Anxiety level among family members attending patients admitted in intensive care unit

Abstract

Background: As family is an integral part of patients' care, they are often the ones who determine satisfaction of care provided, as well as with the overall critical care experience. This is always observed that family members of patients admitted in intensive care unit (ICU) are typically in a state of strain and tension that leads to fear and anxiety. This study was undertaken to assess anxiety level among family members attending ICU patients, and to find out the association between anxiety level and demographic variables of family members. **Materials and method:** The study was conducted in selected ICU of Gauhati Medical College and Hospital, Guwahati. Conveniently selected 100 family members whose near relatives were admitted in ICU and attending the patients at least for three days from admission constitute the sample. They underwent standardised self-evaluation questionnaire to assess the anxiety level and data analysis was performed by using descriptive and inferential statistics. **Results:** Findings of the study suggested that out of 100 family members majority (54%) had high level of anxiety followed by moderate level of anxiety (31%) and least (15%) had low level of anxiety. There was significant association between anxiety level of the family members and selected demographic variables such as age (P value 0.034), sex (P value 0.000) and occupation (P value 0.000). **Conclusion:** Family members attending ICU patients showed moderate to high level of anxiety and also showed significant association between anxiety level and selected demographic variables. Anxiety can be improved by nursing activities that help them to achieve coping ability, enhanced functional pattern, and improve psychosocial wellbeing.

Keywords: Fear. Demography. Nursing.

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Introduction

Intensive care units (ICU) are probably one of the most challenging and stressful places in a hospital in terms of anxiety and depression among family members of ICU patients, especially if their loved one is at an increased risk for dying.[1,2] When an accident-induced trauma occurs suddenly and unexpectedly, the relatives of the victim have no opportunity to prepare themselves emotionally; as they usually have little or no experience of such situations, they are in a state of shock. The admittance of critically ill patients other than accident victims to an ICU can evoke similar reactions, although this does not hold true for all cases. A critically ill patient in an ICU is often associated with a high mortality risk and while waiting for the diagnosis and prognosis, the relatives experience a sense of uncertainty and unreality, and there may be feelings of being thrown into disequilibrium. The situation may include several stressors, such as fear of losing the patient, financial problems, change of roles, responsibilities and routines as well as possible emotional chaos during the patient's critical illness. These emotional stress experiences may result in weakened mental and physical functioning on the part of the relatives.[3]

Admission in ICU produces a crisis situation for both the patient and family members. During this period, families deal with many stresses including role changes, financial concerns, uncertain patient prognosis. If the event is not handled properly, the result may be prolonged physical and psychological instability of family member, a situation that may adversely affect patient outcome.[4] An ICU is a special area of care in each hospital which is mainly dedicated to the management of patients with life-threatening illnesses, injuries, or complications.[5] Having a patient in ICU is an extremely difficult experience for the concerned one.[6] This is especially so for close relatives causing psychological symptoms such as feelings of anger, emotional pain, disbelief, guilt, stress, anxiety, and depression. Azoulay *et al*.[1] surveyed factors that may cause symptoms of anxiety in family members of ICU patients. They reported that 33.1% family members of critically ill patients had moderate to high level of anxiety. They also found that the level of anxiety is higher among relatives who felt they did not receive enough

information in the ICU, who involved in end-of-life decision-making, whose relative died in the ICU, and after end-of-life decisions. In another study, Askari *et al.*[7] compared psychological reactions of family members of patients in ICU and coronary care unit (CCU) using the Depression, Anxiety and Stress Scale 42 (DASS 42). They reported that 68% of the patients' relatives had experienced anxiety. In large observational studies conducted in France, for example, Pochard *et al.*[8] found that 69% of family members had anxiety early in their relatives' ICU stay, while 73% had anxiety in the days preceding their relatives' ICU discharge or death. In a cohort of cancer patients' families, the prevalence of anxiety was 71%.[9] These symptoms, as showed by Anderson *et al.*[10] diminish over time, but even at six months, 35% of families were still experiencing post- traumatic stress.

Every year in the United States approximately 20% of all deaths occur in an ICU. More than half of these occur after life sustaining measures are withdrawn or withheld. This type of experience may adversely affect family members by increasing their stress levels and increasing risk for psychological and physical symptoms.[11] As family is an integral part of the patient's care, so they are often the ones who determine satisfaction of care provided, as well as with the overall critical care experience. This is always observed that family members of patients admitted in ICU are typically in a state of strain and tension that leads to fear and anxiety. The intense feelings of anxiety and distress remain, until sufficient information is given or obtained. To provide appropriate care for the family members of these patients, it is necessary for healthcare team members to assess primarily of the symptoms of relatives of patients.

Nearly 5 million patients are admitted in ICU in India every year.[12] Yet, there is paucity of the research studies in psychological impact on their relatives. Stress-related anxiety, depression, and posttraumatic stress symptoms are commonly seen in the spouses and relatives. It is necessary to provide relevant information to minimise this severity of psychological impact of family members. So, there was need to assess anxiety among family members which will help the nurses to plan and implement holistic care to patient and family. Moreover, Karim *et al.*[13] stated that compared to other parts of the country, the burden of care and social support may be different in a traditional society like in Assam.

The principal aim of the study was to assess the anxiety level among family members attending ICU patient and to find out the association between anxiety level and demographic variables of family members.

Materials and methods

A descriptive study was conducted at ICU of Gauhati Medical College and Hospital (GMCH), Assam from 31 December 2012 to 30 January 2013. The study population comprised of 100 family members of patients admitted in ICU who fulfilled the eligible criteria. The study duration was confined in four weeks period. Hence, to overcome the time constrain, convenient sampling technique was used. Data were collected with the help of standardised tool, State Anxiety Inventory for assessing anxiety level. Data analysis was performed by using descriptive and inferential statistics.

Prior to data collection, permission was obtained from the concerned authority for conducting the study. Consent was obtained from the study participants. The institutional ethical committee had approved the study.

Sampling criteria

Inclusion criteria: Close relatives of patients, age between 18-60 years, the family members who were willing to give consent, family members who were attending the patients from the first day of admission till three days.

Exclusion criteria: Family members attending the patient whose age was above 75 years, family members who were illiterates.

Development of the tool

It was evident from the literature review that because of the nature and type of data required to be analysed to assess the anxiety level among family members attending patients admitted in ICU, standardised tools are essential. After an extensive literature search and examining the tools available, the standardised tool, State Anxiety Inventory to assess the anxiety of family members of ICU patients was selected and procured for the present study. The State Anxiety Inventory is a psychological inventory based on a four-point Likert scale to assess the anxiety level among family members of ICU patients developed by Spielberger *et al.*,[14] and validated by Marteau and Bekker[15] with a reliability of Cronbach's alpha coefficient ranging from 0.78 to 0.92.

Results

Results were reported as mean ± standard deviation (SD). The association between anxiety level and demographic variables were assessed using chi-square values.

Data presented in Table 1 shows distribution of the study sample in regards to their age, sex, religion, education, occupation, relationship with patients, type of family, and monthly family income. Regarding age, it was found that majority of family members (54%) were in age group of 31-45 years, 24% were in age group of 18-30 years, and only 22% were in age group of 46-60 years. Sex-wise break up shows that majority 56% of the study subjects were male, and rest 44% were female. Regarding religion, majority (53%) of subjects belonged to Hindu religion and only 47% were from Muslim religion. The distribution of the sample in regard to education shows maximum number of family members (42%) was graduates and above level. Occupation-wise, 40% family members were businessman, 32% were service holders, and rest 28% were other class background. The distribution of the sample in regard to relationship shows majority of family members (40%) was spouse who was attending their patients. Regarding type of family, 61% of family members were from joint family, whereas only 39% were from nuclear family. In regard to family monthly income, 62% of family members had monthly income below rupees 15000, and rest 38% had monthly income between rupees 15000 and 25000.

Table 2 and Figure 1 portrays that majority of family members, i.e. 54% had high levels of anxiety, followed by

Table 1: Distribution of sample with their demographic variables

n=100			
Variable	Category	Frequency	Percentage
Age	18-30 years	24	24
	31-45 years	54	54
	46-60 years	22	22
Sex	Male	56	56
	Female	44	44
Religion	Hindu	53	53
	Muslim	47	47
Education	Middle school	17	17
	Higher secondary	41	41
	Graduation and above	42	42
Occupation	Service holder	32	32
	Business	40	40
	Others	28	28
Relationship	Spouse	40	40
	Parents	36	36
	Siblings	24	24
Type of family	Nuclear family	39	39
	Joint family	61	61
Monthly income	Below rupees 15000	62	62
	Rupees 15000-25000	38	38

Table 2: Distribution of sample with their anxiety level among family members of patients admitted in ICU

Levels of anxiety	Mean	SD	%
Low (68-71)	70.5	1.2	15
Moderate (72-76)	74.6	1.2	31
High (77-80)	79.3	1.1	54
Total	75.8	3.5	100

ICU=Intensive care unit, SD=Standard deviation
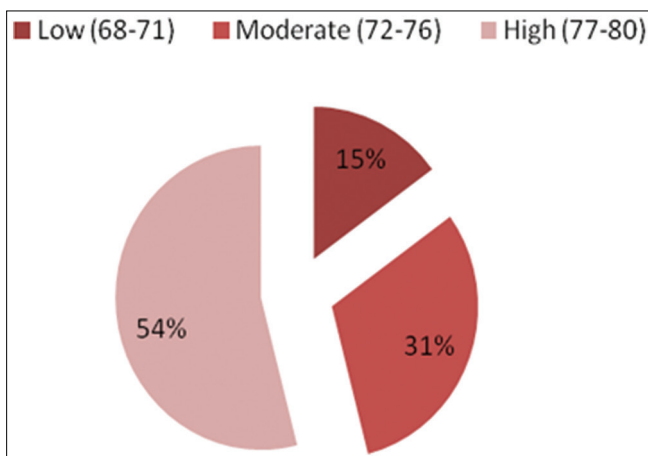
Figure 1: Level of anxiety among family members.

31% who had moderate level of anxiety, and 15% had low level of anxiety among study subjects. Therefore, the findings suggested that majority of family members of ICU patients experienced high to moderate level of anxiety.

Table 3 shows the association between anxiety level and selected demographic variables such as age, sex, religion, education, occupation, relationship with patient, type of family, and monthly income. Among the eight selected variables, age was found to be statistically significant (P value 0.034) at 0.05 level (i.e. p<0.05), whereas sex (P value 0.000) and occupation (P value 0.000) was found statistically significant at 0.01 level (i.e. p<0.01) with anxiety level of respondents; the remaining variables were found to be not statistically significant.

Table 4 shows that in terms of anxiety score, the mean score of female respondents was higher than male respondents (t=-5.733, df=98); so, it indicates that the difference was significant. Therefore, it can be inferred that females were having more anxiety than male.

Discussion

The current concept of anxiety among family members of ICU patients acknowledges that anxiety is a common subjective experience, signals that a threat of some type has stimulated the stress response. The complex of subjective feelings associated with anxiety includes apprehension, feelings of uncertainty, uneasiness, dread, and worry.[16] Keeping in mind the concept of anxiety among family members of ICU patients, the primary aim of the study was to assess the anxiety level among family members attending ICU patient. This study showed that majority of family members (54%) had high level of anxiety, followed by moderate level of anxiety in 31% and least (15%) had low level of anxiety when measured by standardised tool, State Anxiety Inventory. Similar to present study findings, Jones *et al*.[17] in UK reported that close relatives of ICU patients had experienced higher levels of anxiety. In their study, 62% of close relatives showed symptoms of anxiety. In the study of Bandari *et al*.,[18] the prevalence of anxiety among family members of ICU patients with use of State-Trait Anxiety Inventory (STAI) was assessed. Similar to our findings, they mentioned that the experience of anxiety may increase with having patients in ICU. A significant proportion of family members will remain at moderate to high risk for psychological distress well after the patient's death or discharge from ICU, as suggested by Douglas *et al*.[19] in their study. Young *et al*.[20] reported that ICU patients' relatives had significantly high levels of anxiety throughout their hospitalisation.

This study also showed a strong, positive, and independent association between the age, sex, and occupation of the family members and anxiety level. In the study of Askari *et al*.,[7] similar to our findings, they reported that sex and age affect the psychological symptoms of family members. To determine which sex is more significant, *t*-test was done and the findings revealed that female respondents were having more anxiety level than male.

Limitations

The study cannot be broadly generalised as participants for the study were selected through convenient sampling

Table 3: Association between level of anxiety and demographic variables

Variable	Category	Level of anxiety			Chi-square value	df	p-value
		Low	Medium	High			
Age (years)	18-30	Nil	6	18	10.438	4	0.034*
	31-45	7	20	27			
	46-60	8	5	9			
Sex	Male	14	22	20	19.184	2	0.000**
	Female	1	9	34			
Religion	Hindu	10	17	26	1.677	2	0.432
	Muslim	5	14	28			
Education	Middle school	2	2	13	4.626	4	0.328
	Higher secondary	6	14	21			
	Graduation	7	15	20			
Occupation	Service	6	6	10	24.861	4	0.000**
	Business	7	16	7			
	Others	2	9	37			
Relationship	Spouse	3	11	26	9.219	6	0.162
	Parents	6	12	18			
	Siblings	7	8	9			
Type of family	Nuclear	4	9	26	4.153	2	0.125
	Joint	11	22	28			
Monthly income	Below Rs. 15000	6	20	36	3.664	2	0.162
	Rs. 15000-25000	9	11	18			

*Indicates significant level is at P<0.05 and **Indicates significant level is at P<0.01, df=Degree of freedom

Table 4: t-test on association between anxiety level and sex

Anxiety	Sex	n	Mean	SD	t-value	df	p-value
	Male	56	74.27	3.403	−5.733	98	0.000*
	Female	44	77.80	2.539			

*Indicated significant is at P<0.01, n=Number, SD=Standard deviation, df=Degree of freedom

technique. Moreover, the study was limited to assessment of anxiety among the family members attending ICU patients.

Conclusion

On the basis of the present study, the conclusion can be drawn that patients' families are expected to make unprecedented decisions and deal with many difficult situations. In turn, they may have psychological symptoms such as stress, anxiety, and depression, which can affect their general well-being. The study confirms the general impression that there is a considerable amount of anxiety among the family members of patients admitted in ICU. There is significant association between anxiety among family members and demographic variables.

This type of study is important to provide knowledge to the nurses to assess the anxiety level among family members of ICU patient and also helps to find out the common causative factors of anxiety, so that the nurses can plan intervention module to reduce anxiety among the family members who are attending ICU patient.

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