

# Effect of Support Program on Satisfaction of Family Members of ICU Patients

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## ABSTRACT

**Background:** This study has been conducted to investigate the effect of family-centered support program on satisfaction of the family members of patients in intensive care unit. Hospitalization of patient in intensive care unit causes crisis in family. It is very important to pay attention to the role of patient's family in support and care of patients in intensive care unit, to pay attention to fulfillment of the family's needs in order to increase their satisfaction.

**Methods:** This study was a quasi-experimental study with control group. Seventy six family members of the patients hospitalized in medical and surgical intensive care units were recruited through purposeful sampling method and were divided in two groups (control and trial with 38 people in each groups). In the control group, action was taken according to routine way of the unit and in trial group, intervention was conducted within three days in three dimensions of support, information and reassurance. In the fourth day, satisfaction was measured using Family Satisfaction Intensive Care Unit questionnaire.

**Results:** Mean and standard deviation of the satisfaction with care in the control and trial groups were 37.78(18.36) and 69.26(8.39), respectively, mean and standard deviation of satisfaction in information and decision-making domains were 25.65(17.48) and 61.84(12.21) and total satisfaction score were 32.73(16.92) and 66.17(9.07), respectively. These scores indicated significant increase of satisfaction after intervention ( $P < 0.001$ ).

**Conclusion:** This research showed that information, emotional support and reassurance of the family of patients in intensive care unit has considerable effect on increase of their satisfaction. It is suggested to educate intensive care nurses and other health care personnel about psychosocial and behavioral skills to support family members during hospitalization of their patients in intensive care unit.

## Keywords:

Satisfaction, Intensive care unit, Family member, Support Program

## 1. Background

Although patient-centered care has been considered as one of the fundamentals of nursing care in the last four decades, important role of patient's family in support and care of patients in intensive care unit has attracted attention (Mitchell et al. 2009). When patients are admitted to intensive care unit due to physiological crisis, their family members experience psychological

crisis (Kosco & Warren 2000) and emotional disturbance, shock, disbelief, depression and anxiety (Azoulay et al. 2003).

Families face issues of death and life, change of roles, financial concerns and increase of responsibilities and all of these are potential and major sources of stress, anxiety and barriers of compatibility (Leske 2002). Patient's family is an integral part of care of patient. Family is a support for patient and can be a factor for recovery

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of patient (Roberti & Fitzpatrick 2010). Family members are not only visitor of intensive care unit, but also experience care along with their relatives (Alvarez & Kirby 2006).

Performance of nurses in intensive care unit usually focuses on needs of patient and less attention has been paid to recognition of experiences of patients' family (Neabel et al. 2000; Chesla 1996). Notwithstanding medical result of patient, family has been recognized as a group with special needs in intensive care unit. They face a complex technical environment and repeated changes in personnel and have many expectations (Stricker et al. 2009). Considering that family members of the patient are the best partners for taking care of patient, intensive care nurses should have proper and comprehensive understanding of the family's needs for effective cooperation with family members of the patient. Nurses have suitable opportunity for fulfilling needs of family due to 24-hour attendance and close relation with the patient (Bijttebier et al. 2001). Fulfillment of psychosocial needs of families of these patients has been converted into one of the priorities of intensive care nurses and their fulfillment increases satisfaction and promotes quality of services.

According to the findings of the studies conducted on identification of the family's needs, five categories of major needs have been introduced: need for information, reassurance, support, comfort and closeness (Leske 1986). In different cultures and societies, priority and importance of these needs are different for families. For example, necessity of closeness to patient and right of free visit at all hours are a priority in some societies whereas need for correct and timely information is one of the important needs in most studies (Davidson 2009; Verhaeghe et al. 2005). Evaluation of family needs, satisfaction with care, information and helping at time of decision-making should be an integral part of quality assessment in ICU (Harvey 2004).

In health care systems, satisfaction of patient is one of the most important and challenging indicators. Due to the type and intensity of disease and patients' level of consciousness, it is difficult for the nurse to determine patient's satisfaction in intensive care unit. As a result, family members can be determining in these situations (Roberti & Fitzpatrick 2010). Harvey (2004) believes that a critical disease affects patient and identifies family satisfaction as an alternative to patient satisfaction in critical care unit. Today, many health care organizations consider patients' satisfaction as one of the quality indices of health services. Since experience of disease and

the necessity of treatment and care process increase vulnerability of patients and also their need for multilateral support, therefore, it is needed to pay more attention to satisfaction in health care system (Joolaei et al. 2011).

Different studies show that fulfillment of needs of patients' families usually leads to better results for patient and family and increases satisfaction (Verhaeghe et al. 2005; Chien et al. 2006; Khalaila 2013). A study in Australia showed that fulfillment of the needs of patients' family makes them more ready for participation in care of the patient after discharge (Russell 2000 cited in Mitchell 2009).

Few studies have been conducted on description and determination of family's satisfaction with the provided cares in intensive care unit (Azoulay et al. 2001; Heyland et al. 2002; Heyland & Tranmer 2001). The present study was conducted to examine the effect of family-centered program in three dimensions of support, information and reassurance on satisfaction of family members of the patients hospitalized in intensive care unit.

## 2. Materials & Methods

### Design

In this quasi-experimental study with control group, 76 close families of patients hospitalized in medical and surgical intensive care unit in one of the teaching hospitals of Iran University of Medical Sciences in Tehran, Iran were recruited through purposeful sampling method within the first 24 to 48 hours after hospitalization of the patient.

### Sample

Thirty eight people were included in the control group and 38 people were placed in the trial group.

Inclusion criteria included: 1) being wife or husband or having blood relation such as parent or child, sister and brother or being the closest person to patient in family; 2) The subject has visited him/her patient in the first 24 to 48 hours after hospitalization; 3) aged of above 18 years; 4) ability to read and write; 5) emotional readiness for participation in the study; 6) not taking care of another patient in family; 7) not having the experience of hospitalization of a relative in intensive care unit; 8) not having mental or physical disability and; 9) not being member of health care team. Exclusion criteria included lack of tendency to continue participation in the study or

**Table 1.** Demographic characteristics of family members in two groups (n=76).

Variable		Trial group (n=38) Frequency (%)	Control group (n=38) Frequency (%)	Test
Age group	19-34	14(36.8)	18(47.4)	P=0.632
	35-50	16(42.1)	14(36.8)	
	50 & above	8(21.1)	6(15.8)	
Gender	Man	15(39.5)	19(50)	P=0.356
	Woman	23(60.5)	19(50)	
Marital status	Single*	10(26.3)	9(23.7)	P=0.557
	Married	28(73.7)	29(76.3)	
Education level	Under Diploma**	14(36.8)	10(26.3)	P=0.723
	Diploma	15(39.5)	17(44.7)	
	University	9(23.7)	11(28.9)	
Relation with patient	Child	17(44.7)	16(42.1)	P=0.357
	Father or mother	3(7.9)	7(18.4)	
	spouse	6(15.8)	8(21.1)	
	Sister or brother	12(31.6)	7(18.4)	
Job	Free job	10(26.3)	11(28.9)	P=0.824
	Employee	6(15.8)	6(15.8)	
	Homemaker	16(42.1)	14(36.8)	
	Other	6(15.7)	7(18.5)	

\*: single consists of "not married", "widow" and "divorce".

\*\* : under diploma refers to primary & secondary school without degree.

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death of patient. This study lasted for four months (from September 2013 to December 2013).

### Instruments and data collection

Data collection instruments included patient and family's demographic characteristic questionnaire and Family Satisfaction in the Intensive Care Unit instrument (FS-ICU). Demographic questionnaire included information relating to family member including age, gender, education, relation with patient, job and also information relating to patient such as age, gender, education and job. In this research, FS-ICU (Heyland & Tranmer 2002) which has been summarized and validated by Wall et al, (2007) was used. This questionnaire includes 24 items among which 14 items are about satisfaction with care and 10 items are related to satisfaction with decision-making. All items are five-pointed (excellent, very good, good, fair and bad) except one item which has two aspects. All questions included item of "no case". To confirm validity and reliability, after translation the questionnaire was given to 10 members of faculty board of School of Nursing and Midwifery, Tehran University of Medical Sciences. After receiving suggestions and performing corrections, it was given to 20 members of the patients' family members to confirm reliability, face validity and understandability. To determine reliability of the ques-

tionnaire, split half method was used and Cronbach's alpha was obtained 0.89. To calculate and analyze satisfaction, each of the items was valued between 0 and 100 (Wall et al. 2007). Higher point indicated higher satisfaction. Total point was obtained by calculating mean of the points given by the respondents.

The researcher explained manner of intervention to the head nurses and nurses of the unit who intended to cooperate with her as research assistant. They helped by holding a session for introduction to the project, the study and its goals by giving a version of behavioral details and type of communication with family member and the points considered in the project. This assistance was based on needs of family in Critical Care Family Needs Inventory (CCFNI) questionnaire.

Family members were informed about the study and its goals and participants of both groups were asked to fill demographic datasheet questionnaire after signing the informed consent for participation in the study. In the control group, action was taken according to routine way of the unit and FS-ICU instrument was filled by them three days after hospitalization of patient. In the trial group, intervention was performed in three dimensions of support, information and reassurance and they filled the FS-ICU instrument three days after hospitalization.

**Table 2.** Comparison of family satisfaction, three days after admission of their patient in the intensive care unit in two groups (n=76).

Dimension of satisfaction	Group	Trial group Mean (SD)	Control group Mean (SD)	Test
Satisfaction with care		69.26 (8.39)	37.78 (18.36)	p=0.001
Satisfaction with information and decision-making		61.84 (12.21)	25.65 (17.48)	p=0.001
Total satisfaction		66.17 (9.07)	32.73 (16.29)	p=0.001

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In dimension of support, the following actions were taken: Showing what they can perform at time of visiting the patient, explaining about environment and the equipment which they will see in bedside of the patient and its application for patient in the first visit of the patient, speaking about negative feelings such as guilt and anger, accompanying the nurse at time of visiting the patient, giving the feeling that personnel of the hospital take care of patient, that the person can cry and giving information about people or organizations which can help the person and his/her family. In dimension of information, the following actions were performed: introducing personnel and their duties and showing what information they can acquire from each of them, explaining the treatment plan, special procedures and the tests which were performed for the patient and the reason for their performance, providing daily talk with doctor and telephone contact in case of change in condition of the patient or transferring him/her to another unit. In dimension of reassurance, the following actions were taken: giving understandable explanations, explaining facts about disease and its progress and the expected outcomes, speaking about death of the patient, giving feeling of hope to members of the family mentioning that he/she will improve, assuring the best possible care of the patient.

### Ethical considerations

The researcher received necessary licenses after receiving confirmation letter from Council of Research and Committee of Ethics of Tehran University of Medical Sciences and presented it to authorities of the hospital. Family members were informed about the study and its goals. Written forms explaining the purpose and method of the study were given to the family members. They were ensured that their anonymity would be guaranteed, that their participation or withdrawal from the study would be of their own free will and that any refusal to participate would not result in any negative consequences.

### Data analysis

Data were analyzed with SPSS software, version 17. To compare means, independent t-test was used and homogeneity of two groups was evaluated with chi-square test in terms of demographic variables.

### 3. Results

Demographic characteristics of study participants are shown in Table 1. Age of the participants ranged between 19 and 67 years with mean and standard deviation of 37.71 (12.21) in the control group and 40.42 (11.83) in the trial group. Most participants were female (60.5% in the control group and 50% in the trial group). About ¾ of the participants in both trial (73.7%) and control groups (76.3%) were married.

In terms of education, in both trial (39.5%) and control groups (44.7%) most people held high school degree. Most participants in both trial (44.7%) and control groups (42.1%) were children of the patient. Most participants in the study were housewives in both trial (42.1%) and control (36.8%) groups. Chi-square test showed that both groups were homogenous in terms of demographic characteristics.

Age of the patients ranged between 17 and 85 years with mean and standard deviation of 50.18 (18.33) in the trial group and 47.32 (20.89) in the control group. In both groups, 65.8% of the patients were male. Most patients in this study had critical conditions in both trial (55.3%) and control (57.9%) groups. Chi-square statistical test showed that two groups had no statistically significant difference and were homogenous. To compare the satisfaction between the two groups, independent t-test was used and the results are given in Table 2.

In the control group, mean of satisfaction with care was 37.78 with standard deviation of 18.36 and in the trial group, mean of satisfaction with care was 69.26 with

standard deviation of 8.39 and according to the independent t-test, there was statistically significant difference between two groups in this regard ( $P < 0.001$ ).

In the control group, mean of satisfaction with information and decision-making was 25.65 with standard deviation of 17.48 and in the trial group, mean of satisfaction with care was 61.84 with standard deviation of 12.21 and there was a statistically significant difference between two groups in this regard ( $P < 0.001$ ).

In the control group, mean of general satisfaction was 32.73 with standard deviation of 16.92 and in the trial group, mean of general satisfaction was 66.17 with standard deviation of 9.07 and there was a statistically significant difference between two groups in this regard ( $P < 0.001$ ).

#### 4. Discussion

The findings showed that implementation of a family support plan to fulfill need for support, information and reassurance in the first three days of hospitalization of the patient in medical and surgical intensive care unit can have considerable effects on increase of satisfaction of the family members. This finding has been also confirmed in other studies.

Consideration and fulfillment of support needs of the family members are of the dimensions of intervention in this research. Khalaila (2013) in one study showed that fulfillment of the supportive needs of family members was the strongest predictor of general satisfaction though they had considered this need less important. Chien et al, (2006) showed that effort to fulfill needs of family increased satisfaction particularly satisfaction with fulfillment of psychosocial needs in family's members by executing a need-based curriculum. Results of study carried out by Moore et al, (2012) also showed that supportive intervention of family with emphasizing on psychosocial skills and increasing communication level with family members could increase satisfaction with care. Karlsson and colleagues et al, (2011) believe that skill of ICU personnel and their conduct toward the patient and family are important factors which increase of satisfaction with care.

One of the other dimensions of intervention in this study is attention to fulfillment of information needs of the family members. Bailey et al, (2010) in their descriptive study showed that there was positive relationship between information support and satisfaction. Information support increased satisfaction. Khalaila (2013)

in one study mentioned that fulfillment of information needs of the family increases general satisfaction and satisfaction with information and decision-making but it doesn't affect satisfaction with care and this shows that it is very important for the family members to participate in decision-making and care process and the information which they receive helps them in this regard. Karlsson et al, (2011) showed that from the family's viewpoint, it is very important to provide regular information.

Fulfillment of the need for reassurance of the family members of the patient is one of the dimensions of intervention in this research. Khalaila (2013) showed that fulfillment of need for reassurance, closeness and comfort had positive relationship with general satisfaction and satisfaction with care. According to study conducted by Chien et al, (2006), need for reassurance was one of the most important needs of the families. The researcher was not able to take action regarding fulfillment of need for comfort and closeness in this research and intervention was done only for reassurance need.

#### Limitations of the study

Nonrandom assignment of people into each of the groups and carrying out the study only in two intensive care units of one hospital can endanger generalization of the results. Family members in control group might have been supported by other nurses who could change results of intervention. Ratio of nurse to patient in the studied units was three to one and they might have not enough support, reassurance and information at time of intervention due to high workload and pressure on the nurses. This could be one of the factors affecting results of intervention. Difference in social level of families and receiving support and help from other potential resources could also affect the results.

This study was conducted only to fulfill three dimensions of needs. In the next studies, effect of meeting other needs on satisfaction will be studied by providing suitable opportunities. This intervention was done in the early days of hospitalization and in the next studies, satisfaction can be measured during and at the end of hospitalization.

Results of this research and other studies on family-centered care and attention to needs of family members of the patients hospitalized in intensive care units show that family members face crisis when their patient is hospitalized in intensive care unit and they need proper and timely support and information in order to adapt to these conditions. Nurses have suitable place for fulfill-



ment of these needs due to continual attendance in the unit and close relation with patient and family. Meeting these needs has considerable effect on promotion of care service quality and increase of satisfaction level in all of its dimensions. Therefore, it is necessary to pay attention to education of psychosocial basic skills and behavioral skills and conduct toward patient and family for nurses and other therapeutic personnel. In order for the nurses to execute these educations properly, their work conditions such as the number of shifts and working hours and hardship of workplace and ratio of nurse to patient should be considered so that they have necessary motivation and power to conduct toward patient and his/her family properly.

It is suggested to educate intensive care nurses and other health care personnel about psychosocial and behavioral skills to support family members during hospitalization of their patients in intensive care unit.

### Conflict of interest

The authors declare that they have no conflict of interest.

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