The effects of giving patients pre-operative information


Abstract

Background A literature review was undertaken to establish the effects on surgery patients’ anxiety levels of giving them information before they attend theatre.

Conclusion There is plenty of evidence that pre-operative information giving can reduce patients’ anxiety regarding surgery. It might be better to provide this information before patients are admitted to hospital, as they are more likely to be able to take in the information if they are not already feeling anxious. To provide better patient care, members of the peri-operative team should work together to prepare patients for the psychological and physical consequences of surgery.

This article is adapted from a course assignment for the BSc in Professional Practice for Nurses, and examines the effects of giving pre-operative information to surgical patients.

The author is an experienced senior staff nurse working within the anaesthetic department of a busy operating theatre suite comprising 11 theatres, including a day surgical unit and obstetric unit. The surgical specialties undertaken in the hospital include orthopaedic surgery, gynaecology and obstetrics, general and colorectal surgery, paediatric oncology and paediatric orthopaedic surgery.

The research question proposed by this literature review is: ‘What are the effects of pre-operative information given to patients coming to theatre?’

At present, patients admitted for elective surgery are generally not visited by a theatre nurse. The aim of this literature review, therefore, is to identify what the effects are of preparing patients psychologically for theatre by providing adequate pre-operative information and using the research to improve patient care.

A wealth of nursing literature advocates the provision of pre-operative information with the sole purpose of reducing anxiety, but also highlighted are the benefits of patients requiring less analgesia and a decrease in the length of hospital stays (Bysshe 1988, Webb 1995, Wicker 1995).

Anxiety is a product of helplessness, and admission to hospital accentuates this anxiety by disturbing the patient’s integrity outside the context of their normal lives.

Anxiety might be described as a complex emotional state with apprehension and dread being the most prominent features (Kenworthy et al 1992).

When facing surgery, the patient is subjected to a variety of stresses associated with anxiety, for example, fear of pain, disfigurement, dependence and perhaps even loss of life (Castledine 1988).

Anxiety can be the response to, or the cause of, stress, which is a biophysiological event; anxiety is the individual’s subjective emotional response (Kapnoullas 1988). Boore et al (1987) highlighted that prolonged anxiety leads to increased protein breakdown, decreased wound healing, decreased immune response, increased risk of infection and fluid and electrolyte imbalances. Such physiological imbalances could delay recovery for surgical patients, therefore nurses should use interventions that reduce patients’ anxiety levels.

Methodology

Having defined the topic for review, the relevant literature was then searched using various search strategies. The research topic was systematically broken down into components, and key words,
synonyms and related terms were identified within each component. Many references were made to textbooks regarding reviewing literature and the appropriate use of resource guides (Cormack 2000, Parahoo 1997, Polit and Hungler 1997, Rees 1997, Tarling and Crofts 1998).

Electronic search strategies were used initially and undertaken at home and at the learning resources centre in the university. All key words were considered, and synonyms retrieved via a thesaurus to access material successfully. Key words used to access the databases were as follows:
- Pre-operative visiting.
- Anxiety.
- Anxiety in the surgical patient.
- Patient information giving.
- Communication.
- Psychological assessment for surgical patients.

Databases accessed were the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Databases of the National Library of Medicine (MEDLINE), Nursing Collection and the British Nursing Index (BNI). *Nursing Standard and Nursing Times* were also accessed online via the internet.

The search limits were defined by setting a five-year time span as this is basic for current nursing topics, but this was eventually extended to ten and then 15 years as the literature material found was limited. Geographic limits were set to include the UK and the US. The language requested was English, and the type and quality of material to be searched were research articles and journal reviews.

As the time span was extended, the research material accessed was plentiful. In all, 27 references were located, mostly with abstracts, and these were all retrieved for reading. It was decided to concentrate on the research articles with the occasional reference being made to journal reviews. Having collated the literature, the articles’ reference lists were then reviewed to identify other articles or textbooks that were relevant and a manual search was then carried out to obtain further information. Once all the literature material was located, information relevant to the chosen topic was then extracted for review.

**Literature review**

A review of the literature can be defined as the critical examination of a representative selection of published literature on a particular topic or issue (Rees 1997). Cormack (2000) suggests that a literature review provides the researcher and the reader with knowledge of the field being researched and contextualises the research problem being considered. The literature review might identify gaps in the previous literature that the new research can address, or might suggest research to be replicated. Parahoo (1997) states that researchers can benefit from what has been done before and hope, thereafter, to offer something in return. Two questions they should ask are:
- What can the current literature contribute to their research?
- What can their research contribute, in particular, to the understanding of the phenomenon under investigation, and to knowledge in general?

**Pre-operative visiting and anxiety**

A pre-operative visit refers to communication between a surgical patient and a theatre nurse in the period before the patient is taken to theatre. Hayward (1975), in his classic research publication *Information: A Prescription Against Pain*, stated that it is an unfortunate truth that most patients enter hospitals and operating rooms with unnecessary fears and anxieties. A great part of the apprehension stems from a lack of knowledge concerning their illness and the operative procedure that is to be performed on them. He also highlights that the persistence of these anxieties often interferes greatly with smooth post-operative results.

Kalideen (1991) concluded that Hayward’s study indicated that good psychological preparation pre-operatively contributed greatly to reduced analgesia requirements in the post-operative period. Egbert et al (1963) showed that the pre-operative visit by an anaesthetist reduced anxiety and related signs and symptoms, for example, fear of pain, fear of the anaesthetic and fear of perhaps not waking up. The patient’s ability to understand and retain information depends greatly on the communication skills and experience of the medical attendant (Egbert et al 1963). Wesschler-Evans (1990) suggested that by having made contact with a member of the theatre staff, patients were often anxious to retain the relationship as emotional support.

The combination of essential physical aspects of care, lack of time, the increasing complexity of surgery, shorter hospital stays and an increased turnover has largely prohibited the introduction of formalised care plans to address the more marginal issues, such as effective anxiety management (Cahill 1999).

Numerous research studies have suggested ways in which the management of anxiety can be improved (De Groot et al 1997, Linden and Engberg 1996, Mitchell 2000).

Martin (1996) in a quasi-experimental design study, evaluated the effect of pre-operative visits by theatre nurses on pre- and post-operative levels of anxiety in two groups of general surgical patients, to see if the outcome was reflected in the level of post-operative pain, nausea, mobility or length of hospitalisation. A combination of qualitative and quantitative research was used. Rees (1997) states: ‘Qualitative research believes that if we are to understand a topic, we need to look at it through the eyes of those who experience it, and try to understand it from their point of view.’ Quantitative
research is defined as a formal, objective, systematic process in which numerical data are used to obtain information about the world (Burns and Grove 1995). The outcome of any research project is dependent on the reliability of the method used and the type and quality of the sample on whom the results are based (Rees 1997). The sample consisted of 40 elective general surgical patients of both sexes in a local general hospital. The criteria to be met were that the patients were over the age of 16, willing to take part in the study, able to comprehend verbal instruction and expected to stay in hospital for at least 24 hours. One group received pre-operative visits, but the other group did not.

Three of the most common ways of collecting quantitative data are to observe behaviour using a standardised checklist, to survey a sample of the population using a standardised questionnaire, or to measure performance following some experimental manipulation (Tarling and Crofts 1998). Questionnaires must produce data that are reliable and valid for the information to be of use to nurses and healthcare professionals (Jack and Clark 1998). Polit and Hungler (1997) state that the reliability of a questionnaire refers to the consistency with which respondents understand and respond to all the questions. Validity is the extent to which a questionnaire measures what it is supposed to measure (Polit and Hungler 1997).

The results of Martin’s (1996) study demonstrated a significant decrease in anxiety 24 to 72 hours post-operatively for the visited group. A positive relationship was also found between pre-operative anxiety levels and the level of pain, nausea and lack of independence experienced by both groups. Length of hospitalisation was unaffected in either group. The study concluded that patients who are prone to feelings of anxiety might demonstrate increased pre-operative anxiety, and that all surgical patients should receive a visit from the theatre nurse to inform them about the forthcoming surgical experience.

There are many negative aspects related to this study as Rees (1997) points out: a quasi-experimental design such as this one differs from an experiment in that it lacks one of the elements, for example, control or randomisation.

The sample was not categorised into major or minor procedures and, in the author’s opinion, this could reflect in the amount of post-operative pain that a patient reports. Surgical intervention could also reflect the amount of pain and anxiety experienced by the patient.

Ethical considerations such as approval from an ethics committee were not addressed. Cormack (2000) suggests that all research conducted within the auspices of the NHS and involving human subjects or personal information relating to them requires the approval of the local ethics committee. Cormack also suggests that if the researcher is to behave ethically, the individual should be given every opportunity to question and receive accurate information. However, it is important to decide when such information and consent is obtained. Polit and Hungler (1997) state that data should be collected anonymously to ensure confidentiality. Rees and Bray (1995) highlight that the key to confidentiality is to make the identity of the subjects and the location of the study unavailable for public knowledge. Another serious ethical issue is the fact that the control group were denied any form of information relating to their surgery. It could be argued that as the benefits of pre-operative information were obvious to the researcher, the study could have provided both groups with varying degrees of information to ascertain anxiety levels.

This study has indicated that patients undergoing major surgery might have a greater risk of high anxiety levels. This evidence also suggests that pre-operative information given to patients will produce a positive outcome by reducing post-operative anxiety, pain levels and episodes of nausea, thus leading to a shorter hospital stay.

Pre-operative assessment and information has usually been provided for patients on the day of admission in the author’s clinical environment until recently, whereby a pre-assessment clinic has been introduced for general surgical patients undergoing day case surgery.

Wilson-Barnett (1979) suggests that the day of admission might not be the best time to give patients pre-operative information as they might be too distracted by other events to receive and retain the information. Dobree (1990) found that providing patients with booklets ten days before admission was beneficial in relieving anxiety and enabled patients to take an active role in their own care.

In contrast, Beddows (1997) carried out a unique experimental study of the relationship between the giving of information, anxiety and hospital admissions. The hypothesis was that: ‘the giving of information prior to admission for elective surgery would alleviate anxiety sufficiently to demonstrate the difference between the experimental and the control group pre-operatively’.

The sample was selected from patients of both sexes, between the ages of 18 and 65, who had been admitted for hernia repairs and varicose vein surgery. No rationale was given for the reason why these particular procedures were chosen. The subjects were matched for gender, age, surgeon and diagnosis. Systematic sampling was used by taking alternate names from a box and allocating one to the experimental group and the next to the control group. A state trait anxiety inventory questionnaire was chosen for the study (Spielberger et al 1996). The experimental group was visited at home by the researcher and each participant was asked to complete the questionnaire following informed consent and discussion. However, as in Martin (1996), approval from an ethical committee was not addressed,
Although permission for this study was sought and received from the committee, the questionnaire consisted of 40 questions to ascertain how the subject normally felt. A structured information-giving session was conducted from a card listing all ward procedures and investigations likely to occur on admission. The control groups were sent the same questionnaire by post with an introductory and explanatory letter. Each participant was requested to present the questionnaire on admission. The results supported the hypothesis that information given before admission for elective surgery alleviates anxiety.

The limitations to the study are that the research was conducted in a small general hospital and the participants chosen had been admitted for minor surgery only. The author questions the researcher’s role in the study and the reasons for visiting patients in their homes. A recommendation for further study in this area is required, using a larger sample to include patients for minor and major elective surgery.

Communication

There is evidence to indicate that patients are aware that communication is central to their wellbeing. The benefits of effective verbal communication in all areas of patient care have been clearly demonstrated (Clark et al. 1991, Crawford 1999, Kalideen 1991, Scott et al. 1999, Williams 1991). Studies have shown that an explanation and information giving on admission to hospital (Elms and Leonard 1966), before diagnostic tests (Wilson-Barnett 1979) and surgical operations (Hayward-Barnett 1975) have measurable benefits in terms of reducing anxiety, pain and side effects in the majority of patients.

The prospect of surgery can generate emotions such as fear of pain and death. Anxiety is present in most patients before surgery, although it is often hidden (Martin 1996). 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).

To be able to assess a patient psychologically, it is important to allow him or her time to talk and for the nurse to have the time to listen. Verbal communication is not always necessary, as sometimes all that is needed is ‘a friendly smile or holding a patient’s hand’ (Weschler-Evans 1990). McFarlane and Castledine (1982) highlighted that a very important and often underestimated means of communication is listening. Knowing how to listen involves channelling one’s attention, concentrating on a patient’s verbal and non-verbal messages and shutting out external noise and distractions.

In summary, the results show a significant decrease in anxiety when information is given to patients pre-operatively. In current nursing practice, it is generally accepted that giving patients adequate information and explanation regarding their medical condition and impending surgery pre-operatively will enhance post-operative recovery.

Copp (1988) states that, although the research studies are encouraging, several questions need to be addressed before the implementation of a pre-operative assessment. For example, should the preparation of patients for surgery become the responsibility of the theatre nurse or be a joint responsibility with ward nurses? Brown (1992) suggests that patient education be reinforced by all members of the multidisciplinary team. Several studies have demonstrated a positive correlation between pre-operative assessment and pre-operative visiting (Kalideen 1991).

Conclusion

The demand for research and evidence-based care means that a growing number of nurses are actively involved in research (Tarling and Crofts 1998). Evidence-based practice is a useful tool to introduce, justify and evaluate change and changing practice in health care. This literature review questions the existing ways of preparing patients psychologically for theatre and relieving patient anxiety with the aim of improving current practice.

Wicker (1995) states that pre-operative visiting and assessment is good for both patient and nurse. However, it must be approached in an overt manner for the full benefits to be realised, although on reflection, it could be suggested that the relationship established between the nurse and the patient is more important to the patient in relieving anxiety than the giving of information.

Although the evidence is encouraging, Copp (1988) suggests that certain questions remain to be answered before the implementation of preoperative information giving. She questions whether the preparation of patients for surgery should become the responsibility of the theatre nurse alone, or whether the theatre and ward nurse share the task.

Scott et al. (1999) believe that peri-operative nursing contributions begin and end on the ward and that all members of the perioperative team should play an equal role in receiving patients on the ward, preparing them for the psychological and physical consequences of surgery.

All the identified studies agree that communication is crucial at all stages of the patient’s surgical experience and that it is essential in achieving a high standard of patient care (Copp 1988, Crawford 1999, Martin 1996, Scott et al. 1999).

To offer patients the best in peri-operative care, nurses need to create an environment in which patients are free to identify their fears. Nurses also need to re think how they assess for anxiety. They can then help patients to make the best out of an essentially unpleasant experience (Wiens 1998).
Pre-operative visits help patients cope physiologically and psychologically with their theatre experience (Crawford 1999). Research has suggested that the overlapping of information and teaching programmes, together with the overexposure of patients to different groups of personnel, might well contribute to ‘information overload’ and confusion as opposed to better meeting the needs of the patients (Copp 1988).

Other areas that require further investigation include replication of certain studies to include larger sample sizes in patients who require more extensive hospitalisation and recoveries (Beddows 1997, Lookinland 1998, Martin 1996). Read (1998) suggests a role for a specialist link nurse who would be available to co-ordinate information needs, act as a resource and enable research into quality of care. She includes a close working relationship with the intensive care unit and the acute surgical wards to bring together new concepts of nursing practice and joint ownership of ideas.

The nurse who informs the patient about imminent experience of surgery and anaesthesia, who judges the patient’s readiness for learning and who individualises instruction, has a clear understanding of his or her role and professional responsibilities in the pursuit of excellence in clinical practice.

Pre-operative visiting would lead to an increase in job satisfaction. When planned care is successfully executed, it would be a great boost to morale whereby the patient becomes a real person, rather than just the next patient on the operating list (Crawford 1999). In conclusion, Crawford (1999) suggests that as theatre nurses, we must be prepared to examine our role in the hospital and, if necessary, expand it to make efficient use of our specialist skills.

For the theatre nursing team we must accept that this service will take time and commitment to implement correctly and will, in turn, improve patient care and make for a safer and happier working environment.

### Implications for practice

- On admission, nurses should assess each patient’s anxiety levels, to help in the planning of information-giving sessions.
- Information given to patients should be reinforced pre- and post-operatively by nurses to ensure that patients can comply with any necessary care following discharge from hospital.
- Patients should be asked to complete questionnaires to determine their level of pre-operative anxiety and also to record their own pain levels post-operatively.
- Theatre nurses should be encouraged to visit patients post-operatively to evaluate the effectiveness of care given.
- All healthcare professionals should collaborate to give and receive information about anxiety, mobility and pain to improve patients’ quality of care (Beddows 1997, Martin 1996).

### REFERENCES


