



# The Status and Expectations of the Relatives of Surgery Patients in the Waiting Area of Guilan Academic Hospitals

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## Abstract

**Background:** The situation of the relatives of surgery patients in waiting areas is an important issue, which has not been investigated in Guilan province, so this study was planned.

**Methods:** This cross-sectional descriptive study was conducted in Guilan academic hospitals (Razi-Poorsina-Heshmat-Alzahra–Amir al Momenin) from Feb 2022 to Dec 2022. Relatives of patients who underwent elective surgeries enrolled the survey. A questionnaire containing two parts of demographic data and 12 items assessing relative's conditions in waiting area was filled out via a direct interview.

**Results:** 318 relatives enrolled the survey. 93.2% of patients' relatives were first-degree relatives. 76.7% had information about the surgery. 41.5% were informed of their patient's status in operating room. Fear of not emergence from anesthesia 109(34.3%) and death 105(33.0%) were the main causes of anxiety which was reported as  $8.23 \pm 28.2$  from 10 and only 6(1.9%) had financial concern. 86.8% of the responders declared that being informed from their patient's condition in operating room, was the most effective approach to reduce their anxiety. A positive and highly significant association was observed between the level of education and receiving explanation from surgeon, anesthesiologist and being informed from patients' status in waiting area ( $p=0.001$ ).

**Conclusion:** It was found that relatives of surgery patients suffered from high degrees of anxiety mainly due to fear of death and not emergence from anesthesia. They stated that being informed from their patient's conditions was the most powerful factor in reducing their anxiety.

**Keywords:** Anesthesiologists, Anxiety, Cross-sectional studies, Educational status, Humans, Motivation, Operating rooms

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## Introduction

In the healthcare setting, since the provision of services is related to the health and lives of human beings, satisfaction is crucial (1). Currently, society's expectations from hospitals and the quality of their services have increased. In fact, compared to the past, the sensitivity and level of expectation of patients and their relatives have increased (2). Today, patients are more aware of their rights and have special expectations from the medical staff and doctors. Therefore, it is necessary for hospitals to continuously monitor the quality of their services. In fact, if there is no monitoring of this matter, hospitals will be unaware of their performance and the quality-of-service provision, thus they fail to find their weaknesses. One of the most important issues in this field is the situation of the relatives in waiting areas of the operating rooms (3). Fear of death and anesthesia, worry about the result of the operation, emotional turmoil, financial concerns, worries regarding disruption in daily life and the unfamiliar environment of the hospital can all create difficult conditions for the patient's relatives in the waiting area (4,5).

In addition, prolonged surgeries and unexpected and unannounced delays increase this anxiety (6,7). This stressful situation can interfere with the proper functioning of the family and their positive support for the patient (8). Studies have shown that if the patient's companions spend the waiting time with physical and mental comfort and in favorable conditions, they would be more prepared to take care of their patient to a rapid recovery (9,10). Therefore, this issue is very valuable and important from various medical, ethical, and the hospital credit aspects. In addition, it is clear that according to the cultural differences, economic and social status and the level of education as well as the characteristics of that hospital, the level of expectation would be different. This means that the results of other studies cannot be generalized and each center should investigate the issue separately and independently. To the best of our knowledge, the topic has not been investigated in Guilan province. The purpose of this study was to determine the needs and expectations of the relatives of surgical patients in the waiting areas of the academic hospitals affiliated to Guilan University of Medical Sciences (GUMS).

## Materials and Methods

This cross-sectional descriptive study was conducted in academic hospitals (Razi, Poorsina, Heshmat, Alzahra, Amir Al-Momenin), affiliated to GUMS from Feb. 2022 to Dec. 2022.

### *Inclusion criteria*

Relatives of patients who underwent elective surgeries, being able to understand and speak Persian, aged above 18, willing to participate in the study and signing the informed consent form enrolled in the survey.

### *Exclusion criteria*

Individuals who were not willing to participate in the research or did not have the ability to communicate were excluded. In the mentioned academic hospitals, routinely, after the patient was admitted and placed in the operation list, he/she was referred to pre-operative anesthesia clinics. In order to optimize the patient's conditions for surgery, the anesthesiologist visited the patient and necessary consultations and paraclinical examinations were requested. Eligible relatives were interviewed by the responsible medical student and a questionnaire which was taken from MsN's study (11) was filled out. The mentioned questionnaire had 15 items assessing relatives' conditions and their expectations which were translated into Persian and reviewed by 10 faculty members of anesthesia and surgery department and based on their comments, three questions were not in accordance with the local conditions of the country and were actually irrelevant and were removed. Content Validity Ratio (CVR) and Content Validity Index (CVI) were calculated. The minimum value with the average CVI for all the items was more than 79% and the CVR index for all the questions were above 62%. The anxiety score of the relatives were assessed based on VAS score, in which 0 indicated no anxiety while 10 the most stressful condition that an individual could experience. The other evaluated item was waiting time which was considered from the moment the patient was separated from her/his companion until being discharged from recovery.

### *Statistical analysis*

The obtained data were analyzed by SPSS 21 software

(IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.). Frequency, mean and standard deviation statistics were used to describe the data. In order to analyze the data, in the case of normal distribution of continuous variables, the independent T test or the equivalent non-parametric test was utilized, and the Chi-square test was used to analyze the nominal variables. A p-value less than 0.05 was considered significant.

**Ethical Considerations**

Firstly, the study protocol was approved by the Honorable Vice-Chancellor Research of GUMS and the ethics code of IR.GUMS.REC.1400.500 was received. Before filling the questionnaires, the purpose of the study and the optionality of participating and confidentiality of the information were explained to the relatives and informed consent was obtained. All the ethical principles were considered in this research. The study participants were aware of the research process. The patients’ information was kept confidential.

**Results**

Finally, the data from 318 patients’ relatives with the mean age of 38.05±10.7 were analyzed. 93.2% of them were first-degree relatives. Patients’ demographic data is presented in (Table 1). Over half of the responders reported that they had received information in terms of their planned surgery 244 (76.7%), but only 56% of them received the information from the surgeon who performed the surgery and only 84 (26.4%) were informed about the type of anesthesia.

During the time in the waiting area, less than half of the relatives 132 (41.5%) were given information about their patients. The main reasons of their anxiety were fear of not emergence from anesthesia 109 (34.3%) followed by death 105 (33.0%), and only 6 (1.9%) had financial concerns. The mean waiting time was 4.53±0.9 (3-7) hours. Totally, the average score of anxiety was reported as 8.23±28.2 from 10 and 276 (86.8%) of the relatives believed that being informed from their patient’s condition in OR, was the most effective approach to help them cope with the stressful situation and reduce their anxiety. Regarding the environmental status of the waiting area 53 (40.2%) complained from noise and crowded

and the least reported item was bad treatment of hospital staff with them 2 (1.5%). A positive and highly significant association was observed between the level of education and receiving explanation from surgeon (P=0.001), anesthesiologist (p=0.001) and being informed from patients’ status in the waiting area (p=0.001). Regarding the physical features in the waiting area, our responders expressed their satisfaction in terms of light 207 (65.1%), temperature 178 (56%), number of seats 129 (40.6%), but 263 (82.7%) stated that their food and drinking needs were not met. The frequency of responses of relatives to items of the questionnaire for assessing the condition of waiting area is shown in (Tables 2-4).

**Discussion**

The issue of respecting the wishes of the patients’ relatives and answering their questions and doubts is not only very important from an ethical point of view, it is also significant from a legal aspect, since establishing a good communication leads to

**Table 1.** The demographic characteristics of the responders, Waiting time & Anxiety score

Variables	Status	Number (percent)
Gender	Male	136(42.8)
	Female	182(57.2)
Age (Years)	Less than 40	201(63.2)
	More than 40	117(36.8)
Mean±SD (Min–Max)	38.05±10.7(19-69)	
Education	Illiterate	11(3.5)
	Until the diploma	84(26.4)
	diploma	138(43.4)
Family relationship with the patient	University degree	85(26.7)
	First degree relatives	306(96.2)
Waiting time	Others	12(3.8)
	≥4 hr	162(50.9)
Anxiety score	<4 hr	156(49.1)
	Mean±SD (Min–Max)	4.53±0.9(3-7)
Mean±SD (Min–Max)	8.23±28.2(0-10)	

**Table 2.** The frequency of the answers to questions assessing their condition and expectations in waiting area

Questions	Yes number (percent)	No number (percent)	I have not requested information nNumber (percent)
Have you been informed about the surgery that is going to be performed on your patient?	244(76.7)	64(20.1)	10(3.1)
Have you received information from the surgeon who is going to perform the surgery?	178(56)	132(41.5)	8(2.5)
Have you received information from the anesthesiologist about the patient's type of anesthesia?	84(26.4)	97(30.5)	137(43.1)

**Table 3.** The frequency of the answers to questions assessing physical status of waiting area

Questions	Yes number (percent)	No number (percent)
Were there enough seats in the waiting room?	129(40.6)	189(59.4)
Is the temperature of the waiting room appropriate?	178(56)	140(44)
Is the lighting of the waiting room appropriate?	207(65.1)	111(34.9)
Are your food and drink needs provided in the waiting room?	55(17.3)	263(82.7)

**Table 4.** The frequency of the answers of the relatives to questions assessing the causes of anxiety and complains in waiting area

Questions	Status	Number (percent)
What are the most common causes of anxiety among patients undergoing surgery?	Death of the patient	105(33.0)
	No emergence from anesthesia	109(34.3)
	Adverse outcomes of the surgery	78(24.5)
	Inadequate care and attention of the treatment staff	20(6.3)
	Hospital expenses	6(1.9)
What is the most effective way to reduce your anxiety while waiting?	Being Informed about patient's condition during the operation	276(86.8)
	The calm physical space of the waiting room	42(13.2)
Have you experienced any problems in the waiting room?	Yes	132(41.5)
	No	186(58.5)
Problems mentioned by the patients' relatives in the waiting room	Absence of a specific and standard space as waiting room	34(25.8)
	Bad and inappropriate behavior of the personnel	2(1.5)
	Traffic congestion and noise	53(40.2)
	Lack of response from the treatment staff	43(32.6)
How have you been informed about your patient's condition during surgery?	Doctor	19(6)
	OR staff	113(35.5)
	I did not receive any information	146(45.9)
	I did not ask for information	40(12.6)

fewer complaints against the doctors (12). Studies have indicated that most of the complaints against the treatment team were not for compensation, but because doctors did not spend time to provide the required information (13). Regarding whether the relatives were aware of the type of operation, 76.7% of them gave a positive answer, but in terms of the source of information, whether the surgeon provided the information or not, this percentage decreased to 56%. Regarding the question of whether they received information about the anesthesia method, 26.4% gave a positive answer. The important point was that 43.1% stated that they requested no information. This was justified as the anesthesiologist in charge of the patient is likely to visit the patient for the first time in the Operating Room (OR) and like the surgeon, the anesthesiologist is determined for each operation based on the duty lists of OR. In general, in governmental referral centers, due to the workload, high turnover and performing the procedures by residents under attending supervision, access to the responsible surgeon and anesthesiologist is not easily possible.

Another issue is that there is enough time to talk with the patient and the relatives in the anesthesia clinic before the operation, but the patient may be accompanied by someone else on the day of the operation. For example, the patient went to the anesthesia clinic with his wife, but on the day of the operation, the patient's daughter was with him, who had not received an explanation from the anesthesiologist. A higher level of education was associated with a greater amount of receiving information from surgeons and anesthesiologists, as expected. Since people with higher education are able to communicate more with the treatment team, they are more aware of the importance of this information and follow up more effectively. Almost all the relatives were the first-degree members which was significantly more than other studies (11), indicating the cultural differences. In a study conducted by Hadadzadegan *et al* in hospitals affiliated to Shahid Beheshti University of Medical Sciences in Tehran, 482 questionnaires were filled out by patients' relatives and their satisfaction with the physical conditions of the waiting area was checked. They reported that the light condition was adequate, but they complained of the non-standard

temperature. Also, 40% stated that the noise and crowded annoyed them in waiting area which was in line with the present research (14). Shariati *et al* in Ahvaz investigated the level of satisfaction of patients' relatives with the health reform project in Ahvaz academic hospitals. 300 people participated and it was found that 65.26% were satisfied with this plan (15). In Trimm *et al*'s study, first-degree relatives of surgical patients were interviewed. The results showed that concern of the precise performance of surgeons and anesthesiologists, the difficulty of spending the time, the interaction between their thoughts and feelings, and the need to receive support from the treatment team, were the most reasons of their anxiety in the waiting area (16). In MsN's study from Turkey, the expectations of the relatives of surgical patients in an academic hospital was investigated and 300 questionnaires were completed via a direct interview. Their results demonstrated that 94.7% of the responders had received information about surgery. 25.4% suggested that they should receive more information about their patient status in OR, 29.2% stated that the waiting area was inappropriate (11). Comparing their results with the current work, presented more satisfaction conditions for relatives in waiting area.

In a similar study, Kynoch *et al* from Australia showed that the families of patients who undergo surgery experienced significant anxiety, which was aggravated when they established no communication with the OR staff. They concluded that in order to provide suitable conditions for the patients' relatives and facilitate the passing of the waiting time, a proper communication between the relatives and OR staff was necessary (17) which was inconsistent with the findings of the present study. Regarding receiving information during the operation, unfortunately, most of the responders' answers were negative. Also, it was found that the average anxiety score of the relatives was above 8, out of 10, which is quite understandable to what extent the relatives suffered from anxiety during the time they were away from the patient and unaware that what was going on. This issue definitely needs to be reviewed and it is clear that this issue can be solved with a simple coordination. In many cases, the patient enters the OR and is separated from the relatives, and it takes a long time for the previous

patient to recovery from anesthesia and be transferred, or an emergency surgery occurs and the surgeon would be involved or emergency situation occurs and anesthesiologist is involved, or special equipment is not ready. All these factors cause the patient who had a short operation to be separated from his/her relatives for many hours. And if he spends this time in ignorance and behind the closed door of the OR, he will be in a very unfavorable mental and physical condition.

Regarding the main reasons of anxiety of relatives, only 1.9% was worried about the costs, which was a positive point of the performance of the health policymakers, that in the governmental centers, the financial worries of the companions are minimal. The majority of our responders mentioned that being informed about their patient could help the most to reduce their anxiety; they needed to receive information about the condition of their patients and only a little percent cared about the physical space. Almost half of the relatives reported that they were faced with problems while waiting, and noise, crowding and high traffic were the first annoying factors. Considering that the main concern was death and the failure to emergence from anesthesia, and considering the findings that the patients and relatives' communication with the anesthesiologist was not in a favorable condition, it is necessary to provide conditions to receive an explanation from the anesthesiologist. It should be kept in mind that due to the advantages of regional anesthesia, many surgeries are performed without general anesthesia. Therefore, the accompanying worry about the patients' unconsciousness is much unfounded, but at the same time, very anxiety-provoking. It should be noted that this unfortunate situation can be resolved by spending a few *min* on the part of the treatment staff

### **Limitations**

Not considering the study in the private sector could be a limitation of this study.

### **Suggestions**

According to the valuable information obtained from this research, conducting this study in a private sector, provides the opportunity to compare the findings, which will be very valuable.

### **Conclusion**

It was found that the relatives of patients in Guilan academic hospitals suffered from severe anxiety when their patient underwent surgery. Not being informed of the patient's condition in OR was their main complaint and fear of death and not emergence from anesthesia were the causes of anxiety. Obviously, this stressful and painful situation could be coped with no cost and by holding briefing sessions with medical team and empathy with the relatives. In addition, a highly significant association was observed between the level of education and receiving explanations from the surgeon, anesthesiologist and information about the condition of the patients.

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### **Informed consent**

Written consent form was completed by the participants.

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### **Conflict of Interest**

The authors declare that there is no conflict of interest.

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