameters have been evaluated and compared so far. However, comparative studies on the level of dependence of the patient, which we believe could affect the patient's level of satisfaction, were not available in the literature. It was determined that the dependence levels of our

patients were above the average. However, it was determined that there was a positive relationship between the patients' mean dependency scale score and their level of satisfaction with the nursing service. In other words, the decrease in the level of dependency of the patients has a positive effect on their satisfaction levels. Since the stress and discomfort experienced increase with the dependence of the patient, the increased expectations will inevitably negatively effect the satisfaction.

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