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"AN ASSESSMENT OF SATISFACTION OF FAMILY MEMBERS OF PATIENTS ADMITTED IN THE INTENSIVE CARE UNIT"

Dr Desiraju Vivekanand Associate Professor Armed Forces Medical College, Pune

Dr K Gowtham Kumar Reddy Anaesthesiologist BMR Hospital, Guntur

Dr Manish S Honwad Associate Professor Armed Forces Medical College, Pune

ABSTRACT *The aims and objectives of this observational study were to assess the satisfaction levels of, and factors affecting satisfaction of family members of patients admitted to Intensive Care Units (ICUs).*

Materials and methods : *Family members of 364 patients admitted to an ICU of a tertiary care teaching hospital were given the 24 item validated FS-ICU questionnaire on discharge or death of the patient. Patient and family member data were recorded. The Family Satisfaction (FS ICU) Score was calculated. A Performance-Importance Grid evaluation was done based on the responses.*

Results : *The Overall Family Satisfaction score (maximum of 100) was 70.82 ± 17.12 . None of the patient and family member related factors were significantly associated with the FS Scores. Performance-importance grid analysis revealed items falling into the "high priority for improvement" were those relating to communication and management of patient symptoms. Items scoring poorly were: support provided during decision making, frequency of nurse communication and atmosphere of the ICU waiting room.*

KEYWORDS : Intensive Care Units, Family satisfaction, FS-ICU 24, Anesthesiologist-Intensivist, Performance-Importance grid

INTRODUCTION

Family members of patients who are critically ill and are admitted to the ICU undergo tremendous stress, anxiety and fatigue. While attending to the seriously ill patient, the needs and questions of the family members are often not looked into by the hospital. Since critically ill patients frequently cannot make their own decisions, family members play an essential role in daily decision making. (1).Family members often fail to comprehend the diagnosis, prognosis, or treatment of the patient even after meeting with the physician. (2) They need timely, clear, understandable, honest and compassionate communication by clinicians.(3) (4)

The purpose of this study is to find out the levels of, and the factors affecting satisfaction amongst the family members. ICUs are predominantly managed by anesthesiologists; so it was felt that this is a relevant research in anesthesia practice.

Aims: To assess the family members' satisfaction concerning the care that they and their critically ill relatives received while admitted in the ICU.

Objectives:

1. To study the level of satisfaction of family members of patients in the ICU
2. To study the factors and determinants of satisfaction and dissatisfaction.
3. To recommend strategies to improve family satisfaction.

Study design: Prospective observational study.

METHODS:

After obtaining Institutional Ethics Committee approval and informed consent of the participants the study was conducted in a 20 bedded combined medical and surgical ICU of a tertiary care teaching hospital. The study population was family members of patients who were admitted to the ICU for more than 48 hours. 364 patients over a one year period were selected by systematic random sampling.

The FS-ICU 24 questionnaire was handed over to the family member the day before the planned discharge of the patient. In case of death of the patient the questionnaire was handed over as per convenience. Patient characteristics recorded were age, gender, diagnosis, severity of illness (SOFA score), length of stay and survival status. Details of the family member noted were age, sex, educational level and annual income.

The FS-ICU questionnaire is a reliable and validated 24-item tool that is designed to measure family satisfaction with ICU care. It provides a total satisfaction score, as well as subscale ratings for satisfaction with "Care" (14 items) and with "Decision Making" (10 items). All items use a 5-point Likert scale (excellent, very good, good, fair, and poor), as responses except one item which uses a dichotomous scale (Yes/No).(1)

The questionnaire covers various aspects of ICU care including infrastructure and amenities, courtesy and compassion shown by staff, communication, degree, consistency and honesty of information provided, involvement in decision making and care given by treating staff to the patient and family member.

Data analysis:

Responses given on the Likert scale were linearly transformed to scores ranging from 0 to 100 and were oriented so that higher values indicate increased satisfaction. Correlation between the family members' responses and characteristics of patient as well as family member were analyzed.

STATISTICAL ANALYSIS

Demographic characteristics of both patients and family members were analyzed using descriptive statistics. Chi square test or Fisher exact test was used to find association between questionnaire response and outcome. ANOVA t test was used for statistical comparison of the various subgroups for all determinants except for the Survivor/Death determinant where Independent Student t test was used. P-value 0.05 was considered as significant. Qualitative data was expressed by using frequency and percentage (%).Data analysis was done using SPSS statistical software version 20.0.

RESULTS

Overall Family satisfaction score (FS-ICU score) obtained was 70.82 ± 17.12. Overall Satisfaction score of family members in "Care" domain was 70.47 ± 18.88 and in "Decision "Making" was 71.30 ± 17.2.

Table 1 : Consolidated table of patient and family member factors determining the family satisfaction score

S No	Factor	P-value (<0.05 Significant)
1	Age of patient	0.975
2	Gender of patient	0.498
3	Length of stay in ICU	0.801
4	Severity of illness	0.422
5	Outcome(survivor/death)	0.384
6	Age of respondent	0.673
7	Education level of family member	0.143
8	Annual incomeof family member	0.182

Table 2 : Responses marked as excellent and correlation coefficient

ITEM	Percentage of excellent response(%) No/364 x 100	Correlation (with overall FS score)coefficient
1. Did you feel included in the decision making process?	39.56	0.31
2. Did you feel supported during the decision making process?	26.37	0.37
3. When making decisions do you have adequate time to have your concerns addressed and questions answered?	81.59	0.43
4. Do you feel you had control over the care of your family member?	54.12	0.34
5. How often nurses communicated to you about your family member's condition?	24.73	0.58
6. How often doctors communicated to you about your family member's condition?	29.4	0.66
7. Willingness of ICU staff to answer your questions?	30.22	0.76
8. How well the ICU staff provided you with explanations that you understood?	26.65	0.83
9. How well ICU staff informed you what was happening to your family member and why things are being done?	30.49	0.78
10. The honesty of information provided to you about your family member's condition?	26.65	0.82
11. The consistency of information provided about your family member's condition?	21.7	0.73
12. The courtesy, respect and compassion you were given?	31.59	0.83
13. The courtesy, respect and compassion your family member was given?	34.07	0.77
14. How well the nurses cared for your family member?	30.49	0.83
15. How well doctors cared for your family member?	49.18	0.79
16. How well the ICU staff provided emotional support?	28.02	0.79
17. How well the ICU staff showed an interest in your needs?	29.4	0.82
18. How well the ICU staff assessed and treated your family member's breathlessness?	28.02	0.79
19. How well the ICU staff assessed and treated your family member's agitation?	25.27	0.76
20. How well the ICU staff assessed and treated your family member's pain?	22.25	0.79
21. The team work of ICU staff who took care of your family member?	34.89	0.80
22. Atmosphere of the ICU?	33.79	0.80
23. Atmosphere of the ICU waiting room?	18.41	0.58
24. How satisfied were you with level or amount of health care your family member received in the ICU?	34.07	0.83

Correlation coefficient reflects the extent to which an individual item is related to overall family satisfaction (the higher the coefficient, the stronger the correlation).

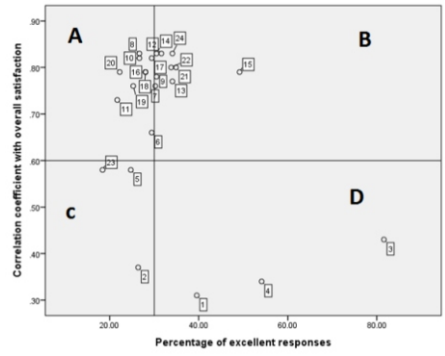
DISCUSSION

In this prospective observational study of assessment of family satisfaction involving family members of 364 patients admitted in the ICU it was found that family members were satisfied with the overall care received by them as well as their admitted relative. The average Family Satisfaction score (FS-ICU Score) was 70.82 (±17.12). This matches with previous studies of Heyland et al. (5) and Sundararajan (6) The average Family Satisfaction score with "Care" was 70.47 (± 18.88) and with "Decision Making" was 71.30 (± 17.2) which also correlates well with the study conducted by Heyland et al.(5) in which levels of satisfaction with "Care" (84.3) and "Decision Making"(75.9) were high . In contrast Osborn et al.(7) found low scores in the decision making domain.

This study also assessed the factors which may have influenced overall satisfaction scores. These were age, gender, length of stay, severity of illness (SOFA score) and outcome (survived/death) of patient and factors like age, educational level and annual income of family member of patient. None of these factors were found to be significantly affecting the overall satisfaction score. (Table 1)

A Performance-Importance grid was prepared. This grid plots the percentage of excellent responses (performance) against the correlation coefficient (importance). Drawing a vertical line through 30% and a horizontal line through 0.6 divides the grid into four quadrants A, B, C and D. (See Fig 1 and Table 2)

Figure 1: Performance importance grid for the items in the FS – ICU



- Quadrant A items: Highly correlated with satisfaction but low rate of "excellent" responses.
- Quadrant B items: Highly correlated with satisfaction and high rate of "excellent" responses
- Quadrant C items: Not highly correlated with satisfaction and low rate of "excellent" responses.
- Quadrant D items: Not highly correlated with satisfaction but high rate of "excellent" responses.

Quadrant A represent high-priority items that, if improved, would yield an increase in overall family satisfaction. Points in Quadrant B represent high priority items that already have good satisfaction ratings. Points in Quadrants C and D represent low-priority items that have opportunities for improvement and high satisfaction ratings, respectively.(8)

In our study the items in Quadrant A (high priority for action) were 8, 10, 11, 16, 18, 19 and 20.

Items 8, 10 and 11 relate to communication. The reasons for lack of consistency of information provided about the family member's condition probably was due to many categories of healthcare providers (residents, nurses, specialists) interacting with the family members of patient. The poorer scoring for these items suggests that there is a need to improve communication skills amongst the healthcare providers in the ICU.

Items 16, 18, 19 and 20 relate to management of symptoms of the patient which are easily visible and apparent to the family member. Breathlessness, agitation and pain in the patient have a strong emotional impact on the family member and any perceived lack of management of these symptoms will understandably lead to poor satisfaction scores.

In our study the items in Quadrant C were 2, 5 and 23. The poorer score for "support during decision making" is significant. Decision making by the family member on behalf of the incapacitated patient is stressful and difficult. It is important that ICU doctors and nurses guide them properly and help them arrive at a decision. There is a need to empower the nursing staff and permit them to speak to family members while ensuring that the doctors and nurses be coordinated regarding the information being provided.

Conditions and atmosphere in the ICU waiting room scored a low percentage of excellent response. Since the family members spend most of the day and night in the waiting rooms, it is very important that the waiting room be made comfortable, with all essential facilities.

CONCLUSION:

This observational study was conducted to assess the satisfaction of family members of patients admitted to the ICU which is an often ignored aspect of ICU care. The overall satisfaction score was good as also the overall satisfaction scores for the subdomains of "Care" and "Decision making". None of the patient factors namely age, gender, length of stay in ICU, severity of illness and outcome (survived/death) or family member factors namely age, educa-

tional level, and annual income were found to have a significant effect on Family Satisfaction score. Performance-importance grid analysis showed that the areas scoring low and needing attention were those relating to aspects of communication, management of patient symptoms, provision of emotional support during decision making, frequency of nurse communication and atmosphere of the ICU waiting room.

It is therefore recommended that the doctors and nurses in the ICU be suitably trained and sensitized to the importance of communication skills and provision of emotional support to family members. The hospital administration should undertake steps to improve the waiting room conditions. Addressing these aspects will definitely improve family satisfaction which is an important element of quality of care being provided in the ICU.

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