



## Experiences of open heart surgery patients from admission to discharge: a qualitative study

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### ABSTRACT

**Aims:** open heart surgery is a stressful experience for the patients and their family. Patients from admission time to discharge experience different levels of anxiety and in order to cope with that they use some strategies. This study had been done with the aim of identification of the experiences of open heart surgery patients from admission to discharge.

**Methods:** Samples had been chosen purposefully from 8 women and 10 men who were under open heart surgery in three centers of educational hospitals of Tehran in 2012. Data were collected through unstructured interviews. With qualitative approach of analyzing the content of Graneheim & Lundman 2004 had been analyzed.

**Results:** From analyzing data three themes including Stuck at the crossroads of death threats, seeking a way to stay and forced to compromise with the situation had been emerged. Themes and subthemes indicate anxieties and strategies of the patients in hospital environment.

**Conclusions:** Facing several stressful factors during care period and not meeting physical, psychological and educational needs lead to feeling fear and threatened in the patients. Patients' attempt in these adverse care conditions is self-protection with using different strategies. So real identification of patients' needs and anxieties is very important in clinical nurses' care planning.

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### 1. Introduction

Cardiovascular disease is the most common reason of death among men and women, according to the last report of WHO (2011) annually in Iran 45 percent of all the deaths is dedicated to this disease [1]. Open heart surgery

is the common treatment intervention of this disease and thousands of patients are under this surgery annually from all over the world [2]. Also in Iran there are many patients under heart surgery daily. Although open heart surgery is a successful technical intervention in heart care and treatment, presence and hospitalization is a stressful and life threatening experience along with fear and anxiety to many patients and their families [3]. Patients in this hard period, from

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the time of diagnosing the disease, need to surgery and taking decision about doing it and how to take care after surgery are facing with several physical, mental and social stressful factors and bear many different anxieties [2-4]. In fact perception and acceptance of surgery as the last treatment solution for many patients is like a shock and bitter incident that impresses all the aspects of their life and emotions and faces them with lots of challenges [3, 4], fear of death, intolerance of the surgery complications cause that patients refuse to accept surgery, but finally in order to get rid of the physical problems such as; severe heart pain, shortness of breath and ... they accept it [5]. However many patients with being hospitalized in unfamiliar hospital environment and in facing surgery room equipment and ICU are afraid [6]. What is clear is that being in an adverse care environment causes that the patients bear stresses and anxieties because of the surgery complications and (arrhythmias, graph infection and ...), physical power reduction, lack of playing the previous roles and responsibilities in the family or in the society and they are in conflict with the negative emotions due to these factors [3, 4, 6]. Beside these factors what makes vulnerability conditions double for the patients is achieving adverse and inappropriate care towards their needs [7]. Actually patients with achieving and observing severe technical care and being dependent on Ventilator, being in turbulent care environment and being encountered with busy nurses who are involved with daily tasks, lack of easy access to them, cold and indifferent behavior of the nurses to the request, patients have the feeling of little attention, insecurity and fear and consider it as a threaten for their integrity [7-9]. It should be considered those patients' expectations of care attention and supports of the nurses are different and the way of presenting them is based on the level of everybody's perception [4]. So identification of these needs by the nurses is necessary for making trust and communication, and then the patients explain their anxieties with peace of mind [10]. With

accepting this fact that prevalence of heart disease and consequently surgery is continuously increasing, many professionals put their attention on that [8]. Also in Iran most of the studies with qualitative and quantitative approach about this issue measured care needs according to pre-defined criteria [11]. Also in qualitative approach without professional look at heart surgery patients' experiences, there has been worked on the quality of care process [12]. Since nurses of open heart surgery in special clinical environments take care of the patients in different situations, so apart from specific condition of every patient, it seems to be necessary to do qualitative research in our country tissue in order to understand real experiences and emotions of the patients in clinical ground and promoting nursing quality. This study had been done with the aim of discovering experiences of open heart surgery patients who are hospitalized from admission to discharge.

## 2. Methods

Data of the study with the approach of qualitative content analysis were analyzed. Research environment was open heart surgery units in three educational hospitals of Tehran in 2012. Criteria for participating in the study included patients who were candidate for heart surgery or those who had done surgery and were hospitalized, they were conscious and they could speak Persian and liked to explain their experiences to the researcher. In order to achieve rich experiences of the participants, sampling had been done purposefully. Data collection method was unstructured interview. All the interviews with the patients had been done next to their beds. Before starting interview there were some explanations about the aim of the study, confidentiality of the information and record of the interview. Then the questionnaire had been started with an open question such as; "please explain before or after the surgery, stressful time or situation that you've passed for me? "And "what did you do to relieving that?" from the participants. And

with follow-up questions, according to the answers and information that the participants provided, some questions during the interview had been asked in order to clarify the content of the subject of the study such as; “please explain more about this issue?” “What do you mean? Please explain your mean with a subjective example clearly in order to understand you better?” Analysis of the data from every interview was a guide for the next interview. In this way sampling had been continued to data saturation. Interviews had been ended with 18 participants. Time duration of the interview was variable between 30 to 120 minutes. Data analysis process had been done according to the processes of Graneheim & Lundman (2004): interviews had been listened carefully, then patients’ voice had been transcribed and typed word by word; all the interviews had been coded as the analysis unit, words, sentences and paragraphs of the interview texts had been considered as the semantic units, then semantic units that were related to each other from main content approach had been put next to each other and they have been named with a label as code, review of all the text had been done after coding, comparing the codes in terms of similarities and differences, and their classification had been done under classes and subclasses with more abstract label. Exact and deep thinking on the primary classes, researchers’ agreement on classification of the codes, classes and subclasses, compare of the classes with each other that at the end hidden content of the classes had been studied in the form of theme [13] (table 1).

Also in order to credibility of prolonged engagement of the researcher with the research subject and data, control by the participants themselves (member check) (some parts of the interview along with primary codes had been observed by the participants, rates of the congruence of heterogeneity ideas of the researcher about the data had been compared with the participants’ idea) data triangulation had been done in the form of the interview with the patients in different times (in three shifts of

morning, evening and night in determining that whether there is any similar findings or not?) and for transferability, maximum variation sampling technique had been used, it means choosing the participants in terms of gender, age, marital status, education, hospitalization time before and after the surgery, type of heart surgery, and job (table 2).

Also confirmability had been measured by external check control of foreign observers who were familiar with quality research, it means that some parts related to the interview along with related codes and emerged classes had been assessed and confirmed by two observers who were familiar with quality research. For dependability, researcher documented and reported stages and process of the research exactly in order to provide the possibility of follow up study. For transferability, it had been tried to provide the quote of the participants in the same form. Taking the permission to enter the clinical arena from ethics committee of Tarbiat Modarres University and officials of the related hospitals had been done before collecting data and after proposal approve in research council of Medical Sciences College. Code of ethics in research such as; informed consent, keep anonymous, secrecy and participants’ option for leaving the study had been observed.

### 3. Results

From data analysis 9 classes and 3 themes with titles of “stuck at the crossroads of death threats”, “seeking a way to stay”, “forced to compromise the position” that were achieved from the patients’ experience and their perception dimensions from admission to discharge.

#### 1.1. Stuck at the crossroads of death threats

Hospitalization for heart surgery impresses all the dimensions of patients and their family’s life and emotions. They bear stressful moments. Anxiety about the perception of the disease danger and its consequences, sense of indifferent and little attention, and anxiety of the patients about his/her condition in the future

are the features of this theme. Participants' experiences showed that; physical problems before surgery, fear and stresses related to surgery and emergence of its complications lead to the perception of the disease danger and its consequences. Accepting surgery as the last treatment choice along with stress and fears related to surgery is a threaten for all the patients and cause fear, anxiety or lead to disability of the person in self-protection. Sometimes this fear and anxiety such as; fear of death, fear of surgery room equipment and... were to the extent that at first patients refused surgery but finally they accepted that in order to relieve form the physical severe pain (heart severe pain, shortness of breath, activity disorders,...) that is along with comfort. "In fact I was afraid of not be able to live" (patient 5 man).

"It took my breath away, when I was walking, there was severe pain around my heart, I had cold sweat, I thought it is better to have surgery (patient 13, woman)". Also passing a period of hospitalization time in Intubation condition, connection of the pipes and drains and its special limitations, and emergence of surgery complications such as; bleeding from the drain and graft patency were experiences along with fear and anxiety for all the patients.

"When my intelligence came, I couldn't talk, I thought that I became dumb, I was really afraid (patient 6 woman)"

"My foot had a hard bleeding, it was hardly open, in a way that four fingers could go into it

(location of foot graft) I was very afraid (patient 10 man)"

Attempting of treatment team to further surgery a long with the patients with no justification about the reasons of its happening was a very stressful factor in all the patients. "I had stress for the second time, I was frightened (patient 18 man)."

Sense of indifferent and little attention is the next feature of this theme that had been formed itself from sense of indifferent to psychological and physical needs, lack of easy access to nurse, nurse's negligence in patient's awareness and education. All the patients' expectation is nurse's attention to their care needs. Providing a hasty care and without previous justification, amnesia, delay and lack of rapid and on time presence and of the nurse were stressful factors for the patients.

"They do their works very fast; there is no explanation, no talking, a person gets worried, he/she does not know what is going to happen to him/her (patient 11 man)".

This delay specially in providing medicine at the time of chest pain when the entourages were absent made the patients very worried and caused them to feel little attention and consequently fear.

" I said three times through the iPhone to the nurse that my heart hurts, she said I will come but she didn't come, however it is heart, is she supposed to come or not? (Patient 16 man)"

Table 1: An example of analysis process

story	codes	levels	theme
" If you do not go and come here they do not bandage you, if you do not call that I feel pain they do not ask how are you" (patient 1)	-sense of little attention to the patient's request Answering to the question	Sense of indifference and little attention	Stuck at the crossroads of death threats
"I' worried for the house, my children need an attendant, I don't know whether I can work like before or not?!" (patient 14)	-patient's concern due to lack of taking care of the family -patient's concern about lack of returning to the last work	Patient's fear of his condition in the future	

Table 2: demographic features of the participants

gender	Male (10), Female (8)
age	36-70 years old
Marital status	Married (10), Widow (4), Divorced (2), Single (2)
Education level	Illiterate (6), primary (8), high school (3), university (1)
Hospitalization duration	10-45 days
Type of surgery	Coronary artery bypass (9), mitral valve replacement (6), Aortic valve replacement (3)
occupation	Retired (2 women and 3 men), housewife (6 women), self-employment (5 men), employee (2 men)

Little attention to spiritual needs of the patients for their expressed concerns evoked emotional feelings such as; disappointment, depression and anxiety in the patients.

“it’s three days that I’m here, I couldn’t talk to them (nurses) tell them my concerns, they do not ask us what do you want, what do you need (patient 12 woman)”

Also all the patients explained presence of the nurse and easy access to them as the cause of their assurance, sense of security and protection in them and in the case of lack of presence and irregular monitoring they felt fear and danger.

“You are here in the room, the door of the room is closed, the nurse is sitting on his/her chair and she/he doesn’t come to see what’s going on, you know a person is frightened (patient 2 man)”

Lack of clear answer to the questions, providing information only when the patient asks, delegate the task of answering to the doctor, lack of providing information about the exact time of surgery, lack of explanation about the necessity of doing care and treatment measures and the results of the surgery, lack of education about the way of self-care and etc. indicate nurse’s failure in patient’s awareness and education. It caused patient’s complaint and bewilderment and made stress and anxiety.

“They give you one blade and they do not explain what you are supposed to do?! (Patient man 3)”

“I was behind surgery room for three days, it was cancelled all the time and they don’t explain why it has been cancelled (patient man 1).”

Patients’ anxiety about his/her unclear condition in the future is another stress for all the patients. Lack of previous roles and responsibilities in the family or society induced severe fear and anxiety in the patients.

“I’m worried for the house, for my children, my husband is an old man, my daughter is a child, she wants an attendant (patient 8 woman).”

Most of the patients with disease and essential need to surgery were worried for the costs supply. Failure to return to the previous work and finding a job which is appropriate for his/her physical condition especially for men who have an important role in family finance were severely disturbing factors.

“Responsibility for household expenses is with me, if I can’t work I don’t know what happens, these thoughts are in my mind (patient 14 man)”

Lack of ability to pay cost of surgery and hospital for discharge and lack of financial support (insurance services, and ...) resonated this situation. “It is ten days that I’m here, I’m discharged, and I have no money (patient 7 man)”

## 1.2. Seeking a way to stay

This theme indicates the possible search and struggle to get free from fears and stay for continuing life that is formed from help of the family and patients’ assistance, self-help and adherence to spirituality. Patients with being in an unfamiliar environment deprived from choosing care requests because of adverse economic and management effects on the health system, lack of enough sources such as shortage of nurses for providing patients’ expected professional standard care services, weak

conditions of care in the form of little attention and negligence in providing care, nurse-patient's ineffective communication in physical, mental and educational needs felt vulnerability and finally were frightened and threatened. They were worried and they needed to be aware of their situation, to resolve ambiguities and to be aware how to take care of themselves but encountering with nurses' negligence found themselves in the condition of being unable to adequately protect, so they searched and achieved physical, mental or informational support from the most available sources around them such as family or other similar patients. "I took the information of the surgery from one of my families who had had the same surgery (patient 17 woman)".

Presence of the family especially spouse was a very strong supportive tool in supplying patients' physical and emotional needs against anxieties and shortcomings of care.

"My wife was in all the stages with me, she gave me spirit and she took care of me (patient 11 man)"

Patients' assistance was formed in the absence of nurse and in the case of lack of emotional closeness with a nurse or because of lack of family's adequate support. Patients used similar patients' presence and fellowship for resolving physical, mental and informational needs.

"I said my concerns to my roommate easily, I was relieved, every information that I wanted I took from him/ her but I was not comfortable with nurses to say to them (patient 16 man)"

Some patients in inappropriate care conditions decided to take care of themselves and they showed less attention to complain about their environment. Also they started their earlier activities and empower themselves immediately after that they achieved relative improvement.

"When I came to the unit I stood up and I said I have to walk myself (patient 3 man)."

Sometimes the patients for achieving care used perseverance, persistence, or violence and anger in order to resolve care need.

"I go and come a lot to make them frustrated so they give me what I want (patient 9 woman)"

Surgery was the factor of fear for most of the patients, resorting to religious beliefs and trust in God cause their soothing and healing for all the patients. "I trusted in God, I said whatever God wants happens (patient 15 woman)".

### 3.3 forced compromise to the position

Patient's avoidance of explaining his /her request and patient's perception of nurse's work hard are two features of this theme. Some patients for decreasing adverse effect of little attention, shortages and nurses' non-caring behaviors tried to accept the present care conditions. They did it with avoiding request or lowering their expectations from care services system. Inappropriate care space made such an insecure environment for the patients that they felt any complain or criticism causes deterioration of the present care attendance status by the nurses. So they endured inappropriate care conditions with internalizing problems and discomforts and they avoided requests to the possible extent. "I was afraid to say, and they do not continue attending me to this extent that they are doing now, they grouch with me (patient 3 man)".

Providing care with anger indicates nurse's misuse of his/her power and situation for the patients. Patients ignored their request against nurses' bad behavior. "Nurses always talk to you badly so that you do not have lots of request from then (patient 20 man)".

This behavior of a nurse did not only lead to lack of trust of the patient but also it caused patient's isolation and turns them to provide their need through any source except the nurse. "If I had a question I didn't ask the nurse, I went to another unit in which one of my relatives is in that and I asked him/her, the nurse does not know (patient 12 woman)".

Incuriosity and lack of accountability of the nurse induced nurse's little attention to patients' needs.

"Everything that I say to them they (nurses) don't speak, they don't answer, they just do their works, give the medicine and bandage (patient 4 woman)".

But in contrary some patients who found the nurses busy with their works and they could not access to their requests in care conditions, tried to accept the present conditions despite their heart desire and with lowering their expectations avoid explaining their request to the nurse. "We have no expectation, everything is like this, it is not possible to have more expectations, they are two nurses with lots of work (patient 1 man)".

Some patients think that tiredness, impatience and lack of accountability, indifference and little attention of the nurse is due to their stressful and hard work and sympathize them emotionally and lower their expectations. Actually avoidance of explaining request with observing nurse's work pressure is a method that some patients use for protecting themselves. "I saw that a nurse's spirit is exhausted through his/ her behaviors and tiredness... because of this I didn't request (patient 9 woman)".

#### 4. Discussion

Findings of this study contain concepts that in relation with each other show heart surgery patients' concerns and used strategies in coping with that and in protecting himself/herself in hospital environment.

Analysis of participants' experiences showed that: patients from the time of disease diagnosis to surgery and discharge according to being located in different care position (hospitalized in heart surgery unit, transfer to operating room and cardiac ICU) experience anxiety, stress and lots of concerns with different subjects, fear of death, fear of anesthesia and ... stressful experiences related to surgery. In confirm with these findings, Mooney et.al (2007) reported that; patients at the time of expecting heart surgery were severely afraid of risk of death due to heart surgery and lack of surgical pain tolerance [5]. In the present study for all the hospitalized patients in ICU, lack of ability to talk and explaining emotions because of intubation, activity limitation and being dependent to others because of their hands

closed, connected pipes and drains was an experience along with concern.

Also Merilainen et.al. (2013) in confirm with this report found that; patients' anxiety in ICU included: lack of ability to talk, pain, thirst, sleep problems and immobility [14]. In the present study analysis of body dementia and fear of how to take care and improvement or forced to accept surgery again because of surgery problems and complications evoked anxiety and stress with greater intensity in patients. While in study of Shih et.al (1998) patients under heart surgery in spite of wound appearance, surgery complications and recovery process also were worried about the negative effect of scar appearance on their marital relations [8]. It seems that concern about change in phantasm of body is as important as other concerns for the patients. Expectation of all the patients of the present study was nurse's attention to their mental and physical needs. Any time that the patients did not meet this care need, they felt fear and threatened. Also study of Williams and Irurita (2001) showed that; when the patients were ignored by nurses and their requests were not listened, they had vulnerability and threaten feeling in their entirety [7]. Also in the present study every delay and lack of rapid and in time presence of the nurse for doing required care works of the patient such as; lack of providing medicine at the time of chest pain especially in the absence of the entourage caused sense of little attention and consequently sense of fear and danger in the patients. In confirm with this finding Holroyd et.al (1998) also reported that: delay in giving the medicine makes Chinese patients severely worried [15]. It seems that eastern patients consider the role of getting the medicine on time very important in their improvement.

All the patients of the present study requested achieving necessary information and education about surgery and disease situation, type of the food and how to use the food and the medicine, treatment and care proceedings and how to take care of themselves and in the case of not

meeting these needs they felt fear and danger. Atree (2001) reported that: "shortage of information lead to increase of patients' concern" [16]. While in the study of Mooney et.al (2007) half of the participants refused to achieve information about heart surgery, because with information seeking and awareness increase their fear increases [5]. It seems that achieving unsatisfactory answers related to health was the cause of their fear and refuse, because people's reaction to achieving information is different so meeting care needs should be according to the people's request. All the patients who participated in the present study considered presence of nurse and easy access to him/her as the cause of their assurance, sense of security and peace of mind and in the case of lack of presence or irregular monitoring of the nurse they had sense of insecurity. Molazem et.al (2010) reported: general surgery patients had sense of security with the presence of nurse and they had sense of danger with the lack of presence of nurse [17]. Actually nurse's visiting is especially important for the patients and physical presence of the nurse makes peace of mind for the patients more than his/her only attention. Patients of the present study were worried about the possibility of not having the last role and responsibility in the family and society. Lack of returning to the last work and lack of supplying of the family from the financial point of view were the concerns of all the male patients, they were really afraid of their unclear condition in the future. Shih et.al (1998) also writes that: male patients are worried about change in their life situation and work conditions after their surgery [8]. Most of the patients of the present study in the absence of the nurse for meeting their primary care needs and protecting themselves used family, friends, and other patients' entourages 'support or even they took help from the patients who had better physical condition and they decreased the tension due to their self-care deficits, these social communications of the patients had been increased at the time of nurse's absence for

meeting primary needs [18]. While in the study of Ivarsson et.al. (2004) to not explain the concerns to the family and relatives or children causes the patients do not achieve their adequate support [3]. It seems that social networks like family, friends, relatives and even other hospitalized patients do not supply support for all the patients but it depends on the patients' reaction to this subject.

Also patients like to explain concern about heart surgery and their disease status but when they found the nurse busy and he/she was not in access, they tried to get emotional support from family, close friends and similar patients. Wives were strong emotional supports for many of the male patients in the present study. Also in the study of Koivula et.al (2002) spouses were the most important emotional support source before surgery [4]. While Schou and Egerod (2008) reported: some patients consider presence of the family as the cause of distress and deterioration of the care situation and they do not like to achieve any support from them [19]. Contradiction in these findings indicate difference in people's reaction towards concern tools and choosing patients' protection strategy, usually patients' chosen strategy is a method in which they are comfort. In this study some patients with more appropriate improvement conditions started self-care and some others for attracting care used anger or persistence method in order to get answer for their request. Also in the study of Frank et.al (2009) patients in emergency unit used perseverance and persistence strategy or negative protest and criticism in order to achieve clinical tests and medical information from the nurse [10]. Actually patient's behavior is for meeting needs in protecting himself from the available care bed. Although patients of this study with not meeting care needs had sense of little attention and fear and they used strategies like getting help from the entourage and other patients, these strategies could not give to their suffering heart security and peace, restoring to religious beliefs and trust in God cause patients' mental peace and make it easier to bear the conditions.



Tatsumura (2003) writes: personal faith, pray, talking to spiritual advisors and presence in holy places are complementary therapies for cancer patients and support due to these sources is useful for life quality improvement and decreasing disease symptoms and its recurrence [20]. Also some patients used accepting care conditions strategy for protecting themselves against tensions and concerns. Avoidance of request was a decision that the patients took against fear of lack of nurse's attention or against nurse's indifference and unkind behavior. Calman (2006) writes: patients with observing specialized technical competence of nurse, achieve a general picture of care and judge nurse's performance, choosing or refusing care depends on the patient's trust to nurse's care behavior [21]. It seems that formation of some patient's trust is with nurse's care behavior reflection, and attracting patient's trust is very useful in explaining tension and concerns. In the present study some patients tried to internalize their concerns and they did not explain them to the nurse or even their relatives. Also in the study of Karlsson et.al (2005) patients did not explain their concerns to the family. They considered heart surgery as a suffering experience that should maintain it alone [6]. In contrary some patients of the present study sympathized with the nurse and perceived nurse's hard work, so that they lowered their expectations of achieved cares quality and tried to accept the conditions. Also in the study of Schou and Egerod (2008) patients with limiting achieved care tried to forget nurse's care deficits to perceive their work conditions [19]. It seems that patients for compliance with conditions and achieving a balance try to decrease their tensions with decreasing the requests.

## 5. Conclusions

This study shows patients' experiences from hospitalization to discharge and the way of achieving intensive cares of heart surgery. Identification of these experiences indicates this point that hospitalization in the hospital is not

always equal with effective meeting of treatment and care needs. Patients experience lots of tensions related to hospital policies and regulations and organizational priorities. When treatment system performs in a way that do not answer to the patient's need coherently, this sense of little attention causes more increase and complexity of the patients' concerns and makes sense of fear and threaten in them. In such a non-care environment, patients try to protect themselves with using strategies in order to be able to cross from this dangerous passageway safely. So identification of concerns and used strategies by the patients is the most necessary step in improving nursing care quality at any care situation. Since care and promoting its quality in any care situation is different with other situations, so identification and transparency of the expectations and real emotions of the patients for the nurses, like a key for improving life quality is vital. Also bedside nurse managers can use these findings about heart surgery for improving care quality and nurses' professional performance.

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