ORIGINAL ARTICLE

Can We Satisfy Family in Intensive Care Unit? A Tunisian Experience

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Abstract

Background: Communication improvement and family satisfaction in intensive care unit (ICU) are the main indicators of care quality. Our study aims were to evaluate family satisfaction in our intensive care and identify factors influencing the satisfaction level.

Materials and methods: We performed a descriptive prospective study in the ICU of Ben Arous régional hospital conducted between October 2016 and June 2018. We included parents of patients hospitalized for more than 48 hours, with available contact details and they agreed to reply to the questionnaire.

Results: One hundred and twelve family representatives were included. Ten (9%) were illiterate and 40 (36%) had a primary level education. Noninvasive ventilation and hemodialysis were, respectively, used in 53 and 9.8% of cases. Thirteen patients had sequelae at their hospital discharge. The median satisfaction score was 133.5 (120; 145.7). Ninety-five (85%) relatives were always satisfied with cleanliness of the unit. The medical and paramedical staff availability was appreciated as excellent, respectively, by 65 (56%) and 66 (59%) family members. The information provided by doctors and paramedical staff was considered very clear by 75 (65%) and 65 (58%) parents, respectively. The medical secret was respected by medical ($n = 107$) and paramedical ($n = 105$) staffs in most cases. Patient management was considered excellent by 90 (80%) parents. The level of satisfaction was lower when the parent interviewed was illiterate ($p = 0.04$) or had a primary-level education ($p = 0.012$), with hemodialysis resort ($p = 0.011$) and with the presence of sequelae at hospital discharge ($p = 0.017$).

Conclusion: Family members were satisfied with the unit environment, the communication, the healthcare management, and the patient care. Low education level, hemodialysis use, and sequelae at hospital discharge influence negatively the satisfaction.

Keywords: Critically ill, Experience, Family satisfaction, Healthcare.

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Background

The satisfaction of patients' families is increasingly considered as an essential concept in care quality evaluation procedures.

In the intensive care environment, the impossibility of communication with patients has made the involvement of family representatives, both in medical information and in therapeutic decision-making, necessary in the care quality policy improvement.[1–3] In addition, extreme stress experienced by families highlights the importance of a well-thought-out communication strategy and the role of psychological support.

Our study aimed to

- Evaluate the satisfaction of the families of patients hospitalized in intensive care.
- Identify factors influencing the satisfaction level.

Materials and Methods

The descriptive, prospective single-center study was carried out in the medical intensive care unit of the regional hospital of Ben Arous over a period of 20 months (from October 2016 to June 2018).

During this period, the doctor/patient ratio was 1.6:1.

The paramedical staff of the service was divided into four teams, each team was made up of three nurses and a caregiver.

A hospitality manual, in two versions Arabic and French, explaining the department operation and specifying physicians' contact information and schedule of visits, was issued to families on admission.

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Family visits were allowed daily through a gallery with a total visiting time of 2 hours/day (from 1 to 3 pm). The doctor in charge of the patient communicates every day with the family representative.

Study Population

The population in our study included family representatives of patients hospitalized for a period of time greater than or equal to 48 hours, having had visits during the journey.

The representatives were adults appointed by the family members on admission. They can be an ascendant or a descendant. For lack, the representative can be patient's distant relative or a friend who visits him (or her) during his stay and communicates with the medical and paramedical team. Family representatives who refused to answer the survey and who could not be reached after three phone calls were all excluded. Phone calls were made weekly and at different times of the day.

Data Collection

For each patient included in the study, a data sheet was completed.

The first part of data was collected from medical records. The second part, relating to the satisfaction survey, was completed through phone calls with family representatives.

Phone interviews were spread over a period of 2 months. They were performed by three doctors who were not a part of our healthcare team.

Verbal consents were obtained over the phone calls.

Satisfaction Assessment Score

Satisfaction was assessed using a survey (Appendix) that was developed by our team and validated by the hospital's quality control service with reference to the family satisfaction in the intensive care unit (FS-ICU)[4,5] and critical care family needs inventory (CCFNI).[6,7]

Satisfaction score was calculated from the 32 items of the survey. Items were multiple-choice questions: excellent, very good, good, average, and poor satisfaction. For each item, scores were coded as follows: the lowest value denotes extreme dissatisfaction (value = 1) and the highest value denotes extreme satisfaction (value = 5). The value of the satisfaction score was obtained by calculating the sum of all items in the survey. The score ranged from 32 to 160 (32 being the state of extreme dissatisfaction and 160 being the state of extreme satisfaction).

Data Entry and Analysis

Statistical processing of data was divided into two components: the first one was descriptive and the second was analytic.

To study the relationships that may exist between the different variables and the satisfaction score, several tests were used:

- Student's *t*-tests for independent series and analysis of variance (ANOVA) were used to compare groups and subgroups in case of normal distribution.
- Mann–Whitney and Kruskall–Wallis *U* tests were used for non-Gaussian distribution.
- Pearson's Chi-square test was used to compare qualitative variables.

The significance level retained for the study was 0.05.

Results

One hundred twelve families were included in our study with a participation rate of 81%. Ninety family representatives (80%) were first-degree relatives.

Ten (9%) were illiterate and 40 (36%) had a primary school level.

The median age of our patients was 56 years (36; 69). The median simplified acute physiology score II (SAPS) II[8] at admission was 29 (20; 43). Nineteen patients (17%) had a history of intensive care hospitalization. Noninvasive ventilation and mechanical ventilation were used, respectively, for 59 (53%) and 58 (52%) patients. Eleven patients (9.8) required hemodialysis during their stay.

The median hospital stay in the intensive care unit was 8 days (5; 16). Thirteen patients (12%) had sequelae on discharge. The overall mortality rate was 26%.

Assessment of Family Satisfaction

The median satisfaction score was 133.5 (120; 145.75) with a minimum score of 86 and a maximum score of 156.

No complaints regarding the duration and times of the visits were reported. Ninety-five (85%) relatives were always satisfied with cleanliness of the unit.

Availability of medical and paramedical staff was judged to be excellent by 62 (56%) and 66 (59%) family representatives, respectively.

Information provided by doctors and paramedics was considered very clear by 72 (65%) and 65 (58%) family representatives, respectively.

The medical secret was respected by medical ($n = 107$) and paramedical ($n = 105$) staff in most cases.

Psychological support was deemed to be always present by the medical and paramedical staff by 62 (55%) and 55 (49%) family representatives, respectively.

Only 25 representatives (22%) claimed lack of medical devices and treatments.

The therapeutic management was judged to be excellent by 80% of the representatives ($n = 90$).

Nursing care was rated as excellent by 61% of representatives ($n = 68$). Only one family representative considered the quality of care to be poor.

Continuity of care was rated excellent by 70 family representatives (63%).

Study of Factors Influencing the Satisfaction Level

Use of dialysis ($p = 0.011$), presence of sequelae at patient's discharge ($p = 0.017$), and being illiterate at the evaluation of intellectual level of the family representative ($p = 0.040$) were factors that negatively influenced families' satisfaction.

Use of noninvasive ventilation (NIV) ($p = 0.013$) and primary intellectual level of the family's representative ($p = 0.012$) were factors that positively influenced families' satisfaction (Table 1).

Discussion

Despite sociocultural differences (expectations of families would be different) and in particular economic conditions (nurse/patient and doctor/patient ratios), the satisfaction level in our population was comparable to that described in European and American studies.[9–11]

In literature, several studies have shown that families want free access to patients hospitalized in intensive care units.[6,12,13] Other studies have shown that bed visits were inconvenient for patients and could disrupt the work of healthcare providers.[14]

In our study, bed visits were not allowed in majority of the cases, but this was not a source of dissatisfaction for the families.

Communication is one of the cornerstones in satisfactory assessment. The importance of communication in the medical field has been demonstrated by many studies.[15–18] In our population, satisfaction with the quality of interviews and information provided by the medical staff was deemed satisfactory. This can be explained by the importance given to communication with patients' families in our department. But a good deal of work remains to be done for further improvement.

Psychological support is also a key element of the relationship between caretakers and patients. The training of our team on communication, in particular ability to listen, and families' involvement in staff meetings had also improved families' satisfaction in intensive care departments.[19–22]

In our study, the use of NIV was associated with higher satisfaction. This element can be explained by the application of a protocol for starting and monitoring NIV sessions with the almost

Table 1: Factors influencing the satisfaction level of families

	Median score		
	Yes	*No*	*p*
Intellectual level Illiterate	121.5 (112.25; 131.75)	137 (121.5; 146)	***0.040***
Intellectual level Primary	141.5 (128.25; 148)	127 (117.25; 144)	***0.012***
History of hospitalization in ICU	139 (116; 146)	133 (121; 145.5)	*0.356*
Mechanical ventilation	131 (119; 144)	139 (122; 148)	*0.280*
Noninvasive ventilation	141 (125; 147)	127 (115; 142)	***0.013***
Dialysis	118 (116; 126)	139 (122; 146)	***0.011***
Death	128 (122; 145)	136 (119.5; 146)	*0.655*
Sequelae at discharge	131 (119; 145)	146 (126.5; 151.5)	***0.017***

constant presence of nursing staff. On the contrary, interviews are carried out with families by doctors with distribution of brochures to explain the different care procedures to them. This attitude was considered reassuring by families.

In our study, the satisfaction score was lower when family representatives were intellectually illiterate. Families with a low level of education would have more difficulty to accept stressful situations and assimilate explanations, even with simplified medical terms. It was easier for families with a higher education level to understand the provided information.

The level of satisfaction among the families of patients with sequelae at discharge was lower. The lack of a structure for rehabilitation of patients with sequelae could explain dissatisfaction of these families in our study, especially since most of our patients were discharged at home.

In view of the heavy nursing care required by patients with sequelae at discharge, the creation of post-acute rehabilitation units had been recommended by the Hospital Organization Guidelines in France.[23]

The prospective randomized study RECOVER of Walsh had shown that rehabilitation after resuscitation in specialized centers increased the patient's satisfaction rate.[24]

Conclusion

Regardless of the limits of our study, it could be concluded that the family representatives were satisfied with communication with our healthcare team and with therapeutic management. Illiteracy, use of hemodialysis, and presence of sequelae at discharge negatively influenced the satisfaction level.

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Appendix

Satisfaction of Families' Representatives of Intensive Care Patients

Patient

Name and surname

File number

Admission date

Age

Sex

Marital status

History of ICU hospitalization

Degree of autonomy before admission (WHO scale)

Reason of admission

Diagnosis retained

State of consciousness on admission

Level of severity on admission (SAPS II score)

Use of sedation during the stay

Use of mechanical ventilation
1. Yes
2. No

Use of NIV
1. Yes
2. No

Length of stay

Output mode

Possible sequelae on discharge

Family's Representative

Age

Sex

Relationship

Level of study
1. Illiterate
2. Primary
3. Secondary
4. University

Profession

Satisfaction Questionnaire

General Framework

1. Is there a waiting room?
   Yes
   No

2. Have you been allowed to visit your relative in bed?
   Always
   Often
   Rarely
   Never

3. Do you feel comfortable during the visit?
   Always
   Often
   Rarely
   Never

4. Are you satisfied with the hygiene level in the department?
   Always
   Often
   Rarely
   Never

Communication with the Staff

1. Have you received the brochure explaining how the service works?
   Yes
   No

2. Level of understanding of the brochure: is it?
   Excellent
   Very good
   Good
   Medium
   Bad

3. Quality of communication with Doctors and Paramedics

Availability		*Doctors*	*Paramedics*
	Excellent		
	Very good		
	Good		
	Medium		
	Bad		
Quality of given information		*Doctors*	*Paramedics*
	Very clear		
	Clear		
	Clear enough		
	Not clear enough		
	Incomprehensible		
Do you feel that information was discordant			
	Always		
	Quitter frequently		
	Often		
	Rarely		
	Never		
Do you think that you were having all information regarding your patient's state of health?			
	Always		
	Quite frequently		
	Often		
	Rarely		
	Never		
How do you judge the staff's attitude regarding your demands?			
	Excellent		
	Very good		
	Good		
	Medium		
	Bad		
Did you face an abuse?			
	Always		
	Quite frequently		
	Often		
	Rarely		
	Never		
Did you find the staff interested with your psychological state?			
	Always		
	Quite frequently		
	Often		
	Rarely		
	Never		
Do you think that the staff respected the medical confidentiality?		*Doctors*	*Paramedics*
	Always		
	Quite frequently		
	Often		
	Rarely		
	Never		

Nursing and Treatment

1. Do you judge that nursing and treatment were at the maximum level
   *In the material plane (missing material/rely on explorations or private care/drugs purchase...)
      Always
      Quite frequently
      Often
      Rarely
      Never

   *In the human plane
      Always
      Quite frequently
      Often
      Rarely
      Never

2. How do you find the management of
   *Pain
      Excellent
      Very good
      Good
      Medium
      Bad

   *Anxiety/agitation
      Excellent
      Very good
      Good
      Medium
      Bad

   *Breathing difficulties
      Excellent
      Very good
      Good
      Medium
      Bad

3. You judge the respect for your relative's privacy:
   Excellent
   Very good
   Good
   Medium
   Bad

4. You judge the respect of the person of your relative:
   Excellent
   Very good
   Good
   Medium
   Bad

5. Do you think that we have to work on some points to improve quality of care?
   Yes
   No

Therapeutic Decisions

1. Are you involved in the making of therapeutic decisions?
   Always
   Quite frequently
   Often
   Rarely
   Never

2. You judge that time allowed to reflection is
   Very sufficient
   Sufficient
   Moderately sufficient
   Insufficient

3. Do you feel that you can control care provided to your relative?
   Always
   Quite frequently
   Often
   Rarely
   Never

4. Do you want to leave the decision to doctors?
   Yes
   No

5. Do you have any proposals to improve the quality of care and communication?