



FEARS AND DOUBTS AMONG PATIENTS ATTENDING PRE-ANAESTHETIC CHECK-UP (PAC) CLINIC: A CORRELATION WITH THEIR EDUCATIONAL STATUS

Anaesthesiology

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ABSTRACT

Fears and anxiety are common during hospitalization for surgery. The fears of surgical insult due to operation, separation from family, hospital environment, pain and awareness during operation, duration of unconsciousness after operation or even death cause strong emotional distress, which, in turn, have an impact on the psychological and somatic functioning of the individual. Fear adversely affects the time of recovery, incidence of complications and the discomfort felt by patients. In this study, the common types of fear among the patients interviewed were regarding intraoperative and postoperative pain (64.3%), operation-related complications (37.7%), awareness during operation (31.5%), prolonged unconsciousness after operation (23.8%), uncongenial operation theatre environment (18%), and death (13.8%). The present study aimed to measure the fears and doubts among patients attending preanaesthetic checkup (PAC) clinic and its correlation with their educational status, based on a simple questionnaire. As many as 62.3% patients stated that they had no fear or worry about operation. High anxiety scores represent a lack of adequate and timely information to patients during the pre-anaesthetic consultation.

KEYWORDS:

Preoperative; Anxiety; Fear; Preanaesthetic checkup

INTRODUCTION

Preoperative fears and doubts among the patients undergoing surgery under anaesthesia is a not an uncommon behaviour. If not addressed in time, it may exert unfavourable influence on the outcome of anaesthesia and surgery. It starts as soon as the surgical procedure is planned and increases to maximal intensity at the moment of entering the hospital.¹ Most patients awaiting elective surgery experience anxiety, which is widely accepted as a normal response.² It has been suggested that few patients may perceive the day of surgery as the most threatening day in their lives.³

Studies have shown that high perioperative anxiety levels can lead to increased postoperative analgesic requirement, prolonged hospital stay,⁴ significant contribution to adverse perioperative outcome and poor patient satisfaction.⁵ Interventions to reduce preoperative anxiety include pharmacological therapy⁶, provision of relevant information⁷, distraction, attention, focusing, and relaxation procedures.⁸

We prepared and provided a set of six questionnaires to surgical patients attending our preanaesthetic checkup (PAC) clinic in our effort to assess their anxiety and fears, and also tried to assess improvement, if any, after providing optional, verbal and at least in some cases, written information on awareness etc. The aim of the study was to assess preoperative fears and doubts among patients scheduled for elective surgery attending PAC clinic and also to find out its correlation with educational status of the patients.

MATERIAL AND METHODS

This study was conducted in the patients attending the PAC clinic of our institute. We evaluated 600 adult patients, of either sex, attending PAC clinic in the age group of 18-80 years. The patients were questioned about their fears and doubts related to anaesthesia and surgery.

After obtaining approval from institutional ethics committee and written informed consent, patients who fulfilled the selection criteria, viz. belonging in the age group of 18-80 years, with or without a history of previous surgery, and scheduled for elective surgery (general surgery, orthopedics, oncology, gynecology, urology, cardiothoracic, neuro-surgery and plastic-surgery) were included in

the study. Exclusion criteria included refusal of patient to participate in the study, cognitive impairment and previous diagnosis of anxiety or depression with any anti-psychotic or anxiolytic treatment. Medical students, doctors, nurses, hospital staff and other medical professionals were also excluded from study. Patients were selected randomly among all those who attended the PAC clinic and fulfilled the selection criteria. For the selection of subjects, we used non-probabilistic convenience sampling of consecutive cases who attended PAC clinic.

As degree of fears and doubts is likely to correlate with the educational status of the subject, we tried to assess these using appropriate questionnaires and tried to correlate them with their educational status. Patients were categorized on the basis of their educational status into four groups:

- I. Non-Matriculates
- II. Matriculates
- III. Graduates
- IV. Post Graduates/University Teachers

Initially we enquired about the purpose of attending and reason of being referred to PAC clinic. Patients who didn't know about the objectives of pre-anaesthetic check-up were made aware about it and the purpose of study was also explained. Then the patients were asked about their fears in the form of a set of questionnaires. A set of six questions was prepared and provided to them. The patients were asked to provide the answers in 'Yes' or 'No'. The questions included in the set were as follows:

- Q1. Are you afraid of a surgical operation or anaesthesia?
- Q2. Are you afraid of operation theatre environment?
- Q3. Are you afraid of awareness during the operation?
- Q4. Are you afraid of pain during the operation?
- Q5. Are you afraid of remaining unconscious even after operation is over?
- Q6. Are you afraid of death during operation?

They were further asked regarding any doubts in their mind related to anaesthesia and recorded, if any. Any improvement in the response of

the patients after providing them optional, verbal or written information on awareness in the form of a booklet was also assessed.

We assessed their fears and anxiety with the help of answers given to question 1 to 6 in the questionnaires. The answers were analysed separately questionwise in each group. The possible effect of gender of the patients and its correlation with the preoperative anxiety and fear, if any, was also assessed. The chi-square test was used to analyse the data collected from the study. A p-value of <0.05 was considered as significant.

OBSERVATIONS

Among 600 patients interviewed, there were 316 males and 284 females taken randomly among the patients who attended PAC clinic before the elective surgery. We categorized the patients into four groups on the basis of their educational status as Group-I to IV including Non-Matriculates, Matriculates, Graduates, PGs & University Teachers respectively. There was no criteria for number of patient in each group.

The groupwise distribution of patients was as follows (Table-1): Group-I [n=216; 91 males (42.1%), and 125 females (57.9%)];
Group-II [n=207; 108 males (52.2%) and 99 females (47.8%)];
Group-III [n=126; 74 males (58.7%) and 52 females (41.3%)];
Group-IV [n=51; 43 males (84.3%) and 8 females (15.7%)]

Table - 1: Distribution of patients among the groups

Group	I		II		III		IV	
Sex	No.	%	No.	%	No.	%	No.	%
MALE	91	42.1	108	52.2	74	58.7	43	84.3
FEMALE	125	57.9	99	47.8	52	41.3	8	15.7
Total	216	100	207	100	126	100	51	100

P=(<0.001)

Out of 600 patients, 388 (64.7%) [192 males (60.8%) and 196 females (69%)] had no awareness about the reason of being referred to PAC clinic, and only 122 patients [124 males (39.2%) and 88 females (31%)] knew about it. Males had more awareness than the females about PAC clinic. (P-value=0.035) (Table-2).

Table – 2: Health awareness and gender

Knowledge	MALE		FEMALE		TOTAL	
	No.	%	No.	%	No.	%
NO	192	60.8	196	69.0	388	64.7
YES	124	39.2	88	31.0	212	35.3

P=(0.035)

Patients with higher educational level, had significantly more awareness regarding the PAC clinic and the need for preanaesthetic checkup. (P-value<0.001) (Table-3)

Table – 3: Groupwise response and awareness about preanaesthetic checkup, i.e. the reason of being referred to the PAC clinic.

Awareness	I		II		III		IV	
	No.	%	No.	%	No.	%	No.	%
NO	184	85.2	140	67.6	56	44.4	8	15.7
YES	32	14.8	67	32.4	70	55.6	43	84.3
Total	216	100	207	100	126	100	51	100

p=<0.001; (14.8<32.4<55.6<84.3).

Fears among patients increased with an increase in their educational status, except for Q.2 (i.e. fear about the operation theatre environment). Fear regarding the operation theatre environment, contrarily, was more in group I – III, and less in group IV patients who had the highest educational level among all the participating groups. (Table-4)

Table-4: Groupwise response to the questions.

Question Number		I		II		III		IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Q.1	NO	162	75.0	124	59.9	68	58.0	20	39.2	374	62.2
	YES	54	25.0	83	40.1	54	46.0	31	60.8	226	37.7
Q.2	NO	185	85.6	168	81.2	94	74.6	45	88.2	492	82.0
	YES	31	14.4	39	18.8	32	25.4	6	11.8	108	18.0

	YES	31	14.6	39	18.8	32	25.6	6	11.8	108	18.0
Q.3	NO	168	77.8	156	75.4	65	51.6	22	43.1	411	68.5
	YES	48	22.2	51	24.6	61	48.4	29	56.9	189	31.5
Q.4	NO	94	43.5	73	35.3	39	31.0	8	15.7	240	35.7
	YES	122	56.5	134	64.7	87	69.0	43	84.3	386	64.3
Q.5	NO	183	84.7	159	76.8	85	67.5	30	58.8	457	76.2
	YES	33	15.3	48	23.2	41	32.5	21	41.2	143	23.8
Q.6	NO	193	89.4	174	84.0	90	77.8	36	70.6	517	86.2
	YES	23	10.6	33	16.0	28	22.2	15	29.4	83	13.8

We also enquired about the queries and doubts in the mind of the participants related to anaesthesia. But very few patients were aware about the types of anaesthesia, its techniques and possible consequences. So they were not able to say more about doubts related to anaesthesia. Maximum number of patients wanted to get information about the number of days of hospital confinement and the expenses involved. More number of patients preferred general anaesthesia over regional anaesthesia, due to fear of pain and awareness during regional anaesthesia.

The type of fear among the patients were about pain during surgery (64.3%), operation related complications (37.7%), awareness during operation (31.5%), remaining unconscious after operation (23.8 %), fear about operation theatre environment (18 %) and about death (13.8 %). (Table-5)

In some cases, we also tried to assess improvement in the beliefs of the patients after providing them verbal and written information on general awareness about anaesthesia in the form of printed flyers and booklets. The patients were further evaluated for their fears and doubts in their minds. While some of these patients showed clear improvement in their state of fears and doubts especially during the postoperative period, due to uncertain and poor follow up of these patients, we could not ascertain the influence of giving written information (in the form of a booklet in local dialect/Hindi) in the PAC clinic on their fears, doubts and better understanding of the perioperative course.

DISCUSSION

Fears and doubts are common during hospitalization. These are considered as a normal feelings that always accompany people throughout life. The term “anxiety” refers to an unpleasant and overriding inner emotional tension that has no apparent identifiable cause. Fear, in turn, causes emotional tension due to a specific external reason. The fear of operation, separation from family, hospital environment, pain and awareness during operation, prolonged unconsciousness after operation or even death generates strong emotional distress, which has an impact on the psychological and somatic functioning.⁹

The dimension of fear exerts untoward influence on the time of recovery, incidence of complications and the discomfort felt by patients. In some studies, the incidence of preoperative anxiety has been reported to be as high as 60% of surgical patients.¹⁰ In our study, the most common type of fear among the patients interviewed was about intraoperative and postoperative pain (64.3%). The other types of fear were regarding operation-related complications (37.7%), awareness during operation (31.5%), remaining unconscious after operation (23.8%), anxiety and fear about uncongenial operation theatre environment (18%), and about fear of death (13.8%).

There are several scientific tools for assessing fears and anxiety. The questionnaires are one of the methods of taking an objective measurement. Commonly used questionnaires in most reported studies are Amsterdam Preoperative Anxiety Information Scale (APAIS), Spielberg's State-Trait Anxiety Inventory (STAI-State),¹¹ Hospital Anxiety and Depression Scale (HAD) and 100 mm visual analogue scale (VAS).¹² VAS has been considered a popular tool in evaluating preoperative anxiety and fear in recent years.^{13,14} We used a multiple questions based tool which is not similar to any of these tools. However, our tool incorporates frequently asked questions that often trouble the minds of most of our patients.

In fact, many studies indicate that monitoring of anxiety can be very useful in diminishing the fear. Determining the factors affecting anxiety and fear can be useful to correctly define, quantify and attenuate them.³ In this study, many patients (62.3%) stated that they had no fear or worry about operation, which could possibly be

attributed to their ignorance about the healthcare services. This may partially be a reflection of their belief in God or some supernatural power. It seems that the religious and cultural beliefs influence people more in stress-full conditions. This might have resulted in an increasing proportion of patients without fear. Having trust in University hospital healthcare facilities could be another important factor which resulted in lesser worries both about anaesthesia and surgery. It has been reported that patients feared surgery significantly more than anaesthesia. In a study, a pre-operative anxiety score of 33 for surgery and 29 for anaesthesia by VAS has been reported¹⁵.

However, a very important point in which several authors agree is that high anxiety scores represent a lack of adequate and timely information to patients during the pre-anesthetic consultation. In this regard, a study by Kiyohara et al found that patients receiving better pre-anesthetic information during their visit to the PAC clinic showed reduced rates of anxiety, compared to those who did not receive it.^{7,16}

The education level of patients directly related to their knowledge about the surgery, types of anaesthesia and its technique. Our study showed that, the knowledge of patients about PAC clinic was proportional to their educational status, and as it ranged from Group-I to IV as 14.8%, 32.4%, 55.6% and 84.3% respectively.

According to a study conducted in Spain, the most common fear reported was "not waking up from anaesthesia."¹⁷ In another study from Switzerland, three kinds of fear were noted among surgical patients: 1- the fear of the unknown, 2- the fear of feeling ill, and 3- the fear for one's life.¹ Furthermore, in a study from Jamaica, the most common fear was death on the operating table. In our population, most of patients had no worries about anaesthesia or surgery. In relation to anaesthesia, most patients feared of intraoperative and postoperative pain, intraoperative awareness and fear of not waking up after surgery was over. When asked about surgery, the patients worried for "possible results of operation," "days spent in hospital" and "expenses incurred."¹⁸

In some reports, correctly defining the word anaesthesia correlated with the degree of education.³ 66% of patients correctly defined the meaning of anaesthesia. 98.1% of university graduates, 82% of secondary school pass outs and only 51.9% of illiterates and primary school pass-outs knew the meaning of anaesthesia. Illiterate or primary school pass-outs had more fears or worries about surgery when compared with more educated patients ($p < 0.05$).³ 53% of university graduates preferred local or regional anaesthesia compared to 42.9% of secondary school and 35.2% of primary school pass-outs. As level of education gets higher, the number of patients who wish to stay informed also increases. There was no significant correlation between the educational status of the patients and fear from anaesthesia.³

Kiyohara et al found that educational level of patients did not influence a greater degree of anxiety.⁷ Similarly, in many other studies, the degree of education was not found to have any influence on the development of anxiety in most patients.^{3,19,20} However, it is noteworthy that in patients with a higher educational level a higher percentage of preoperative anxiety was observed.²¹ We found that the degree of education has significant influence on the development of fears and anxiety in most patients. We observed that fear about the operation between Group-I to IV ranged to ($25\% < 40.1\% < 46\% < 60.8\%$), about pain to ($56.5\% < 64.7\% < 69\% < 84.3\%$), about awareness during operation to ($22.2\% < 24.6\% < 48.4\% < 56.9\%$), about remaining unconscious even after the end of operation to ($15.3\% < 23.2\% < 32.5\% < 41.2\%$) and about fear of death to ($10.6\% < 16\% < 22.2\% < 29.4\%$) respectively. This shows a significantly increased level of different components of fears with educational level, (Group-I to IV; $P = < 0.005$). In contrary to this, the fear about the operation theatre environment was decreased (only 11.8%) with their higher education in group-IV including post graduates and university teachers; other three groups-I to III had increasing levels as above ($14.4\% < 18.8\% < 25.8\%$) respectively.

Moreover, we found that females expressed more fear about both anaesthesia and surgery as compared to male. We found a significantly higher level of anxiety in females. Similar findings have also been reported in some earlier studies.^{3,7} Some other investigators, however, have demonstrated a lack of gender difference in relation to preoperative anxiety.^{19,20}

Preoperative patients feel various kinds of anxiety. The patient's anxiety level depends on their previous experiences of anaesthesia, attending anaesthetists, anaesthetic techniques and type of anaesthesia previously received, and age of the patients. In addition, type of surgery is also important.²² For, instance, the patients undergoing orthopaedic operations remain anxious about postoperative pain, while the patients undergoing gynaecological procedures are more upset about probable mishaps due to surgical process and the outcome of surgical procedure. Our study did not include types of the operation, however, we also did not find any relationship between types of surgery and fear or anxiety.²²

Determining the reasons and factors influencing preoperative fear and anxiety in our population may help us in the better management and outcomes of our surgical patients. Proper management of fear and anxiety by the anaesthesiologist may provide better preoperative assessment, less pharmacological premedication, smoother induction and may be even better outcome.

CONCLUSION

Awareness about anaesthesia and surgery, its procedures and complications is very poor among members of public. The study shows that the patients who experienced preoperative fears and doubts had significant correlation with their educational status and gender. Therefore, preoperative informed consent should be taken properly. This should be supplemented by proper PAC before surgery, which includes meticulously explaining all details regarding the proposed plan of anaesthesia. Further studies on preoperative anxiety are needed to evaluate the impact of anxiety and fear management on anaesthesia and surgery and the outcome. Establishment of preoperative counselling clinic and proper informed consent taken before surgery will help in reducing preoperative fears and anxiety and also improving the quality of care. Further studies are needed, to be able to command in more definitive terms.

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