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Original Article

Evaluating the anxiety and nursing care satisfaction of the patients in internal medicine and surgical services

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Abstract

Aim: This cross-sectional and analytical study was conducted with the aim of evaluating the anxiety and nursing care satisfaction of the patients in internal medicine and surgical services.

Materials and Methods: This study was conducted between January and March 2018 in the internal medicine and surgery clinics of a Training and Research Hospital in Turkey. Data were collected using the Patient Information Form, the Beck Anxiety Inventory (BAI) and the Newcastle Satisfaction with Nursing Scale (NSNS). Descriptive statistics, Kolmogorov-Smirnov test, Mann Whitney U test and Kruskal Wallis test were used in data analysis.

Results: The mean total NSNS score was 57.06 ± 6.07, and the mean BAI score was 13.00 ± 12.91. The BAI and NSNS scores were negatively correlated ($r = -0.239$, $p < 0.05$). It was found that low anxiety scores were associated with being satisfied with patient-nurse communication, being satisfied with treatment, and care information and having a nuclear family ($p < 0.05$). NSNS scores were significantly correlated with family structure, patient-nurse communication, pre-treatment information, and satisfaction level at the time of discharge ($p < 0.05$).

Conclusions: There is a negative correlation between the anxiety and nursing care satisfaction of the patients. This suggests that enhanced communication and attention, especially prior to any medical intervention, provides better feedback and improves patient satisfaction levels.

Keywords: Hospital; medical services; nursing care; nurse; patient; satisfaction; surgical services

INTRODUCTION

Anxiety is a natural and universal response against situations in which a person does not feel safe, defined as the primary feeling of fear and worry of people that experience physical and emotional trauma (1,2). Anxiety can lead to physiological, psychological and cognitive changes and manifest itself with different physical and psychological symptoms of various severities. It is most commonly evaluated under four levels: mild, moderate, severe and panic (3). Mild anxiety does not impair the ability to concentrate and reason, and even promotes effective problem solving. In moderate anxiety, the individual's ability to concentrate, perceive and communicate start to diminish. As the person advances to severe anxiety, it becomes more and more difficult to apprehend the environment, and the person's perception and comprehension capabilities have become narrow to the point that they start to lose control. Panic is the highest level of anxiety. The individual is distracted, cannot comprehend what is happening around them and cannot respond to the potentially dangerous environment (4). The nurses that are in direct communication with the patient must primarily observe them to determine the presence and level of anxiety, and consequently plan a nursing intervention for the discernible symptoms. Thereupon the individual must be encouraged to express their anxiety and fears, and provided with the required tools and support to improve their coping capabilities.

Patient satisfaction depends on how close the patient's expectations of ideal nursing care are to their perception of the care they actually received (5). Ensuring patient satisfaction can yield several benefits from feeling respected while receiving medical treatment to improved treatment compliance, better recovery, reinforced positive behaviors and a better quality of life overall (6). Therefore factors affecting patient satisfaction with nursing care should be defined. Anxiety can be one of these factors. The level of anxiety in patients hospitalized in internal medicine and surgery clinics has been studied and high level of anxiety among patients has been found (7,8).

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However, the relationship between anxiety and satisfaction with nursing care has never been studied. If the level of satisfaction of patients with nursing care is found to be associated with anxiety, it may be necessary to plan and implement institutional arrangements for nursing care and nurse-patient interaction.

Therefore, this study aims to evaluate the anxiety and nursing care satisfaction of the patients in internal medicine and surgical services. The objectives of the study are:

• To determine the relationship between the anxiety and nursing care satisfaction levels of the patients,

• To define the effective factors on the anxiety and nursing care satisfaction levels of the patients.

MATERIALS and METHODS

Type of Research

A cross-sectional and analytical study was conducted with the aim of evaluating the anxiety and nursing care satisfaction of the patients in internal medicine and surgical services.

Place and Time of Research

Study duration was 3 months from January to March 2018 in the internal medicine and surgery clinics of a Training and Research Hospital in Turkey.

Population and Sample

The population consists of patients who were hospitalized in internal medicine (general and pulmonary) and surgery (general, orthopedic and neurosurgery) clinics for at least two days within the designated time period. The study includes a total of 141 patients. The inclusion criteria were as follows: (a) being aged ≥18 years, (b) to be able to understand and respond to questions, and (c) having been hospitalized for at least 2 days.

Data Collection Tools

Data were collected using the Patient Information Form, the Beck Anxiety Inventory (BAI) and the Newcastle Satisfaction with Nursing Scale (NSNS).

Patient Information Form: This form created by the authors consisted of 13 questions concerning patients' sociodemographic characteristics.

Beck Anxiety Scale (BAI): BAI was developed by Beck et al. in 1988 (9). This scale aims to determine the frequency and severity of anxiety symptoms. The highest possible score from the 21-item scale is 63, where a higher score indicates more severe anxiety. The reliability and validity of the Turkish version was tested by Ulusoy et al. (10) who found the Cronbach's Alpha score to be 0.93. In our study, we found the Cronbach's alpha to be 0.94 for the Turkish version of BAI.

Newcastle Satisfaction with Nursing Scale (NSNS): The NSNS was developed by Thomas et al. through individual and group interviews by evaluating 150 patients' perceptions of nursing care – good or bad – while hospitalized in internal medicine and surgery clinics in a UK hospital (11). This 5-point Likert-type scale consists of 19 items that are designed to determine satisfaction with nursing care (1 = not at all satisfied, 2 = barely satisfied, 3 = quite satisfied, 4 = very satisfied, 5 = completely satisfied). The total score is converted into percentage before assessment and a total score of 100 indicates complete satisfaction with nursing care. The validity and reliability of the Turkish version was tested by Akin and Erdogan where the Cronbach's alpha was 0.94 (12). In our study, we found the Cronbach's alpha to be 0.98 for the Turkish version of NSNS.

Analysis and Evaluation of Data

Data were analyzed using SPSS version 23.0. Descriptive statistics were presented as frequencies, percentages, means and standard deviations. The normality of data distribution was tested with Kolmogorov-Smirnov test. Mann-Whitney U and Kruskal-Wallis tests were used for the comparison of the results according to different variables. Spearman's correlation test was used to analyze the relationship between BAI and NSNS.

Ethical Considerations

This study was approved by the Aksaray University Ethics Committee. The Training and Research Hospital where the research was conducted has given permission for this study. All patients were informed of the purpose of the study in accordance with the ethical principles of the Helsinki Declaration, and gave verbal and written consent prior to data collection. Data tools were anonymously filled out by volunteering subjects.

RESULTS

The descriptive characteristics of the subjects were as follows: female, 47.5%; married, 89.4%; nuclear family, 78.0%; satisfied with patient-nurse communication, 85.1%; satisfied with treatment and care information, 83.7%. 54.6% of the patients were treated in internal medicine clinics and 45.4% in surgery clinics (Table 1).

Table 1. Sociodemographic characteristics of the patients

Characteristics		n	%
Gender	Female	67	47.5
	Male	74	52.5
Marital status	Married	126	89.4
	Unmarried	15	10.6
Family type	Nuclear	110	78.0
	Extended	31	22.0
Clinic type	Internal medicine	77	54.6
	Surgery	64	45.4
Satisfaction with nurse-patient communication	Yes	120	85.1
	No	21	14.9
Satisfaction with treatment and care information	Yes	118	83.7
	No	23	16.3

Social insurance	Yes	76	53.9
	No	65	46.1
Place of residence	Village	30	21.3
	Town	32	22.7
	City	79	56.0
Employment status	Employed	48	34.0
	Unemployed	93	66.0
Perceived income level	High	31	22.0
	Moderate	100	70.9
	Low	10	7.1
Educational status	Illiterate	21	14.9
	Literate	23	16.3
	Primary school	34	24.1
	Secondary school	17	12.1
	High school	28	19.9
	University	18	12.8

The mean total NSNS score was 57.06 ± 6.07, and the mean BAI score was 13.00 ± 12.91.

The Beck Anxiety Scale and Newcastle Satisfaction with Nursing Scale scores were negatively correlated (r = -0.239, p < 0.05).

Table 2 presents mean NSNS and BAI scores according to descriptive and clinical characteristics. We found that the patient groups with the highest satisfaction scores were patients who had extended family type (62.38 ± 6.72), patients that were satisfied with treatment and care information (61.17 ± 3.47) and patients that were satisfied with patient-nurse communication (60.57 ± 3.81). It was found that low anxiety scores were associated with being satisfied with patient-nurse communication (11.65 ± 11.81), satisfied with treatment and care information (11.53 ± 11.84), and having a nuclear family (11.74 ± 12.07; p < 0.05).

Table 2. The NSNS and BAI scores according to descriptive and clinical characteristics

Characteristics		BAI x±sd	NSNS x±sd
Gender	Female	56.61 ± 4.29	13.17 ±11.71
	Male	57.48 ± 7.62	12.85 ± 13.99
	test value	-0.680	-0.846
	p value	0.496	0.398
Marital status	Married	57.61 ± 6.34	12.73 ± 12.74
	Unmarried	52.53 ± 3.15	15.26 ± 14.59
	test value	-0.874	-0.623
	p value	0.382	0.533
Family type	Nuclear	55.57 ± 5.63	11.74 ± 12.07
	Extended	62.38 ± 6.72	17.48 ± 14.91
	test value	-2.257	-2.141
	p value	**0.024**	**0.032**
Clinic type	Internal medicine	55.41 ± 6.15	12.23 ± 11.73
	Surgery	59.06 ± 5.87	13.93 ± 14.25
	test value	-1.591	-0.415
	p value	0.112	0.678
Satisfaction with nurse-patient communication	Yes	60.57 ± 3.81	11.65 ± 11.81
	No	37.04 ± 3.35	20.71 ± 16.23
	test value	-5.590	-2.897
	p value	**0.000**	**0.004**
Satisfaction with treatment and care information	Yes	61.17 ± 3.47	11.53 ± 11.84
	No	36.00 ± 1.15	20.56 ± 15.62
	test value	Z= -6.631	Z= -3.196
	p value	**0.000**	**0.001**
Social insurance	Yes	57.51±16.69	12.23±11.00
	No	56.55±15.43	13.90±14.88
	test value	-0.489	-0.029
	p value	0.625	0.977
Place of residence	Village	59.43 ±17.36	16.03 ± 13.83
	Town	55.06 ± 1.78	10.93 ± 11.76
	City	56.98 ± 7.11	12.69 ± 12.96
	test value	1.438	3.147
	p value	0.487	0.207
Employment status	Employed	53.04±18.57	14.77±14.30
	Unemployed	59.15±14.28	12.09±12.12
	test value	-1.726	-1.089
	p value	0.084	0.276
Perceived income level	High	54.61 ± 5.59	15.58 ± 13.58
	Moderate	57.98 ± 6.18	11.74 ± 12.01
	Low	55.60 ± 7.13	17.70 ± 18.12
	test value	1.770	2.421
	p value	0.413	0.298
Educational status	Illiterate	60.52 ± 4.51	12.04 ± 11.52
	Literate	58.34 ± 8.47	17.91 ± 16.22
	Primary school	56.73 ± 4.57	9.50 ± 10.13
	Secondary school	60.17 ±21.51	12.05 ± 13.95
	High school	52.75 ± 3.37	12.64 ± 11.56
	University	55.83 ± 5.73	15.94 ± 14.62
	test value	3.892	6.048
	p value	0.565	0.302
Satisfaction with treatment	Satisfied	63.76±13.52	11.32±11.69
	Partially satisfied	44.51±12.64	16.16±14.55
	test value	-6.611	-2.311
	p value	**0.000**	**0.021**

Table 2 indicates that there is not a significant relationship between NSNS scores, and gender, hospitalization clinic, place of residence, marital status, employment status, social security, family income level, or educational background (p > 0.05). However, NSNS scores were significantly correlated with family structure, patient-nurse communication, pre-treatment information, and satisfaction level at the time of discharge (p < 0.05).

DISCUSSION

The present study found that the mean NSNS scores were higher among men and BAI scores were higher among women, although this finding was not statistically significant. Several studies also report higher satisfaction rates for male patients (13-15) similarly to our results. However, Akin and Erdogan (12) and Uz (16) found satisfaction rates to be higher among women and Lange (17) did not find a significant relationship between gender and nursing care satisfaction. This disparity may be due to differences in research context, age and cultural factors.

We also found that patients that were married had higher NSNS and lower BAI scores, although these results were not statistically significant. Kumar and Choudhary similarly stated that the level of patient's satisfaction was independent on marital status (18). Tang et al. also reported there were no significant differences of patients' satisfaction according to marital status (19). In contrast, Arslan and Kelleci (20) report higher nursing care satisfaction among unmarried patients.

We did not find a significant correlation between educational background and NSNS or BAI scores. That is, the mean satisfaction rates of patients from different educational background were similar. Patients that had completed only primary education were found to have the lowest anxiety scores. Kruszecka-Krówka similarly reported that high educational levels were associated with better nursing care satisfaction (21). In contrast, Uz found that patients with higher education levels were less satisfied with nursing care (21), and Ahmad reports no significant correlation between education levels and nursing satisfaction (22). Hastaoglu (13) and Yurt (14) also found that educational background did not influence nursing care satisfaction levels.

The NSNS and BAI scores of patients that were hospitalized in internal medicine or surgery clinics were not significantly different. However, we observed that both NSNS and BAI scores were higher among surgery patients. We believe that the high-risk nature of diseases treated in this clinic might have led to higher anxiety levels. Furthermore, as surgery patients generally require more diligent medical attention, the nursing care that they receive might be perceived as more satisfactory. Coban (23) did not find a statistically significant difference between nursing care perception and satisfactions of patients that were hospitalized in different clinics. Gecgil et al. (24) and Alhusban and Abualrub (25) reported that surgery patients had higher nursing care satisfaction rates. These findings are consistent with our results.

Our results indicate that satisfaction with patient-nurse communication is associated with higher NSNS and lower anxiety scores. We believe that effective and satisfactory communication improves nursing care satisfaction and decreases patient anxiety. Similarly, patients that felt that they were treated as valid individuals and that were allowed to participate in decision-making were generally more satisfied (26). This suggests that it is crucial to maintain effective open communication and to include the patient in treatment-related decisions.

We also found that patients that were satisfied with the information they received regarding their treatment had higher NSNS and lower BAI scores. This finding signifies the importance of informing patients prior to treatment as this will help lower anxiety and build a sense of trust towards the nurse, and subsequently improve treatment compliance. Fidan (27) found that 10.2% of patients were very dissatisfied with the treatment-related information they received from nurses. It is also reported that being perceived as professional and knowledgeable was associated with nursing care satisfaction (28). One study found that the patient's perception of being informed was correlated with the perception of nursing care (29). Therefore, the professional attitude and knowledge of the nurse has a positive impact on the patient.

In this study, we found that increased nursing care satisfaction was associated with decreased anxiety levels. Another study similarly found that patients with chronic disease had higher anxiety levels because of perception of low nursing care and insufficient care (29). Although this correlation is weak, it can be inferred that there is a relationship between anxiety and patient satisfaction. Kavalniene et al. found that being more anxious was related to patients' worse satisfaction with nursing care (30).

In our study, patients' satisfaction scores were not found to depend on gender, the clinic that they are hospitalized in, marital status, place of residence, occupational status, family income level and education level. Aldemir et al. (31) also reported that hospitalized patients' satisfaction levels were not associated with their age, education level, marital status, social security and previous hospital experiences, but only their gender. Yanik and Ates similarly found that the satisfaction level of patients hospitalized in the internal medicine clinics were not correlated with gender, marital status, education level, occupation, social security, income level, place of residence, number of hospitalizations, type of hospitalization, hospitalized clinic, duration of hospitalization, presence of a relative, or medical condition (32). Hence, assessing each patient's perspective individually may reveal the prominent factors that influence health care perception and provide the healthcare professional with a different point of view.

LIMITATIONS

This study has some limitations. The study sample consisted of 141 patients. For this reason, study results don't represent the entire population. Another limitation is that the study is conducted on patients in internal medicine and surgical services in a single center. Lastly, the BAI and NSNS used in data collection were self-reported scales, which may lead to the manuplation of the patients. The strength of the study is that there is the relationship between nursing care satisfaction and anxiety levels of the patients.

CONCLUSION

In this study, we found that our patients' nursing care satisfaction levels were above average and were not significantly correlated with gender, the clinic that they were hospitalized in, marital status, place of residence, occupational status, family income level or educational background. However, patient-nurse communication and receiving information prior to medical treatment positively influenced nursing care satisfaction levels. This suggests that enhanced communication and attention, especially prior to any medical intervention, provides better feedback and improves patient satisfaction levels. Therefore, we recommend nurses to approach patients with empathy and to achieve a healthy treatment process by minimizing anxiety levels.

Competing Interests: The authors declare that they have no competing interest.

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Ethical Approval:This study was approved by the Aksaray University Ethics Committee. (13. 02. 2018- 2018 / 35).

REFERENCES

1. Salkim OO. The Effect of preoperative education giving by a nurse on the level of knowledge, postoperative anxiety, and pain of patients who undergoing laparoscopic cholecystectomy. Msc thesis, Ankara University, Ankara, 2010.
2. Erdem D, Ugis C, Albayrak MD, et al. The effects of anesthesia procedures in preoperative and postoperative anxiety and pain levels in perianal surgery patients. Med J Bakirkoy 2011;7:11-6.
3. Kaplan S, Bahar A, Sertbas G. Evaluation of the anxiety levels of pregnant women at prenatal and postnatal period. J Ataturk University School of Nursing 2007;10:113-20.
4. Oz F. Basic concepts in the field of health, 2nd Edition. Ankara, Mattek Publishers, 2010:130.
5. Merkouris A, Ifantopoulos J, Lanara V, et al. Patient satisfaction: a key concept for evaluating and improving nursing services. J Nurs Manag 1999;7:19-28.
6. Tugut N, Golbasi Z. Nursing service satisfaction level of patients at gynecology and obstetrics unit of a university hospital and some affecting factors. J Education and Research in Nursing 2013;10:38-44.
7. Mulugeta H, Ayana M, Sintayehu M, et al. Preoperative anxiety and associated factors among adult surgical patients in Debre Markos and Feleke Hiwot referral hospitals, Northwest Ethiopia. BMC Anesthesiology, 2018;18:155.
8. Mirani SH, Areja D, Gilani SS, et al. Frequency of depression and anxiety symptoms in surgical hospitalized patients. Cureus 2019;11:e4141.
9. Beck AT, Epstein N, Brown G, et al. An inventory for measuring clinical anxiety: psychometric properties. J Consult Clin Psychol 1988;56:893-7.
10. Ulusoy M, Hisli-Sahin N, Erkmen H. Turkish version of the beck anxiety ınventory: psychometric properties. J Cogn Psychother 1998;12:163-72.
11. Thomas LH, McColl E, Priest J, et al. Newcastle satisfaction with nursing scales: an instrument for quality assessments of nursing care. Qual Health Care 1996;5:67-72.
12. Akin S, Erdogan S. The Turkish version of the newcastle satisfaction with nursing care scale used on medical and surgical patients. J Clin Nurs 2007;16:646-53.
13. Hastaoglu S. The patients, who stay in internal science part, their satisfaction and announcing from nurse service. Msc thesis, Marmara University, Istanbul, 2007.
14. Yurt AS. The effect of nursing services on patient satisfaction. Msc thesis, Marmara University, Istanbul, 1999.
15. Johansson P, Oleni M, Fridlund B. Patient satisfaction of nursing care in the context of healt care: a literature study. Scand J Caring Sci 2002;16:337-44.
16. Uz MH. Continuous improvement experiences of quality in primary health care services, place of total quality management in health services, Haberal Education Foundation Publications, Ankara, 1995.
17. Lange JW. Testing equivalence of Spanish and English versions: The LaMonica-Oberst (Revised) patient satisfaction with nursing care scale. Res Nurs Health 2002;25:438-51.
18. Kumar A, Choudhary V. Patients' satisfaction from nursing care services. J Nursing Science & Practice 2017;7:17-20.
19. Tang WM, Soong CY, Lim WC. Patient satisfaction with nursing care: a descriptive study using interaction model of client health behaviour. Int J Nursing Sci 2013;3:51-6.
20. Arslan C, Kelleci M. Satisfaction levels of hospitalized patients in care of nursing in auniversity hospital and some related factors. Anatolian Journal of Nursing and Health Sciences 2011;14:1-8.
21. Kruszecka-Krówka A, Smolen E, Cepuch G, et al. Determination of parental satisfaction with nursing care in paediatric wards: a preliminary report. Int J Environ Res Public Health 2019;16:1774.
22. Ahmad MM, Alasad JA. Predictors of patients' experiences of nursingcare in medical- surgicalwards. Int J Nurs Pract 2004;10:235-41.
23. Coban IG. A study on the validity and reliability of the scale of patient perception of hospital experience with nursing (PPHEN). Msc thesis, Ataturk University, Erzurum, 2006.
24. Geckil E, Dundar O, Sahin T. Evaluation of patients' satisfaction levels from nursing care at the centre of the city Adİyaman. Hacettepe University Faculty of Health Sci J Nursing 2008;15:41-51.
25. Alhusban MA, Abualrub RF. Patient satisfaction with nursing care in Jorden. J Nurs Manag 2009;17:749-58.
26. Yilmaz M. Patient satisfaction: a criteria of health care quality. C.Ü. Journal of the School of Nursing 2001;5:69-74.

27. Fidan H. An assessment of the satisfaction levels of patients hospitalized into Yüzüncü Yıl University Medical Faculty, Research Hospital about nursing care. Msc thesis, Yuzuncu Yil University, Van, 2010.
28. Gul S, Dinc L. Investigation of nurses' and patients' perceptions regarding nursing care. Journal of Hacettepe University Faculty of Nursing 2018;5:192-208.
29. Buldan O, Kuzu-Kurban N. Relationship between nursing care perceptions, with anxiety-depression levels of chronic disease cases and affecting factors. DEUHFED 2018;11:274-82.
30. Kavalniene R, Deksnyte A, Kasiulevicius V, et al. Patients satisfaction with primary healthcare services: are there any links with patients' symptoms of anxiety and depression? BMC Fam Pract 2018;19:90.
31. Aldemir K, Gurkan A, Taskin-Yılmaz F, et al. Examination of satisfaction from nursing care of inpatients in the surgical clinics. Journal of Health and Nursing Management 2018;5:155-63.
32. Yanik S, Ates S. Identification of nursing care satisfaction levels and related factors of inpatients at internal medicine clinics. International Refereed J Nursing Researches 2018;14:14-43.