

Evaluation of the satisfaction of relatives of patients being treated in the intensive care unit

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ABSTRACT

Aims: There has been no previous study on the satisfaction of relatives of patients receiving treatment in the intensive care unit of our hospital. Our study was conducted to improve quality and service in our intensive care unit. A survey was conducted to evaluate the satisfaction of the relatives of patients receiving treatment.

Methods: The satisfaction of the relatives of the patients who were treated for at least 3 days in the 3rd Step general intensive care unit at Mardin Training and Research Hospital between 01, February 2023 and 01, June 2023 was evaluated in line with the surveys. A questionnaire was given to each patient's relative by the attending physician to be filled out.

Results: 114 patient relatives participated in the study. 12 patient relatives did not agree to fill out the survey. 102 patient relatives filled out the satisfaction survey.

Conclusion: Waiting room in intensive care unit conditions need to be improved. In our study, we think that patient relatives have confidence in the treatments applied to their patients and are satisfied with the skills and abilities of doctors and nurses.

Keywords: Intensive care units, questionnaire, outcome and process assessment

INTRODUCTION

Tertiary intensive care units are highly specialised environments, equipped with a plethora of sophisticated technologies, situated within the context of a hospital.¹ Such units are equipped to treat life-threatening diseases and to provide organ support through invasive monitoring, thus preventing multiple organ failure and reducing mortality.² Despite the similarities in the demographic characteristics of patients hospitalized in intensive care units, significant inter-hospital variability exists in intensive care unit occupancy rates, length of stay, number of patients per bed, number of patients per nurse, patient admission clinics, number of healthcare personnel working, and intensive care unit mortality rates.³ Furthermore, the expectations and satisfaction of patients and their relatives with regard to ICUs also vary.^{4,5}

Today's technology and successful developments in medicine have contributed to the prolongation of life expectancy with their contributions to diagnosis and treatment. Increasing life expectancy has led to an increase in the number of patients in need of intensive care, and the service quality of intensive care units has gained importance. Previously, the quality of

intensive care units was evaluated based on the duration of hospitalization, mortality, and functionality of the patients in intensive care units, but later on, the satisfaction of the patients and their relatives receiving service from these units was evaluated.^{6,4}

However, the majority of patients hospitalized in intensive care units have difficulty expressing themselves due to their poor general condition and changes in consciousness and are not in the decision-making stage. For this reason, satisfaction and quality assessment of the health service provided to the patient by their relatives have gained importance.^{7,8-14}

There were no previous studies evaluating the satisfaction of patients and their relatives in intensive care units in our hospital. With the questionnaire form we prepared, we aimed to measure satisfaction with the quality of receiving information about their patients, the knowledge and approach of doctors and nurses who manage the treatment of the patient, the intensive care working order, the attitudes of intensive care unit staff towards patients and their relatives, and the process of decision-making about the treatment and care of their patients.

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METHODS

After the approval of Mardin Artuklu University Ethics Committee (Date: 14.12.2022, Decision No: 2022/14-18), the relatives of the patients who were followed and treated for at least 3 days in the 3rd step general intensive care unit of Mardin Training and Research Hospital between 01.02.2023-01.06.2023 were included in the satisfaction assessment survey. All procedures were carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki. Due to the density, functioning, and infection control in our hospital, the relatives of the patients were visited every day at 11.30 am under the supervision of the relevant specialist doctor. In order to reduce the contact of patient relatives in the intensive care unit, information was given by the relevant specialist doctor in the patient information room after the patient visit. During the face-to-face interview, the patient's relatives were informed about the survey. After obtaining consent from the patient's relatives who wanted to participate in the survey, they were included in the study. The survey questions were created by examining previous studies. Questions were added to the questionnaire due to the sociocultural situation of the province. It was asked about the idea of taking their patients to another hospital and whether there was a change in trust in hospital staff in this process.

The questionnaire was composed of nine sections. In the first section, the respondent's gender, degree of closeness, association with the patient, whether or not he or she had a relative who had been hospitalized in an intensive care unit before, educational level, and place of residence were asked. In the second section, the perspective on the knowledge and skills of hospital staff in the treatment applied to the patient was evaluated. In the third section, the frequency, accessibility, reliability, comprehensibility, and consistency of the information given to the patient's relatives were evaluated. In the fourth section, the level of knowledge of the patients' relatives about why their patients were admitted to the intensive care unit and the working order in the intensive care unit was evaluated. In the fifth section, transportation to the patient's relatives in case of an important change in the patient's clinic and the attitude towards them were evaluated. In the sixth section, the approach of the intensive care team to the emotions of the patient's relatives was evaluated, and in the seventh section, the physical conditions of the waiting room were evaluated. In the eighth section, the involvement of the patient's relatives in the decisions taken by the intensive care team in the treatment and care process related to their patients was evaluated. In the ninth section, the trust of patient relatives in hospital staff during the follow-up and treatment process of their patients was questioned.

Statistical Analysis

The data obtained in the study were analyzed using SPSS version 26 (IBM Corp., Armonk, N.Y., USA). Descriptive statistics were used in the analysis. Numbers and percentages of qualitative data were given. Mean, standard deviation, minimum, and maximum values were given for continuous variables.

RESULTS

Out of 114 relatives of patients, 12 refused to participate in the survey; 102 relatives of patients agreed to participate in the satisfaction assessment survey, answered the questionnaire, and returned it to us. The participation rate was 89.4%. The demographic data of patient relatives is shown in Table 1. In the first section, it was seen that there were more men among the relatives of the patients who answered the questionnaire (67.6%). It was seen that those who were close to the patient had more children. Of those who answered the questionnaire, 49% were university graduates.

Table 1. Distribution of demographic characteristics of patient relatives

		n	%
Q1. Your gender	Female	33	32.4
	Male	69	67.6
Q2. Your degree of closeness with the patient	Wife	14	13.7
	Parent	5	4.9
	Brother/sister	16	15.7
	Child	38	37.3
	Second degree relative	14	13.7
Q3. Do you live with the patient?	Yes	50	49.0
	No	52	51.0
Q4. If you do not live with the patient, how often do you see the patient?	Once a week	35	34.3
	Once a month	17	16.7
	Once a year	1	1.0
Q5. Have you ever had a relative hospitalized in intensive care unit?	Yes	62	60.8
	No	40	39.2
Q6. Level of education	No literacy	2	2.0
	Primary education	21	20.6
	High School	30	29.4
	University	49	48.0
Q7. Where do you live?	In the city where the Hospital is located	79	77.5
	Outside the city	23	22.5

The satisfaction ratings of patient relatives are shown in Table 2. According to the answers of the patients' relatives, their satisfaction was converted into scores between 0 and 100. The highest score in these sections was trust in the hospital and hospital staff, with 86.27±21.00. The care and treatment of the patient were 83.68±13.89. The lowest score was 63.15±10.52 for waiting area and logistic support.

Table 2. Distribution of satisfaction scores calculated from sections

	Min-Max	Mean±SD
S2-Patient care and treatment	40.00-100.00	83.68±13.89
S3 - Informing the patient's relatives	28.57-100.00	81.84±14.36
S4-Perception	41.67-100.00	80.07±15.16
S5- Attention to the patient's relatives	50-100	82.11±12.81
S6- Impact on the emotional state of the patient's relatives	30-100	78.58±17.52
S7- Waiting room and logistic support	33.33-100.00	63.15±10.52
S8- Decision making process	33.25-100.00	80.15±17.06
S9- Trust in hospital and hospital staff	25-100.00	86.27±21.00

SD: Standard deviation

Table 3. Patient relatives satisfaction			
Care and treatment of the patient		n	%
Q1. Do you have confidence that the treatment provided to your patient is complete?	Very good	42	41.2
	Good	45	44.1
	Moderate	12	11.8
	Weak	3	2.9
Q2. How would you rate the skills and abilities of doctors?	Very good	53	52.0
	Good	44	43.1
	Moderate	5	4.9
	Weak	0	0
Q3. How do you evaluate the skills and abilities of nurses?	Very good	44	43.1
	Good	50	49.0
	Moderate	6	5.9
	Weak	2	2.0
Q4. Do you think that intensive care unit staff care about your patient?	Very good	40	39.2
	Good	53	52.0
	Moderate	5	4.9
	Weak	4	3.9
Q5. When you visited your patient, did you encounter any situation that disturbed you?	Never	49	48.0
	Sometimes	50	49.0
	Most of the time	1	1.0
	Always	2	2.0
Informing the patient relatives			
Q1. How would you rate the ease of getting information about your patient?	Very good	40	39.2
	Good	43	42.2
	Moderate	17	16.7
	Weak	2	2.0
Q2. How would you rate the frequency of information given to you about your patient's condition?	Very good	30	29.4
	Good	38	37.3
	Moderate	30	29.4
	Weak	4	3.9
Q3. How would you rate the understandability of the information about your patient?	Very good	46	45.1
	Good	48	47.1
	Moderate	6	5.9
	Weak	2	2.0
Q4. How would you rate the reliability of the information about your patient?	Very good	43	42.2
	Good	50	49.0
	Moderate	8	7.8
	Weak	1	1.0
Q5. Does the information about your patient cover everything you want to know?	Very good	47	46.1
	Good	40	39.2
	Moderate	11	10.8
	Weak	4	3.9
Q6. Is the information you received from the nurse and the doctor about your patient in the same direction?	Very good	42	41.2
	Good	50	49.9
	Moderate	8	7.8
	Weak	2	2.0
Q7. Are family members who receive information about your patient given the same information, or are they told different things in the explanations?	Very good	51	50.0
	Good	45	44.1
	Moderate	4	3.9
	Weak	2	2.0
Perception			
Q1. Do you understand why your patient's follow-up and treatment is carried out in the intensive care unit instead of the ward?	Very good	51	50.0
	Good	38	37.3
	Moderate	13	12.7
	Weak	0	0.0
Q2. Do you understand what happened to your patient and why things were done?	Very good	33	32.4
	Good	55	53.9
	Moderate	19	12.7
	Weak	1	1.0
Q3. Do you understand the conditions and working order of the intensive care unit?	Very good	27	26.5
	Good	55	53.9
	Moderate	19	18.6
	Weak	1	1.0
Q4. Do you understand why your patient's follow-up and treatment is carried out in the intensive care unit instead of the ward?	Very good	51	50.0
	Good	38	37.3
	Moderate	13	12.7
	Weak	0	0.0
Q5. Do you understand what happened to your patient and why things were done?	Very good	33	32.4
	Good	55	53.9
	Moderate	19	12.7
	Weak	1	1.0
Q6. Do you understand the conditions and working order of the intensive care unit?	Very good	27	26.5
	Good	55	53.9
	Moderate	19	18.6
	Weak	1	1.0
Attention to patient relatives			
Q1. Do you believe that someone will call you at home if there is any important change in your patient's condition?	Very good	52	51.0
	Good	41	40.2
	Moderate	8	7.8
	Weak	1	1.0
Q2. Are the employees polite and understanding towards you?	Very good	53	52.0
	Good	43	42.2
	Moderate	5	4.9
	Weak	1	1.0
Q3. Do you feel abandoned or lonely in the waiting area?	Absolutely not	22	21.6
	Sometimes	58	56.9
	Most of the time	21	20.6
	Always	1	1.0

In **Table 2**, informing the patient's relatives was scored to evaluate the satisfaction of the patient's relatives, and the score was 81.84 ± 14.36 . In this section, seven questions were asked of the relatives, and it was seen that they were generally satisfied (**Table 3**). In this section, 85.3% of the patients' relatives answered very well or well to the question, "Do you have confidence that the treatment applied to your patient is done completely?" In this section, 95.1% responded positively to the question, "How would you rate the skills and abilities of doctors?"

"How would you rate the ease of getting information about your patient?" The question was answered as very good or good by 81.4%. "Are family members who receive information about your patient given the same information, or are they told different things in the explanations?" was answered as very good or good by 94.1%. In this section, the lowest positive response rate was 66.7% with the question, "How would you rate the frequency of information given to you about your patient's condition?"

The mean score for the perception section in the patient satisfaction assessment was 80.07 ± 15.16 . In this section, six questions were asked of the patient's relatives (**Table 3**). Generally, positive answers were received. "Do you understand why your patient's follow-up and treatment are done in the intensive care unit instead of in the ward?" 87.3% answered very good or good. Very good or good answers to the question "Do you understand the conditions and working order of the intensive care unit?" were 80.4%.

In the "**Table 2**; Attention to patient relatives" section, the satisfaction score was 82.11 ± 12.81 . In this section, three questions were asked to the patients' relatives (**Table 3**). Their answers were generally positive.

Table 4 presents the questions utilized to assess the impact on the emotional state of the patient's relatives and the ensuing findings. Relative satisfaction in this section was found to be 78.58 ± 17.52 (**Table 2**). The question "Do you feel comfortable while visiting your patient?" was answered as very good or good by 81.3%. The question "Did one of the intensive care unit doctors take care of your current feelings?" was answered positively by 89.2%.

Table 5 presents a comprehensive overview of the inquiries and findings pertaining to the Waiting room and logistic support department. The department in question exhibits the lowest level of satisfaction. With a mean score of 63.15 ± 10.52 (**Table 2**). The question "Do you have to personally take care of the work that needs to be done for your patient outside the intensive care unit?" was answered positively, with 39.2% saying that they had to take care of the patient and 60.8% saying that they did not have to take care of the patient. The question "Does the waiting room meet your needs?" was answered with 89.3% saying absolutely not or sometimes. To the question "Is the waiting room comfortable?" 84.3% answered moderately or poorly that they were not satisfied.

Patient relatives were evaluated in "**Table 6** Decision Making Process" in the satisfaction assessment. The satisfaction score in this section was 80.15 ± 17.06 (**Table 2**) and it was positive.

The questions asked about trust in the hospital and hospital staff in the satisfaction assessment of the patients' relatives and their answers are evaluated in **Table 7**. This department

Table 4. Impact on the emotional state of the patient relatives

		n	%
Q1. Do you feel comfortable visiting your patient?	Very good	34	33.3
	Good	49	48.0
	Moderate	12	11.8
	Weak	7	6.9
Q2. Did any of the intensive care unit doctors take an interest in your current feelings?	Very good	52	51.0
	Good	39	38.2
	Moderate	10	9.8
	Weak	1	1.0
Q3. Did any of the intensive care unit nurses care about your current feelings?	Very good	30	29.4
	Good	53	52.0
	Moderate	12	11.8
	Weak	7	6.9
Q4. Are you able to share issues that upset and distress you with intensive care physicians?	Very good	40	39.2
	Good	41	40.2
	Moderate	15	14.7
	Weak	6	5.9
Q5. Are you able to share the issues that upset and distress you with intensive care nurses?	Very good	38	37.3
	Good	40	39.2
	Moderate	18	17.6
	Weak	6	5.9

Table 5. Waiting room and logistic support

		n	%
Q1. Do you have to personally take care of the work that needs to be done for your patient outside the intensive care unit?	Absolutely not	17	16.7
	Sometimes	45	44.1
	Most of the time	22	21.6
	Always	18	17.6
Q2. Does the waiting room meet your needs?	Absolutely not	58	56.9
	Sometimes	33	32.4
	Most of the time	5	4.9
	Always	6	5.9
Q3. Is the waiting room comfortable?	Very good	6	5.9
	Good	10	9.8
	Moderate	21	20.6
	Weak	65	63.7

has the highest satisfaction rate with 86.27±21.00 (Table 2). Patient relatives were asked. “ To the question “Have you thought of taking your patient to another hospital?” 76.5% answered no. To the question “Your trust in hospital staff in terms of treatment during the hospitalization of your patient?” 74.5% answered that they were satisfied (Table 7).

DISCUSSION

In our study, a satisfaction questionnaire was administered and evaluated by the relatives of patients under treatment in the intensive care unit to assess the quality of health care provided in the 3rd-level intensive care unit.

In our study, the response rate to the questionnaire was 89.4%. In other studies, the response rate was 80.2% in Aydın et al.¹⁵ 52.60% in Erdal et al.¹⁶ 69% in Hunziker et al.⁷ and 75.4% in Stricker et al.⁴ Compared to other studies, the participation rate in our survey was high. We think that the high participation rate in our study was due to the fact that the questionnaire form was given to the patient’s relatives by the intensive care specialist who followed the patient.

The satisfaction evaluation of the patients was over 100

Table 6. Decision making process

		n	%
Q1. Did you feel that you were involved in decision-making about your patient's treatment and care?	I've always been included	32	31.4
	I am mostly included	63	61.8
	Mostly not included	7	6.9
Q2. Did you feel supported in your decision-making process?	I was highly encouraged	45	44.1
	I got some support	44	43.2
	Very little support	10	9.8
	I was never supported	3	2.9
Q3. Did you feel you had control over your patient's treatment and care?	I felt I had a good degree of control	36	35.3
	I felt I had some control	49	48.0
	I felt I had little control and that the health system was taking control	7	6.9
	I felt that I had no control and that the health system was in complete control	10	9.8
Q4. During the decision-making process about your patient's treatment and care, did you have enough time to have your concerns addressed and your problems answered?	I've had enough time	74	72.5
	I needed more time	28	27.5

Table 7. Trust in hospital and hospital staff

		n	%
Q1. Have you considered taking your patient to another hospital?	Yes	24	23.5
	No	78	76.5
Q2. If you are willing to take your patient to a different hospital	A better equipped hospital	15	14.7
	Environmental pressure	6	5.9
	Private hospitalization	2	2.0
	Other	1	1.0
Q3. your trust in hospital staff in terms of the treatment provided during your patient's hospitalization	Increased	76	74.5
	Unchanged	21	20.6
	Decreased	5	4.9

points. In the distribution of demographic characteristics of the relatives of the patients, 67.6% of the respondents to the patient satisfaction questionnaire were male, and 48% had a university education. In Erdal et al.¹⁶ 56.9% were male and 36.5% were university graduates, and in Aydın et al.¹⁵ 44% were male and 33.3% were university graduates. In our study, the high proportion of males among the respondents was related to cultural conditions and the fact that those with a higher level of education in the family were at the forefront when obtaining information from the physician.

In the evaluation of patient relatives’ satisfaction, the scoring in the patient care and treatment section was found to be positively high. With the answers given by the relatives in the

questionnaire. it was evaluated as a positive result that they had confidence in the treatments applied to their patients. they were satisfied with the skills and abilities of doctors and nurses. their patients were cared for. and they encountered fewer negative situations during the visits of their patients. In other survey studies conducted in the section of patient care and treatment. the rates of Erdal et al.¹⁶ Aydın et al.¹⁵ and İncesu¹⁷ were similar to our findings.

Satisfaction with the information given to the patient's relatives was answered positively in terms of the frequency of information given about their patients and the information given to family members that was understandable, reliable, and included every subject. Aydın et al.¹⁵ İncesu.¹⁷ Erdal et al.¹⁶ found that when compared with previous studies on patient relatives' information in this section. it was similar to some and higher than others. Ali et al.¹⁸ also emphasized in their study that effective communication with families reduces the stress on family members and patients. For patients who cannot participate in the decision-making process regarding their treatment. the aim should be to at least inform their relatives effectively during this process.¹⁹ It should be kept in mind that multidisciplinary teams can also serve for this purpose.²⁰ We attribute the high level of patient relatives' satisfaction in our survey results to the fact that the specialist physician allocated sufficient time to the patient relatives and provided regular and understandable information about the patients in intensive care.

In the perception section. the relatives of the patients were asked to answer three questions. The relatives of the patients were asked why their patients were followed up and treated in intensive care instead of in ward conditions. what happened to their patients and why they were treated. and their perception of the conditions and working order of the intensive care unit. The answers were highly positive. In the studies of Erdal et al.¹⁶ and Aydın et al.¹⁵ it was also seen that patient satisfaction was high. We attribute the high rate in the perception section of our study to the establishment of understandable communication with the relatives of the patients.

In the section on caregiver care. "Do you believe that someone will call you at home if there is any significant change in your patient's condition? The question was answered as very good or good. With a rating of 91.2%. We think that the communication of the intensive care specialist physician with the patient's relatives is effective because of the high rate of positive responses of the patient's relatives to this question. The question "Do the staff behave politely and understandingly towards you?" was evaluated to determine whether the intensive care staff were sufficiently kind and polite when the patient's relatives and intensive care staff visited their patients in our intensive care unit and when it was necessary to communicate on any issue necessary for their patients. The question "Do you feel abandoned or lonely in the waiting area?" was answered as absolutely no or sometimes by 78.5%. According to the sociocultural values of the region of the patients hospitalized in intensive care. it was thought that more people coming for patient visits. communicating with other patient relatives during the waiting period. and sharing information about the hospital and their patients could be effective.

In the section where the effect on the emotional state of the patient's relatives was evaluated. the satisfaction score of the

patient's relatives was 78.58 ± 17.52 . According to the answers given by the relatives of the patients in our study. it is seen that nurses and doctors are interested in their feelings. that they feel comfortable during the visit. and that they have a positive opinion about being able to share their problems with nurses and doctors.

Waiting room and logistic support received the lowest score in patient relatives' satisfaction. It is thought that the inadequate physical conditions of the waiting room and the lack of sufficient materials in the rest room reduce the satisfaction of the patient's relatives. In other studies^{7,11,15-17,21} it was observed that patient satisfaction was low in the waiting room and logistic support section.

Decision-making process. most of the answers given by the patients' relatives in this section indicated that they were included in the decision-making process regarding the treatment and care of their patients. that they were supported in this process. that they felt that they had control over the treatment and care of their patients. and that they had enough time to address their concerns and answer their problems during the decision-making process regarding treatment and care. The patient satisfaction rate in our survey was found to be higher compared to other studies.¹⁵⁻¹⁷ It is thought that the specialist physician who deals with the patient one-on-one in communication with the patient's relatives. sharing understandable information with the patient's relatives. and allocating sufficient time are effective.

Trust in the hospital and hospital staff received the highest score. The high rate of positive or unchanged responses to the questions "Have you considered taking your patients to another hospital?" and "Your trust in hospital staff in terms of the treatment provided during your patient's hospitalization" was considered to be the fact that the information sharing of intensive care staff and the relevant specialist physician with the patient's relatives was understandable and their concerns decreased with effective communication.

Limitations

Our study has some limitations; the opinions of the relatives of patients who did not participate in the survey are also valuable for evaluating the quality of intensive care services. The reason for not participating in the survey may be dissatisfaction. The fact that our study was single-centered is also one of the limitations of our study.

CONCLUSION

In our survey. the questions that were asked in order to evaluate the love of the relatives of the patients were; care and information of the patient. Informing the relatives of the patient. Perception. Interest in the relatives of the patient. Effect on the emotionality of the relatives of the patient. decision-making process. trust in the hospital and hospital staff. The resting time was quite high. but the lowest temperature level was in the waiting room and logistics support section.

As a result. we believe that the communication between the hospital staff and especially the relevant physician who are responsible for the follow-up and treatment of patients in intensive care and the relatives of the patients is not at

a level that can meet the comfort and needs of the waiting room for the relatives of the patients in the hospital and that improvements in this regard will increase the satisfaction of the relatives of the patients.

ETHICAL DECLARATIONS

Ethics Committee Approval

The study was carried out with the permission of Ethical Committee of Faculty of Mardin Artuklu University (Date: 14.12.2022. Decision No: 2022/14-18).

Informed Consent

All patients signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

The authors declared that this study has received no financial support.

Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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