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# The Effect of Open Visiting on Intensive Care Nurse's Beliefs

<sup>1</sup>Shahrzad Ghiyasvandian, <sup>2</sup>Abbas Abbaszadeh, <sup>3</sup>Morteza Ghojazadeh and <sup>4</sup>Zahra Sheikhalipour
 <sup>1</sup>Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran
 <sup>2</sup>Kermanan Faculty of Nursing and Midwifery, University of Medical Sciences, Kerman, Iran
 <sup>3</sup>Department of Physiology, Faculty of Medical, University of Medical Sciences, Tabriz, Iran
 <sup>4</sup>Sina Hospital, Tabriz University of Medical Sciences, Tabriz, Iran

Abstract: Admission to an intensive care unit is recognized as an extremely stressful experience for both patients and their families. Also, the responses of nurses to visitors in ICU are different and they behave in different ways. The reasons of these behaviors based on some problems that visitors cause for patients and unit managing. However, such belief about open visiting can affect the quality of nursing care specially its spiritual aspects. At present, family visiting policy at intensive care units contains more limitations. By performing this study we temporarily changed visiting policy from outside and beyond the window to presence of family beside patient in own unit. The aim of this study was to analyze the effect of open ICU visiting on nurses and family's beliefs about nursing care. A semi-experimental study was designed. Because of the opposition to changing visiting policy at wide level, sample was contained 14 employed nurses at intensive care unit from educational hospital in Tabriz which each completed one self-structured questionnaire. Questionnaire was developed by using likert scale with 28 questions about personal and social factors of nurses' beliefs about changing visiting policy from restricted to open by using the theory of reasoned action of Ajzen and Fishbein and its validity and reliability was calculated. Results showed that before changing in visiting policy nurses' beliefs was negative. Based on maximum score = 4 mean of scores was 76.71±6.31 and after open visiting was 79.64±5.94. Difference between scores distribution of nurses' beliefs before and after changing visiting policy was meaningful by using Wilkacson test (p = 0.038). Comparing nurses' beliefs score with individual factors, though was not meaningful statistically in general, but nurses' beliefs about the role of family presence in supporting patient, decreasing patients anxiety and hastening patient recovery, obtained higher score after open visiting (57.1, 85.7, 92.8). According to study findings, predominant factors in nurse's beliefs were social factors specially colleagues, supervisors roles, unit policies and managers.

**Key words:** ICU nurse's beliefs, open visiting, theory of reasoned action, nursing care

### INTRODUCTION

As family and family life is basic part of any individual's health and due to basic role and importance of family to patient, they should care as much as patient. These days care environment includes patient and family and holistic nursing care is care of family and patients (Lee and Yee 2003; Colleen *et al.*, 2004; Stayt, 2007; Marco *et al.*, 2006). But for a few reasons family participation in ICU is not possible and family keep away from patient. One of these reasons is admission in ICU which family members presence is being forbidden due to structure and philosophy of these units and visiting are seriously limited (Farrell *et al.*, 2005; Marco *et al.*, 2006).

At present, approximately these limitations are being applied at all educational hospitals in IRAN. The reasons of these limitations are based on the idea that family members are an added risk because of the possibility of infecting patients, of interrupting patients rest and of causing physiological changes such as tachycardia, arrhythmia, hypertension and anxiety in patients. Moreover, nurses justify this restriction, claiming that visiting interferes with nursing care and that the emotional involvement with relatives produced emotional stress and strain. However, visiting of patients is a humanistic aspect of our religion, Islam and is a duty with spiritual requital for Moslems and humanistic and kinship duty for patients family. Also, family visiting is nearly a daily occurrence in

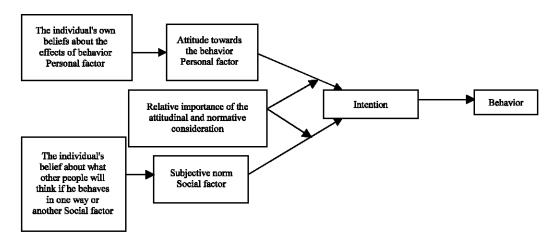


Fig. 1: Application of ajzen and fishbein reasoned action theory (Hogg and Vaughan, 2002)

ICU if people's beliefs influence their work; it can convert to main resource of problem and tension for nurses in carrying out the holistic care and high quality care for patient in ICU.

According to the Marco et al. (2006) 84% of nurses believed that family presence interrupt postpones some treatment and cares which is unpleasant or causes pain to the patient and they do not help much in carrying out basic care. Related literature show that unlike variety of present visiting policy, nurses take themselves responsible for controlling and managing of patients visiting. Finally, they change established visiting policies at unit and make them flexible or limited (Simon et al., 1997). Marco et al. (2006) present that behavior of nurses towards visiting is based on their beliefs about visiting effects and persons beliefs can effect their decisions and intention about doing special behavior. Some articles that published in late years, while rejecting negative and contrary effects of visiting, benefits of family present aside patients have been presented (Marco et al., 2006).

Due to these reasons, desire for removing visiting limitations at these units is increasing. In own country researches which show the effects of visiting policy on nurses and patients family beliefs at intensive care unit and our experiences about intensive cares reveal this facts that visiting limited policy is carrying out at these units seriously. The aim of current study is to evaluate these limitations by using reasoned action theory, which is a standardized approach to study belief and attitude (Hogg and Vaughan, 2002). Although, this theory has used by Kirchhoff *et al.* (1993) and Simpson *et al.* (1996) in order to understand nurses behaviors about visiting and this theory has used in a few researches related to other aspects of health care, but this theory

have not been used in an experimental study in order to evaluate the effect of one of belief factors in ICU, before.

According to Ajzen and Fishbein theory, the intention of person precedes behavior and is based on two elements, one social and the other personal factors. The personal factor is the positive or negative evaluation of the individual to behave in certain way, what is called, attitude toward behavior which in itself comes from the individual's beliefs about the effects of behavior, the social factor is individual's perception of the social pressure he feels on himself to behave in one way or another, this is known as the subjective norms which depends on the individual's belief about what other people will think if he behave in one way or another. Behavioural beliefs finally depend on the predominant factor and this is what will influence concrete behavior (Fig. 1).

In our ICU, visiting policy is more limited and is only beyond the window and at last half an hour each day and family members can not be aside patient even when the patient illness is so serious. At present time in order to making visiting flexible and reducing limitations, it was decided to evaluate the effect of changing hospital visiting policies as a social factor on nurses' beliefs. It was similar to Giuliani *et al.* (2000) study for making changes in visiting policy, Marco *et al.* (2006) study for increasing flexibility of visiting.

The aim of this study was defining difference in nurses and patient's family's belief after accomplishing open visiting in ICU.

## MATERIALS AND METHODS

This research was semi-experiential study that have accomplished at one 6-beds surgical ICU in SINA hospital (Iran-Tabriz).

**Sample:** The sample involved 14 employed ICU nurses in SINA-Tabriz hospital which all had bachelor's degree and 12 of them were women. All nurses participated in our study.

**Instrument:** The instrument used to elicit the effect of open visiting policy on nurses' beliefs about patients care in ICU was one questionnaire with some parts: In order to obtain information about nurses' beliefs on open-visiting, we developed one questionnaire containing 28 questions by likert scale, 23 of them were positive and 5 were negative and had 2 parts: first part contains 17 questions related to personal factors and second part had 11 questions about social factors based on Ajzen and Fishbein theory. This scale that provides possibility of 4 answers, 4 = completely agree, 3 = agree, 2 = disagree and 1 = completely disagree, at final calculating, negative question scores (No, 4,11,13,16,17) were reversed and the mean of total scale was calculated with sub scales. High score (maximum 4) showed that nurses' beliefs about open visiting were positive. For measuring reliability we used cronbach'Alpha for beliefs it was 77% (for personal factor sub scale = 76% and for social factors sub scale = 60%) other parts of data were about sociodemographic personal and professional data: age, material status, number of children, work experience and ICU experience, type of contract and 3 questions (10, 11, 12) were added to demographic questions because were assessed by yes or

Method of data collection: Researcher was responsible for sampling. All of nurses participated in study. During short individual visiting with nurses they were informed about the objectives of the study and their voluntary informed consent was asked for. Those nurses who accepted completed the questionnaire anonymously. In order reducing possible partiality, this process took 15 min and the participants were asked not to make any comment to colleagues until they completed the questionnaire.

Ethical considerations: Ethical approval was obtained from the ethics committee of the university. Each of the nurses was free to attend the meeting, complete the questionnaire and to leave the study at any time. Informed consent was considered implicit in those who handed in the completed questionnaire.

**Data analysis:** Questionnaire once before open visiting and next time at the end of the work month presented to nurses. In order to verifying internal consistency we used cronbach'Alpha coefficient. The calculations were done using statistical software Spss 15.0/win. The statistical

tests were considered significant if the critical level found was inferior to 5% (p<0.05).

#### RESULTS

Results showed that average age of nurses who participated in study was 29.64 years (29-39 years) 57.7% had 0-5 work experience and 78.6% had 0-5 years ICU experience. All of nurses participating in research had bachelor's degree, with maximum 78.6 conventional employment and 85.7 of them were women, 64% were married and all of them had children. According to the belief scale, mean score of nurses belief which was calculated on the basis of maximum score = 4 and minimum score = 1, before open visiting was 76.7±6.31 and after open visiting 79.64±5.94. Results related to every item show effect of open visiting on personal factors (Table 1) and social factors (Table 2) and total nurses belief.

About question regard having previous experience of being admitted in ICU (self or another ones of family members), 42.9% of nurses answered yes and 57.1% answered no and among nurses who had previous experience of being admitted in ICU, 16.7% had positive experience, 33.3% had negative experience and 50% of them had both of them. Also, results showed that before open visiting, 28.6% of nurses were agree with family presence at unit but it increased to 42.85% after open visiting. Before open visiting 71.4% of them were disagree with family presence but it decreased to 57.14% after open visiting. Regard to that, about visitors before open visiting 28.6% of nurses had positive experience and were disagreement with 71.4% with presence of family at unit, but after one month of open visiting, amount of disagreement decreased to 57.14 and 42.85% of nurses were agree with open visiting too. Also, results showed that there was no meaningful correlation between experience of being admitted (self or relatives) in ICU with nurse's belief, personal factors and social factors (P = 0.10, P = 0.95, P = 0.57). The correlation between nurse's beliefs with sociodemographic variables such as age, total working experience and ICU working experience were negative and meaningful (r = -0.55, P = 0.03, r = -0.66, P = 0.01, r = -0.56, P = 0.03) but with gender and status of marriage were not meaningful (r= 0.55 P= 0.26, r= 0.19, P = 0.69). Results showed that mean scores of nurses beliefs before changing visiting policy was 76.71±6.31 and after open visiting 79.64±5.94 that showed nurses beliefs increased after open visiting. Difference of score distribution of nurses before and after changing visiting policy was meaningful by using Wilkacson test (p = 0.038). Also, mean scores of social factors before and

Table 1: Personal factors of nurses' belief regard to caring before and after open visiting (n = 14)

	Before			After		
Personal factor of nurse's belief	Agree	Disagree	Mean±S.D	Agree	Disagree	Mean±S.D
Family support patient emotionally	13(92.9)	1(7.1)	3.14±0.53	13(92.9)	1(7.1)	3.14±0.53
Family decrease patient perception of paint	11(78.6)	3(21.4)	$2.78\pm0.42$	10(71.4)	4(28.6)	$2.85\pm0.66$
Physical Changes in patient due to family presence	9(64.3)	5(35.7)	$2.64\pm0.63$	11(78.6)	3(21.4)	$2.92\pm0.61$
Open visiting increase family satisfaction	10(71.4)	4(28.6)	$2.14\pm0.66$	12(85.7)	2(14.3)	$2.28\pm0.46$
Open visiting hinder patient rest	11(78.6)	3(21.4)	$2.58\pm0.53$	10(71.4)	4(28.6)	$3.14\pm0.66$
Family decrease patient anxiety	12(85.7)	2(14.3)	$2.58\pm0.36$	12(85.7)	2(14.3)	$3.07\pm0.61$
Obtaining more information about patient by family	12(85.7)	2(14.3)	$2.92\pm0.47$	12(85.7)	2(14.3)	$2.92\pm0.47$
Emotional support of family by nurse	13(92.9)	1(7.1)	$3\pm0.92$	13(92.9)	1(7.1)	$3\pm0.39$
Family assurance of patient care	13(92.9)	1(7.1)	$3\pm0.39$	12(85.7)	2(14.3)	$2.85\pm0.36$
Interrupting nursing care by family	12(85.7)	2(14.3)	$1.92 \pm 0.61$	7(50.0)	7(50.0)	$2.35\pm0.74$
Obtaining more information about patient by nurse	12(85.7)	2(14.3)	$3.14\pm0.66$	13(92.9)	1(7.1)	$3\pm0.39$
Family increase nurse's burden	10(71.4)	4(28.6)	$2.07\pm0.99$	7(50.0)	7(50.0)	$2.35\pm0.74$
Family hasten patient recovery	6(42.8)	8(57.2)	$2.28\pm0.72$	8(57.2)	6(42.8)	2.57±0.51
Family help nurse in basic cares	7(50.0)	7(50.0)	$2.42\pm0.75$	7(50.0)	7(50.0)	2.57±0.64
Spending more time for giving information to family	9(64.3)	5(35.7)	$2.28\pm0.82$	7(50.0)	7(50.0)	$2.42\pm0.85$
With open visiting nurses cannot behave normally	11(78.6)	3(21.4)	$2\pm0.67$	8(57.2)	6(42.8)	$2.35\pm0.84$
Increasing nurse's sense of professional satisfaction	4(28.6)	10(71.4)	$2\pm0.78$	7(50.0)	7(50.0)	2.42±0.64

Table 2: Social factors of nurses' belief regard to caring before and after open visiting (n = 14)

	Before			After		
Social factors of nurse's belief	Agree	Disagree	Mean±S.D	Agree	Disagree	Mean±S.D
The value managers give to nurses work	12(85.7)	2(14.3)	$3.42\pm0.93$	12(85.7)	2(14.3)	$3.28\pm0.72$
Importance of colleagues opinion about family visiting	12(85.7)	2(14.3)	$2.78\pm0.69$	13(92.9)	1(7.1)	$3.07\pm0.47$
Importance of head nurse opinion about family visiting	8(57.2)	6(42.8)	$2.64\pm0.63$	13(92.9)	1(7.1)	$3\pm0.67$
Importance of physician opinion about family visiting	13(92.9)	1(7.1)	$3.14\pm0.53$	11(78.6)	3(21.4)	$2.92\pm0.61$
Importance of supervisor opinion about family visiting	13(78.6)	3(21.4)	$2.92\pm0.61$	13(92.9)	1(7.1)	$3\pm0.39$
Importance of family opinion about visiting	6(42.8)	8(57.2)	2.42±0.51	13(92.9)	1(7.1)	2.927±0.26
Effect of patient illness status on family visiting	14(100)	0.00	$3.42\pm0.51$	13(92.9)	1(7.1)	$3.42\pm0.64$
Effect of unit policies and regulations on family visiting	14(100)	0.00	$3.54\pm0.51$	13(92.9)	1(7.1)	$3.14\pm0.53$
Nurses' opinion about family visiting	9(64.3)	5(35.7)	$2.64\pm0.74$	6(42.8)	8(57.2)	2.42±0.39
Necessity of giving value to others opinion	13(92.9)	1(7.1)	$3\pm0.67$	12(85.7)	2(14.3)	$2.92\pm0.47$
Effect of society attitude on nurses about caring	11(78.6)	3(21.4)	3.21±0.97	12(85.7)	2(14.3)	3.21±0.89

after open visiting were  $21.57\pm3.67$  and  $21.64\pm2.40$ , respectively which meaningful difference was not observed before and after open visiting (p = 0.90). Mean scores of personal factors before and after open visiting were  $43\pm4.32$  and  $46.28\pm5.46$ , respectively and there was meaningful difference between score distribution before and after open visiting (p = 0.02).

#### DISCUSSION

Results showed that after and before open visiting nurse's beliefs about family presence were different and number of nurses who agree with family presence had increased and it showed this fact that nurses have positive feeling about family visiting in ICU. Most of the nurses had positive and negative experience in confront with visitors which negative experience resulted from family anxiety due to being admitted of loved one in ICU and being so busy with caring of very ill patient by nurses that influence their relation quality.

Most of nurses before and after open visiting believed that family presence aside patient can support patient emotionally and reduce patient anxiety. Also, nurses were agree with effect of family present in reducing patient understanding of pain, but after open visiting amount of agreement with this effect was lower that can be resulted from presence of anxious family that sometimes were weeping beside patient who did not adopted whit patient illness and were not able to support patient well (Stayt, 2007). Most of the nurses specially after open visiting believed that family presence were as a factor that caused physiological changes in patients(hypertension, tachycardia...). Meanwhile nurses with high frequency after open visiting believed that family presence aside patient help their recovery. The result of similar study which accomplished by Simpson et al. (1996) and Marco et al. (2006) showed that nurses believed that the family gives emotional support to the patient and increases the patient desire to live. However nurses who think that visiting sometimes changes in homodynamic parameters believed that it return to normal after 10 min.

Most of the nurses before and after open visiting believed that during visiting, family can be supported emotionally by nurses and obtain more information about patient from nurses. Most of the nurses with high frequency after open visiting believed that family presence aside patient increase family satisfaction. Most of the nurses before and after open visiting thought that open visiting help family to be assured from good patient care by nurses though after open visiting the number of nurses with such belief decreased. This finding can be resulted from this fact that the period of time that family were beside patient was short and nurses tried to live patient alone with family so they had less time for informing family about nursing cares that had done for patient. The results of similar studies show that during giving information to family, nurses develop both nurse-patient and nurse-family relationship. This has the potential to enhance families' trust and confidence in the care the patient is receiving, thus helping to meet their needs for reassurance and foster their adaptation to the crisis they are facing (Coulter, 1989; Stayt, 2007).

Although, most of the nurses before open visiting believed that family interrupt nursing care, but after open visiting the number of them had decreased. Finding showed that about half of nurses before and after open visiting believed that family can help them in the basic care the patient is receiving. On the contrary the result of Marco et al. (2006) and Chesla (1997) studies showed that family interrupts or postpones nursing cares and they don't help much in carrying out basic care. But Henneman et al. (1989) show that most of the nurses believed that the presence of family dose not interfere with nursing care. Hopping (1992) presented by his study that though open visiting dose not interrupt nursing care but imposes extra stress to patient.

Results of similar studies about the effect of opening visiting in ICU show that this type of visiting is beneficial for family and increasing their satisfaction and decreasing their anxiety level and help them to obtain more and true information about their patient (Henneman *et al.*, 1989; Simpson *et al.*, 1996; Marco *et al.*, 2006).

Meanwhile, results revealed that most of nurses before and after open visiting and with high percent after opening visiting believed that they obtain more information about patient from family during visiting that help them in better patient care which the results of similar show that by gaining valuable information about patient by nurses: his habits, reactions and ... that help them in planning and presenting better care (Kirchhoff *et al.*, 1993; Simpson *et al.*, 1996; Stayt, 2007; Marco *et al.*, 2006).

Most of nurses before opening visiting believed that family presence implies a greater physical and psychological burden for nurse during visiting, nurse spends much time to give information to family so less time is spend with the patient, but after opening visiting the number of nurses with that belief decreased, also most of them before opening visiting believed that during open visiting they can't take better care to patient, but after open visiting the number them had significantly decreased.

Results revealed that most of the nurses before open visiting believed that family presence doesn't have any effect on their job satisfaction that was similar to the results of studies that have done by Stayt (2007) in which revealed that nurses believed that they feel discomfort at the presence of family and aren't able to care better. But after open visiting, most of the nurses were agree with the effect of open visiting in increasing their job satisfaction and it reveals that some of the nurses' beliefs are transmitted to them under the effect of other colleagues and work environment, so in exact confrontation with visitors and applying flexible policy, their evaluation become different. As the other studies results showed, that, although nurses believed that open visiting implies a greater physical and psychological burden, but they add that it is worthwhile, because it creates an atmosphere which is beneficial to the convalescence of the patient. Additionally, most of the nurses believed that this kind of family visiting produces more valuable information about the patient, which help them to plan care better so it increase their satisfaction (Kirchhoff et al., 1993; Simpson et al., 1996; Marco et al., 2006).

The results which obtained from analyzing nurse's perceptions of social pressure which was understood in form of changing policy form limited to open visiting in order to act in other way, showed that the patient illness status is more effective factor in applying opening visiting policy by nurses, because of patient illness and necessity of carrying out some emergency procedures for reliving patient, during this time nurses prevent family from entering to the unit. But when patient illness is so serious and after performing necessary cares, due to fear of patient death, most of the nurses permit their family to visit them and bid farewell with their loved one which help them to be calm. The results of Fridh et al. (2007) study about the family presence at the time of a patient's death in an ICU showed that nurses agree with death time cares and they ask for providing more facilities for family proximity and try to provide private environment for family to bid farewell with their patient tranquility.

The results showed that visiting policies in ICU have main role in nurses' belief about family presence and because of that nurses followed regulations in ICU and hospital during work timetable, so high flexibility in visiting policies can help the nurses to reduce tensions and carrying out high quality cares.

Also, nurses valued their colleagues and supervisors opinion than head nurse about family presence and give value to doctor opinion after head nurse that it is due to less presence of doctors at unit and because most of the nurses shift type was different in this research and they interacted with supervisor in different shifts, so the effect of this factor on nurses' belief was evaluated more than other social factors at this study.

Furthermore, due to permanent interaction of nurses with each other that one of the nurses patient may have more serious illness and needs more care or performing special procedures at private environment so other nurse need his/her and other colleagues permission for family presence and it is possible to prevent from family presence until the patient status become stable. Also, negative belief or experience of one nurse can influence other nurses' belief. Therefore, colleagues are one of social factors that can influence nurse's behavior about visiting. It is noticeable that the role of this factor on nurse's belief is less than other social factors. Brykczynski (2006) and Coyer et al. (2007) studies which had focused on family- focused intensive nursing care showed that nurse' attitude and belief to family of ICU patients are influenced by the hierarchy of the ICU, the departmental philosophy and policies and by other colleagues. Senior clinicians have considerable influence on the developing attitudes and beliefs of junior nurses.

Most of the nurses before open visiting did not value family opinions about visiting and they were disagree with them, but after open visiting 92.9% of them valued their opinions and were agree with them. It shows that during open visiting among interacting with family and observing the effect of open visiting on family and patients their belief changed. Brykczynski (2006) suggests that establishing a partnership in care with family of the critically ill patient is also influenced by nurses 'understanding of family needs. The literature has repeatedly demonstrated that families need timely and factual information about the patient, that families need to be able to see and have access to the patient in ICU that families need assurance, support and comfort that should be assessed and met. Despite overwhelming research evidence, nurses still tend to focus care on the patient and undertake only a limited assessment of family needs so they limit family visiting.

Most of the nurses after open visiting believed that the value managers give to nurses and peoples attitude about them are the most effective factors which can influence nursing care that are similar to Ghiyasvandian *et al.* (2008) study. Findings showed that nurses valued their own opinion about visiting less than others, this is due to being influenced by others beliefs.

Also, working as a group and cooperation among nurses they have to consider others opinions in nursing care.

### CONCLUSION AND LIMITATIONS

Most of the studies that have based on the theory of reasoned action of Ajzen and Fishbein focused on social factor as a predictor of behavior less than personal factors and gave less part to it in changing beliefs. But in our study we focused on social factors and observed that these factors have important role in changing people beliefs. So by interfering and changing in some of them, we can change people belief and behavior. These results are similar to Swanson and Power (2005) study which evaluates the role of social factor in mothers' desire for breastfeeding. He showed that by changing these factors that mothers are under their beliefs effects (such as husband, friends, nurses...) can change mothers' belief.

Although, there was no statically difference in score of social factors before and after open visiting, but among social factors the role of colleagues and supervisor in changing nurses' belief was more important than others. Also, visiting policies were effective factor to nurses' belief and their behavior about visiting. So, by changing visiting policies and establishing new rules can make it more flexible.

Also, result showed that nurses who had child and were working in different shifts obtained high belief's score.

Due to more limitation in visiting policies in intensive care units in our country, we could accomplish this study in one unit. We hope that the results of this study could attract the managers and nurses' attention in these units in order to changing or raising current visiting limitations and accomplishing this study in more units.

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