Alleviating pre-operative anxiety in patients: a study

This study aimed to provide an objective view of the relationship between the giving of information, anxiety and hospital admission. Previous research has suggested that patients are already anxious on admission to hospital and that any information given at this time may be forgotten easily or misunderstood. Forty patients listed for simple elective surgery participated in this study. Using an experimental design, subjects in the experimental group were interviewed and information given to them in their own home before admission and again on their first day in hospital. A state-trait anxiety questionnaire was used to compare both groups. The resultant difference in the anxiety level shown between both groups on admission was found to be significant.

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Jane Beddows RGN, NDN, Cert Ed (FE), RNT, BA(Hons), is Nurse Teacher, School of Health Studies, Edge Hill University College, Fazakerley Hospital, Liverpool.

KEY WORDS
- PRE-OPERATIVE CARE
- PATIENT INFORMATION
- ANXIETY

These key words are based upon work undertaken by the RCN Library.

IT HAS BEEN well documented that admission to hospital causes stress and anxiety (Barnes 1961, Franklin 1974, McGhee 1961). Boore (1978) stated that this not only causes an imbalance in homeostasis, but that it also impedes recovery. In addition, it has been established that providing pre-operative information and encouraging discussion helps to alleviate this anxiety (Boore 1978, Hayward 1975).

BACKGROUND TO THE STUDY
The responsibility for giving pre-operative information to reduce anxiety is recognised as a necessary and ongoing responsibility of the nurse as a source of emotional support (Oakley 1984, UKCC 1986). This preparation, which should lead to understanding and reduce uncertainty (Lazarus and Averill 1972), enables patients to play a role in their own recovery (Janis 1958).

Levanthal and Johnson (1971) suggested that accurate pre-operative
information builds accurate expectations of surgery which will in fact reduce emotional arousal during surgery. Cochran (1984) maintained that surgical patients who are given emotional support and information about the procedure generally have a smoother operative course and recovery, and show greater compliance with treatment.

Although it has been known for many years that pre-operative information reduces anxiety, Dale (1993) doubted whether this recommendation is widely implemented by hospital staff. Carr (1990) agreed, suggesting that the giving of pre-operative information remains inadequate and still contributes to increased patient anxiety.

Care must be taken when giving information. Several studies have highlighted that information given to hospital patients is often insufficient, contradictory and confusing (Cartwright 1964, Duff and Hollingshead 1968, Skipper 1965, Spelman and Ley 1965). Although these studies were carried out more than 25 years ago, there are many recent research studies to add credence to those early findings. Ley’s study (1982) indicated that between 7 and 53 per cent of patients do not understand what they have been told and Houston (1972) found that only 63 per cent of patients interviewed following discharge were satisfied with the information given during their stay in hospital.

The literature search for the study reported here revealed that researchers assessed patients either on the first day of hospital admission or soon after (Boore 1978, Franklin 1974, Hayward 1975). Information was then given in an effort to reduce anxiety. It was thought important for this study to obtain a more accurate view of patients’ trait anxiety and, therefore, it was decided to visit them in their own environment before admission.

AIMS
The study was designed with the following aims:

- To establish the patient’s normal or trait level of anxiety before hospital admission
- To assess the level of the patient’s state of anxiety pre-operatively
- To ascertain whether information given before admission would reduce significantly patient anxiety on admission to hospital.

State anxiety is a transitory experience of an unpleasant emotional state, characterised by feelings of tension, apprehension and worry. Trait anxiety is the person’s proneness or predisposition to experience anxiety and to react by elevating their stress levels.

The hypothesis being tested was that: ‘The giving of information prior to admission for elective surgery would alleviate anxiety sufficiently to demonstrate a difference between the experimental and the control group pre-operatively.’

For this study, it was felt that a visit to each subject before admission to give information and to test the trait anxiety would be beneficial. Information could be imparted in a non-threatening atmosphere and be assimilated more easily in the patient’s own home surroundings. This should also help to encourage the subject to ask questions, which would not be possible with a postal communication.

According to Dumas and Johnson (1972), the time period between
learning of the need for surgery and the actual surgery is a significant factor in determining pre-operative anxiety levels. This anxiety would be the same for both the experimental and the control groups. Once the subject is admitted to hospital, state anxiety is likely to increase.

Permission for the study was sought and received from the ethics committee, the director of nursing services and the relevant consultant surgeons.

**SAMPLE**
The sample was selected from males and females between the ages of 18 and 65 admitted for hernia and varicose vein operations. After matching the subjects for gender, age, surgeon and diagnosis, the subjects were selected using a simple, random sampling method of taking alternate names from a box, one allocated to the experimental group, the next to the control group.

**METHODOLOGY**
The questionnaire chosen for this study was the State-Trait Anxiety Inventory (STAI) (Spielberger et al 1968). This questionnaire gave the most objective view of anxiety, both pre- and post-admission.

**Experimental group** The experimental group were invited to participate in the research, which required a home visit by the researcher. Prior to this visit, a senior ward sister from each of the relevant wards was asked to check the information that was to be given to the experimental group to confirm its accuracy. This information was transcribed onto a card to ensure that the same information in the same order was imparted to each subject. The information-giving session was timed so that all the subjects received the same amount of time.

On visiting the subject, the researcher spent some time in friendly discussion in order to put him or her at ease. Before the information session, each subject was asked to complete the trait anxiety questionnaire. This consists of the STAI Form X-2, which asks 40 questions on how the subject normally feels. The reason for completing this before the information session was to obtain a baseline trait anxiety rating.

The subjects were told that any questions they had relating to their hospital admission and resultant surgery would be answered. If this was not possible, the researcher undertook to discover the answers from hospital staff and relay the information to the subject before admission.

During this visit, having gained an impression of the subject's previous knowledge of hospital procedure and the impending surgery through a question and answer technique, a structured information-giving session was conducted. The information was given from the card listing all the ward procedures and investigations that would be likely to occur. If the conversation strayed from the subject area, it was gently guided back until all the relevant information was imparted.

The time given to this varied slightly depending on the personality of each subject. Following the session, ample opportunity to ask questions was given until the subject was satisfied. On completion of the interview, it was suggested that if there were any questions that arose following the session, the subject should write them down and show them to the researcher on admission, or to the ward staff if preferred. This was thought necessary in the light of research by Joyce and Cable (1969).
who found that only 46 per cent of subjects successfully recalled information after between one and four weeks. Bond (1994) also stated that there is a danger of patients forgetting what they were told if the information was not reinforced by further discussion on admission.

On admission to hospital, the normal procedure is for the patient to be assessed by the ward doctor, then by the nursing staff. At this time any relevant information is given by the doctor and the nursing staff to all patients. Any procedures or investigations required are carried out quickly and any blood specimens are taken so that results are available before surgery. Once all investigations have been carried out and meals have been eaten, it is often time for the visitors to arrive in the evening. Once they have departed, the ward is quiet, the nurses’ report is given to the night staff and the patient has time to sit and think. The researcher deduced that this may be one of the times that the subject is at his or her most vulnerable and anxiety may have increased as he or she contemplates surgery. This is supported by Thompson (1990) who stated that it is during the immediate pre-operative period that patients are given minimal care, just when they are at their most vulnerable. It was at this time that the researcher chose to visit the subject.

Each member of the experimental group appeared pleased to see the researcher and the STAI Form X-I was presented. The STAI Form X-I consists of 20 questions on how the subject feels at that particular time to assess his or her state of anxiety. This form was completed by the subjects before answering further questions used to obtain a more accurate measure of anxiety.

Control group An STAI Form X-2 was sent to each of the 20 subjects in the control group with an introductory and explanatory letter. This was sent to coincide exactly with the time that the researcher met with the experimental subjects. The letter was written specifically on hospital headed note paper and posted within the hospital grounds so that the post mark would be evident on the envelope to encourage the subjects to participate and to reinforce the authenticity of the research and the hospital’s approval of it.

Each subject was asked to present the completed questionnaire on admission and told that the researcher would visit them on the ward to complete the STAI Form X-I. The researcher visited each subject at a similar time as those in the experimental group. After a brief introduction, the STAI Form X-I was presented for completion and the STAI Form X-2 collected.

Scoring Each STAI question on both questionnaires is given a weighting score of between one and four. The Speilberger method for calculating the results means that a rating of four indicates the presence of a high level of anxiety for ten state-anxiety questions and 11 trait-anxiety questions. A high rating indicates the absence of anxiety for the remaining ten state-anxiety questions and nine trait-anxiety questions. When calculating the results, the scoring weights for anxiety-present and anxiety-absent items are reversed.

RESULTS
To obtain scores from the state-anxiety and trait-anxiety scales, the weighted scores from the 20 items that make up each scale are added together, taking into account that the scores are reversed for some of the questions.

Figures 1 and 2 indicate that both the experimental and the control
groups' anxiety did increase following admission to hospital. Figure 3 shows that anxiety levels in the control group increased to a greater level than those of the experimental group.

This increase in the control group's anxiety does support the hypothesis that: 'The giving of information prior to admission for elective surgery would alleviate anxiety sufficiently to demonstrate a difference between the experimental and the control group pre-operatively.'

LIMITATIONS OF THE STUDY
This research took place in one small hospital, which in itself was an obvious limitation to the study. A study encompassing different sites would be advantageous, and this would have the added benefit of a larger subject sample. Although the subjects were taken from the waiting list of two consultant surgeons, there were only two surgical wards at the chosen hospital. Both were situated in close proximity to each other and this may have introduced variables in that the staff on both ward could have discussed the research. The study might also have been limited further by the fact that only subjects admitted for very minor surgery were involved. The Speilberger State-Trait questionnaire is of US origin and the subjects did comment on its unusual use of the English language.

CONCLUSION
This research used only a small subject sample and it must be classed as a pilot study. However, in view of the positive results, the researcher believes that the study would benefit from widening its scope and using a much larger subject sample.

This research was conducted as part of the Degree in Health Studies at The John Moores University, Liverpool

Implications for practice
1. Nurses should be aware that patients being admitted for surgery will display a certain level of anxiety that may impair their ability to understand and retain pre-operative information.

2. Nurses should assess each patient individually on admission for his or her anxiety level to help in the planning of information-giving sessions.

3. Information given to patients should be reinforced both pre- and post-operatively by nurses in an attempt to ensure that patients can, for example, comply with any necessary care following discharge from hospital.

4. Further study in this area using a larger sample that includes patients undergoing both minor and major elective surgery is required.

REFERENCES


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Fig 1. Experimental group state-trait anxiety scores

Fig 2. Control group state-trait anxiety scores

Fig 3. Comparison of experimental and control group state of anxiety