

## Observation of pain assessment and management – the complexities of clinical practice

**ELIZABETH MANIAS** BPharm, MPharm, MNStud, PhD, RN, FRCNA  
*Senior Lecturer, School of Postgraduate Nursing, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, Carlton, Victoria, Australia*

**MARI BOTTI** BA, PGDCAP, RN, MRCNA  
*Associate Professor, School of Nursing, Faculty of Health and Behavioural Sciences, Deakin University, Burwood, Victoria, Australia*

**TRACEY BUCKNALL** BN, PhD, RN, MRCNA  
*Associate Professor and Executive Director, Victorian Centre for Nursing Practice Research, School of Postgraduate Nursing, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, Carlton, Victoria, Australia*

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### Summary

- Pain assessment and management are complex issues that embrace physiological, emotional, cognitive, and social dimensions.
- This observational study sought to investigate nurse–patient interactions associated with pain assessment and management in hospitalized postsurgical patients in clinical practice settings.
- Twelve field observations were carried out on Registered Nurses' activities relating to pain with their assigned patients. All nurses were involved in direct patient care in one surgical unit of a metropolitan teaching hospital in Melbourne, Australia. Six observation times were identified as key periods for activities relating to pain, which included change of shift and high activity periods. Each observation period lasted 2 hours and was examined on two occasions.
- Four major themes were identified as barriers to effective pain management: nurses' responses to interruptions of activities relating to pain, nurses' attentiveness to patient cues of pain, nurses' varying interpretations of pain, and nurses' attempts to address competing demands of nurses, doctors and patients.
- These findings provide some understanding of the complexities impacting on nurses' assessment and management of postoperative pain. Further research using this observational methodology is indicated to examine these influences in

*Correspondence to: Elizabeth Manias, School of Postgraduate Nursing, University of Melbourne, Level 1, 723 Swanston Street Carlton, Victoria, 3053, Australia (tel.: 613 8344 0778; e-mail: e.manias@unimelb.edu.au).*

more depth. This knowledge may form the basis for developing and evaluating strategic intervention programmes that analyse nurses' management of postoperative pain and, in particular, their administration of opioid analgesics.

*Keywords:* decision-making, observation, pain management, pain assessment.

## Introduction

Pain assessment and management following surgery are central to the care of postoperative patients. Despite the development of new techniques in managing pain, many patients continue to suffer unnecessarily. Any attempt to explore pain must begin with the recognition that it is a complex event that embraces physiological, emotional, cognitive, and social dimensions (McCaffery & Beebe, 1989; Stannard *et al.*, 1996). Indeed, pain is more than 'an unpleasant sensory or emotional experience associated with actual or potential tissue damage' (International Association for the Study of Pain, 1979 p. 249); 'it is also determined by the ... [individuals'] specific context and the meaning they give to their pain' (Seers & Friedli, 1996, p. 1167). While there is substantial research on postoperative pain, the assessment and management of pain remain inadequate. In recent studies, prevalence rates for pain amongst hospitalized patients have varied from 46 to 91% (Yates *et al.*, 1998; Gillies *et al.*, 1999). This paper examines the complexities surrounding the nurse-patient interaction using an observational study of nurses' assessment and management of postoperative pain.

Previous research in pain assessment has frequently focused on nurses' and patients' ratings of pain that use a Likert-type or interval level visual analogue scale for measurement (Graffam, 1981; Zalon, 1993; Lebovits *et al.*, 1997; Harmer & Davies, 1998). The ability of these studies to explain fully the total experience of pain must be questioned, in view of the debate surrounding the meaning of 'pain' itself. It has been argued that disparities between nurses' and patients' ratings of pain may be caused by their different interpretations of pain scales. For instance, Graffam (1981) found a significant disparity between nurses' and patients' ratings for pain in the 'severe' category, while Zalon (1993) showed that nurses over-assessed mild pain and under-assessed more severe pain.

The apparent differences between nurses' and patients' pain estimates are likely to be the consequence of multiple influences that are difficult to quantify. Nurses' perceptions of pain may be based on their own knowledge, past experiences of pain, type of operation the patient has undergone, patient's age, number of days following surgery, patient's gender or culture, as well as other

contextual concerns (Yates *et al.*, 1998). In contrast, patients are acutely aware of their unique experiences of pain, which are an integral component of their individuality. Unfortunately, investigators have tended to view the roles played by the patient, nurse or environment in the clinical setting as secondary and somewhat isolated influences on pain assessment and management. Instead, patients' measurement of pain becomes the focus of attention. For instance, Field (1996) compared nurses' and patients' ratings of pain intensity using a five-point verbal pain rating scale. While she acknowledged the importance of many contextual factors that influence pain, such as psychological, socio-cultural and situational factors, she concluded that nurses' underestimation of patients' pain could have been attributed to their under-use of pain assessment tools. In examining pain assessment and management by outcomes obtained on the rating scale, Field presented a narrow and limited means of analysing the complex dimensions of pain and the environment in which it was experienced.

Previous work has also involved the analysis of nurses' responses to patient vignettes, which examine whether age, vital signs, gender or life-style influence nurses in their decision-making about the administration of analgesics (McCaffery & Ferrell, 1991, 1992a,b; McCaffery *et al.*, 1992; Heath, 1998). As with patient self-reports, this method fails to identify issues within the actual clinical practice setting that may impact on nurses' decision to administer analgesics.

Attempts to obtain detailed accounts about nurse-patient interactions for pain assessment and management have led to use of interview and observation methods. Stannard *et al.* (1996) analysed audiotapes of nurses 'thinking aloud' while using a pain notation algorithm with critically ill patients. Results indicated that nurses had to use their clinical judgement accurately to balance analgesic administration against patients' haemodynamic and respiratory conditions, medical plans, and the desires of patients and their families. Other studies employing the interviewing technique have centred on individual patient interviews (Seers & Friedli, 1996; Carr & Thomas, 1997), focus group interviews with nurses (Nash *et al.*, 1999) and individual interviews with nurses (Sjöström *et al.*, 1999; Schafheutle *et al.*, 2001). A major concern with the interviewing method is that

self-reported actions may differ from what occurs in actual clinical practice. On the other hand, observational studies may provide a more effective means of describing some of the complex issues that influence pain assessment and management.

Unfortunately, observational studies of pain have rarely been undertaken in clinical settings. In Fagerhaugh & Strauss's (1977) observations of the clinical environment, they reported that the discrepancy between actual and potential pain relief could be caused by work demands, lack of accountability and the complexity of patient–nurse relationships. More recently, the observational study by Thomas *et al.* (1998) involved a comparison between nurses' assessments of patients' pain severity and patients' self-reports of pain. Similar to other research incorporating survey methods, this study focused on issues that were preconceived prior to data collection. These included patients' willingness to report pain, severity of their pain, their anxiety about pain and its acceptance. While the authors claimed that they did not intend to generalize from their data, they indicated that these issues could be tested in further studies to help predict postoperative pain experiences. It should be noted that patients were observed only for pain-related verbal, vocal, facial and other motor behaviour. Observations were not carried out of nurses' pain assessment and management decisions, and there was no accountability for the environmental context at the time of observation. Willson's (2000) observational study of patients following fractured hip repair examined people-orientated, environmental and situational factors that influenced nurses' decisions to administer analgesia. While this study explored nurses' decision-making behaviours in the clinical setting, it was limited by the use of only three patients for observation.

Our study sought to investigate the effectiveness of the observation method in exploring nurse–patient interactions for pain assessment and management in hospitalized postsurgical patients, and to identify barriers that surround nursing pain management decisions. Observations were conducted in a surgical ward.

## Method

### STUDY DESIGN

An observational design was selected as the means of obtaining information about activities relating to pain in the care of postsurgical patients. For each observation period, the day and time were selected, and the ward roster was examined to determine which consenting

nurses were working at this time. By means of a random number computer program, a consenting nurse was randomly selected for observation to eliminate any researcher bias. Each nurse was usually allocated five postsurgical patients at varying stages of recovery. Both participating nurses and their patients were given identification codes. Demographic data about the participating nurses and their patients were obtained at the end of the observation period. A surgical unit was selected on the basis that the primary surgical interventions involved abdominal or thoracic surgery. These are known to involve greater intensity and duration of postsurgical pain, ensuring potentially greater numbers and variability of pain-related activities during observation periods (Sofaer, 1984).

Various observation times were identified as key periods for activities relating to pain. These covered change of shift and staff overlap times, night shift and presleep patient assessment times, high activity morning periods and ward rounds, availability of medical staff for consultation, and staff lunch and tea breaks. The observation times were: 04:00–06:00, 08:00–10:00, 12:00–14:00, 14:00–16:00, 18:00–20:00 and 21:00–23:00 hours. Each 2-hour observation period was examined twice. A 2-hour observation period was selected because it was perceived to be appropriate for sustained observation (Bucknall, 2000) and there would be ample opportunity for each patient to be observed at least once during the 2 hours. A research assistant, who was also a Registered Nurse, conducted observations on activities relating to pain with minimal disturbance. One research assistant was used for all observations to prevent observer bias, and the investigators were present for the initial observations to ensure that the research assistant used appropriate skills for the data collection process. A portable audiorecorder with a head-mounted microphone was used to record all observations and to allow for rapid descriptions of actions. Following the observation period, the research assistant asked clarification questions of the participating nurse and these were also audiotaped. These questions obtained information regarding influences in the clinical setting and difficulties encountered in making a decision. After completing an observation period, the research assistant transcribed the audiotaped data in the form of field notes, which were then analysed. Table 1 shows the data collection schedule.

Activity relating to pain was defined as any interaction between nurse and patient or patient-related documentation that concerned the patient's pain or comfort. This activity was either patient-initiated or nurse-initiated. For example, the activity may have involved asking patients

**Table 1** Data collection schedule for observations

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1. Describe the patient's appearance, and provide details of verbal and non-verbal communication
2. Describe the activities relating to pain by referring to assessment and treatment
3. State clearly what bed number is involved when conversation occurs at the bed area
4. State the time every 10 minutes
5. State the time when the nurse is visiting the patient for the first time
6. Record the time when the nurse offers analgesia and the time when the patient receives it
7. In conversations relating to pain, use direct quotes wherever possible
8. Describe the total set of activities relating to pain, for example, mobilizing a patient postoperatively and completing a wound dressing
9. If the nurse administers a treatment for pain, ensure that the intent is clear
10. At the end of the observation period, document demographic details of the patients and the observed nurse

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about their pain, administering analgesia, listening to and discussing patients' requests for analgesia, checking medication charts for analgesic status, consulting nurses or medical staff, and evaluating the effects of analgesia. These activities were identified in previous pilot work by the investigators.

#### SAMPLE

All nurses involved in direct patient care in a surgical unit of a metropolitan teaching hospital in Melbourne, Australia, were invited to participate ( $n = 30$ ). Primary nursing was the model of care used in the unit, in which one nurse was principally responsible for the care of five patients from admission to discharge. The observed nurses were the primary nurses for the patients for whom they were caring during the observations.

#### ETHICAL CONSIDERATIONS

The study was approved by the hospital ethics committee. All nurses in the surgical unit consented to participate. Prior to each observation period the patients of the specific participating nurse were invited to consent to participate in the data collection process and to allow their medical records to be accessed for relevant demographic information, and all agreed to do so. Patients and nurses were assured that privacy and confidentiality of collected information would be maintained at all times.

#### DATA ANALYSIS

The audiotapes of the observations were transcribed verbatim and then analysed using the framework approach described by Ritchie & Spencer (1994). The five key stages of this approach are: familiarization,

identifying a thematic framework, indexing, charting, and finally, mapping and interpretation. Familiarization involves gaining an overview of the observation transcripts. In identifying a thematic framework, data are examined in order to derive key issues and themes. Indexing is the process of labelling the data into manageable units for subsequent retrieval and exploration. Charting is the process of abstraction and synthesis whereby each passage of transcript data, which has been annotated with a particular issue or theme, is examined and a summary of the participants' experiences is entered onto a chart. The mapping and interpreting stage involves comparing and contrasting participants' experiences, and searching for patterns, connections and explanations for the data set as a whole.

#### Results

Twelve field observations were carried out with 12 different Registered Nurses, who ranged in age from 23 to 31 years, and their time since registration ranged from 7 to 120 months. While their length of surgical experience varied from 7 to 114 months, their length of experience in this ward ranged from 6 to 30 months.

Four major themes were identified from the analysis of field observations. These were: (1) nurses' responses to interruptions of activities relating to pain, (2) nurses attending to patient cues of pain, (3) nurses' varying interpretations of pain and (4) nurses' attempts to satisfy nurses', doctors' and patients' competing demands. The data reported here represent analysis of 41 activities relating to pain identified in the 12 field observations. The first theme, nurses' responses to interruptions, had occurred on numerous occasions over a 24-hour period, as shown in Table 2. Each of the remaining three themes was observed at least once in each 2-hour observation period.

**Table 2** Frequencies and types of interruptions over a 2-hour observation period

Observation no. (time)	Type of interruption			
	Seeking items not located in immediate area	Assisting nurses with procedures	Answering telephone calls	Interrupting or being interrupted by others
Observation 1 (14:00–16:00)	9	10	2	8
Observation 2 (18:00–20:00)	5	1	5	11
Observation 3 (08:00–10:00)	10	1	3	11
Observation 4 (12:00–14:00)	6	6	2	6
Observation 5 (18:00–20:00)	11	12	6	12
Observation 6 (21:00–23:00)	2	0	1	7
Observation 7 (12:00–14:00)	7	0	2	8
Observation 8 (14:00–16:00)	12	2	8	12
Observation 9 (21:00–23:00)	7	0	1	3
Observation 10 (04:00–06:00)	1	0	2	6
Observation 11 (08:00–10:00)	9	1	4	7
Observation 12 (04:00–06:00)	4	0	1	3

#### THEME ONE: NURSES' RESPONSES TO INTERRUPTIONS WHEN CARRYING OUT ACTIVITIES RELATING TO PAIN

During observations, there was often considerable delay between patients' requests for analgesia and actually receiving pain-relieving medications because of nurses' responses to interruptions. Interruptions often related to other tasks that needed to be performed on time, such as administering antibiotics, answering or making telephone calls, assisting nursing students with patient care (for example, supervising drug administration and wound dressings), and searching for equipment. When nurses responded to these interruptions, they were often unable to attend to the immediate analgesic and comfort needs of patients.

Table 2 indicates the types and frequency of interruptions. During the observations, nurses sought out equipment such as blood pressure machines, stethoscopes, saturation oximeters and tympanic thermometers, which were not located in the immediate patient environment. Some items were a considerable distance from the immediate patient area. The role of assisting nursing students, agency nurses and inexperienced nurses was also a source of interruption. As student nurses worked in the ward during the day rather than at night, the number of interruptions from this source tended to be lower overnight. For observations 1 and 5, in which the observed nurse was 'buddied up' with a student nurse, the number of interruptions from this source was high. Answering telephone calls was also a major source of interruption. A ward clerk was employed from 08:00

to 16:00 to perform this role. However, outside of these times, and during the ward clerk's tea breaks, nurses generally answered the telephones. The peak time period for the observed nurse to answer telephones was between 14:00 and 20:00. Another source of interruption was the nurse interrupting or being interrupted by other nurses, doctors or ward assistants. When the observed nurse or other health professionals held conversations with each other or sought out particular items or individuals, such as patient medical histories, pathology order charts, patients, blood pressure machines or lunch trays, these interruptions meant that valuable time was spent away from the patient area. Being interrupted or interrupting was common at all times, but in particular in the late afternoon and early evening. Despite frequent acknowledgements that they were having a busy shift, nurses continued actively to interrupt each other. Overall, interruptions consumed a major proportion of the observed nurse's activity, impacting significantly on the availability of time spent on pain assessment and management.

#### THEME TWO: NURSES ATTENDING TO CUES RELATING TO THEIR PATIENTS' PAIN

Nurses were observed to respond in various ways to verbal, non-verbal and behavioural manifestations of pain. They tended to be very attentive to pain cues at times when other observations were made, including blood pressure, pulse and temperature. During this time they also examined medication charts to identify analgesic orders. For example:

The nurse finishes taking the patient's blood pressure and pulse, and begins to assess the patient's wound. As she palpates the patient's lower abdomen, the patient winces. The nurse asks the patient if she has any pain and the patient replies that the area is very tender. After retrieving the medication chart, the nurse checks when the patient last received some analgesic medication.

At other times, when patients expressed pain or discomfort, nurses would acknowledge the statement, but not follow-up with further questioning or affirmation of the condition. If patients exhibited grimacing or moaning in response to movement or mobilization, nurses would often continue with the activity until it was completed. They explained the benefits of moving or mobilizing to patients prior to the activity. However, during the 12 observations nurses were never observed to assess patients for pain prior to these activities or to ask them about their pain. Instead, patient discussions about pain were usually raised either during or towards the end of an activity, and at times when vital sign assessments were completed.

When patients commented during an activity that they were experiencing pain, nurses responded by asking if they were 'coping' with the pain, confirming that they were 'doing really well' or reminding them to take deep breaths. Furthermore, during the 12 observations, nurses were observed not to offer prophylactic pain relief prior to an activity. When questioned about this issue following observations, one nurse had indicated that she expected patients to tolerate some degree of pain during activities such as mobilization and wound dressing changes.

Nurses' questioning about pain related to a large extent on patients' ability to tolerate this and to continue the planned activity. For example:

The patient is lying prone, is completely uncovered, and has a huge wound that takes up his whole hindquarter. The nurse caring for the patient says: 'The girls [nurses] gave him some morphine earlier on, but there is no pain with what I am going to do now. Another nurse and I discussed about giving pain relief at handover, but I don't think he actually needs anything now.' ... The nurse rinses the wound with saline ... As she puts the dressing packing plug into the deep hole of the wound, the patient jumps a little bit ... The nurse apologizes and says that he might experience some discomfort while this is happening, and continues with the dressing.

While nurses tended to persist with a particular activity as patients experienced pain, they were also compelled to

attend to the cues if the manifestations of pain were very obvious. For example:

The patient is slumped in the bed, and the nurse says that she would like to sit her up ... As the patient complains that her whole stomach is sore, the nurse asks if she can give her a hand to sit up. The patient slowly rolls over and the nurse straightens out her legs. The patient is now on her back and the nurse asks her to sit up. The patient slowly sits up with great difficulty. The nurse asks her to push herself back up the bed as the nurse assists with the activity. As the patient drops back, she suddenly yelps in pain. She then lies down flat and starts yelling and moaning. 'Okay, I'll get you something for the pain', says the nurse.

#### THEME THREE: NURSES' INTERPRETATION OF PAIN

Nurses tended to identify pain specifically with incisional pain following surgical procedures. Patients experienced pain from other causes, such as that associated with constipation, an intravenous site or urinary catheter. Inexperienced nurses were also observed to be making multiple attempts to obtain a blood sample without asking patients how they felt about the procedure. During observations, nurses also tended to focus on assessing incisional pain rather than on other causes of pain. As noted in the following observation:

The patient has just complained of pain, and the nurse comments: 'Have you got some pain? Where is your pain?' The patient points to his urinary catheter and the nurse replies: 'Oh, the pain is where the catheter is.' She comments that she gave him something for the pain a little while ago, and that she would look to see if it is time to have something again. The patient says that the stitches are not really sore; it is just uncomfortable around the urinary tube.

Sometimes, following persistent promptings by patients, nurses focused on particular sources of pain or discomfort other than the incision site. In the following example, the nurse had just administered a narcotic analgesic to a patient following abdominal surgery who continued to complain about his inability to manoeuvre around his bed. The patient had a long-term urostomy tube inserted following urogenital surgery on a previous hospital admission:

'I can't lie on my side for long because it mucks up the urostomy bag', says the patient. 'Oh, but you should be able to move around now that you have had some pain relief', replies the nurse. 'The urostomy

bag won't drain. I've got other troubles you see', comments the patient. 'Oh, if that's the case, I'll have a look at your drain tube', says the nurse.

While the nurse indicated that pain relief would assist the patient to mobilize around the bed area, it was not until the patient informed her about the discomfort he experienced from his urostomy bag that she decided to check this site systematically.

#### THEME FOUR: NURSES' ATTEMPTS TO ADDRESS COMPETING DEMANDS OF NURSES, DOCTORS AND PATIENTS

Throughout the observations nurses' decision-making activities were influenced by competing demands of other nurses, doctors and patients. Relationships between health-care professionals were important to enable nurses to clarify specific patient care issues for which they were responsible and for organizing their activities and work environment. It was common for nurses to interrupt patient care to attend ward rounds or provide information to attending doctors. At the same time, they attempted to act as patient advocates in their communication with doctors. In the following fieldnotes, a patient was waiting in a prone position for doctors on the ward round to inspect his sacral wound:

The patient asks the nurse if there is sign of the doctors as he is very uncomfortable. He moans between breaths and is very restless. The patient lies on his bed in the prone position because he has a very large sacral wound ... The nurse explains to the patient that she needs to keep him in the prone position until the doctors come so they can assess his wound. She says to him that if she repositions him the doctors will come around and he will have to get back on his stomach ... The nurse pages one of the plastic surgeons who will be examining the wound. She explains to the doctor that the patient is very uncomfortable in the prone position and asks what time the medical team might be coming ... The nurse then heads back to the bed area and tells the patient that the doctors will be there in 10–15 minutes. She gives the patient a drink of water and tells him that she will be back in about 10 minutes with his medications. The patient thanks the nurse as she leaves the room.

Nurses also addressed doctors' and patients' needs in competing ways with respects to administration of analgesic drugs. If patients indicated that they were experiencing pain, nurses referred to medication order charts to determine when the next analgesic dose was due. While

more experienced nurses were more willing to collaborate with a doctor to alter a medication order, less experienced participants were reluctant to request a change in analgesia administration. Instead, less experienced participants tended to communicate with experienced nurses if they were not satisfied that the ordered analgesic alleviated their patients' pain.

Nurses were also observed to act as a patient advocate in communicating with doctors about inappropriate procedures that aggravated patients' pain, as demonstrated in the following observation:

The nurse discusses with the resident about the patient's dressings. She thinks that the dressings are inappropriate because they cause unnecessary pain for the patient. As the resident [first year medical officer] will not alter the dressing protocols for the patient, the nurse confers with the nurse unit manager and pages the medical registrar [third year medical officer].

#### Discussion

The observations highlight the complex, multidimensional nature of pain (Seers & Friedli, 1996). A number of issues were raised by this study that contribute further to knowledge of complex influences impacting on the assessment and management of postoperative pain.

The study revealed that interruptions were a major barrier to effective pain relief, which may have affected formal pain assessment, and caused delays between assessment and analgesic administration. Being interrupted was so pervasive in the nurses' clinical practice that they moved rapidly from one task to another and, as found by Street (1995, p. 54), were unable 'to sit at one task in one place for a period of time without interrupting themselves by thinking of other things to do'. An effect of the interruptions was that patients did not appear to communicate openly their pain concerns to nurses. Instead, they were observed to wait to be asked about their pain rather than to request pain relief themselves. The problem with interruptions is that they encourage patients to hesitate in bothering nurses about their pain 'for fear of been [sic] regarded as a nuisance' (Carr & Thomas, 1997, p. 198). In the study by Carr and Thomas, patients indicated that because nurses were constantly interrupted and were busy in their attempts to complete nursing care activities, they felt uncomfortable in requesting pain relief. Nurses may also actively keep themselves busy, interrupt others or respond to interruptions as avoidance techniques in coping with the stress of caring for postoperative patients (Bailey & Clarke, 1989), which may further deter

patients from asking questions about their pain (Morrison, 1994).

Interruptions that occurred through nurses completing additional tasks also prevented them from assessing and managing patients' pain needs. If this issue is a continuous aspect of their practice, it can have implications for the way nurses gain knowledge and experience about pain. The term 'multiskilling' has been applied to the idea that nurses are adaptable and capable of performing in any context. Benner (1984) demonstrated that the multiskilled, adaptable nurse involves a process of de-skilling because it does not provide nurses with the time or opportunity to develop into expert practitioners. In this instance, nurses may have had little opportunity to become skilled in pain assessment and management – a major nursing responsibility in a surgical ward – because they spent a significant amount of time completing other tasks.

According to Street (1995, p. 53), nurses permit themselves to be interrupted and to interrupt each other because they work within an 'open floor' space. As nursing work occurs within an 'open floor' or public arena, it has little control of space and privacy, and is associated with persistent scrutiny. Nurses learn to move quickly through a variety of tasks, and find it enormously difficult to remain focused on one activity (Street, 1995). In our study, there appeared to be a sense of priority, where some nursing activities assumed a higher 'non-interruptible' status over others. For instance, during the observations, nurses placed a higher priority on activities that impacted on their interactions with other nurses or that had to be completed by the end of the working shift, such as assisting nurses with procedures and seeking equipment for the documentation of vital signs or completion of dressings. On the other hand, nurses appeared to place a lower priority on activities that directly impacted on patient comfort, for example, administering analgesic medications within an appropriate timeframe.

This study also indicated the importance of analysing the effects of activities on patients' pain. Clearly, questioning a patient prior to and during activities such as wound dressing changes, hygiene tasks and mobilization should encompass the goal of relieving pain. The observations showed that nurses tended to focus on patients' ability to tolerate pain while a particular activity is undertaken rather than attempting to alleviate the pain beforehand (Sjöström *et al.*, 1999).

Another significant issue that emerged was that nurses tended to identify pain specifically with incisional pain following surgery. Pain experienced from other causes was either ignored or treated in the same way

as incisional pain. This issue has not been identified in the literature; rather, attention has been placed on nurses' association of certain types of surgery with certain expectations about the severity of pain (Sofaer, 1984; Yates, 1993; Nash *et al.*, 1999), and with the expected duration of analgesic therapy (Balfour, 1989). While incisional pain must be promptly assessed and managed, that associated with other causes also warrants careful consideration.

A further important issue involved participants' difficulties in competing for attention with the needs of other nurses, doctors and patients. Pressures to conform to the prevailing 'norms' of the clinical environment may have contributed to this situation (Nash *et al.*, 1999). As increased pain levels are directly associated with fear and anxiety, patients may be unwilling to speak with nursing staff to discuss their requirements for pain relief (Carr & Thomas, 1997). They also experience a sense of helplessness while in hospital, which can also increase their hesitation in communicating their needs to nurses (Bailey & Clarke, 1989). In order to enhance nurses' prioritization of patients' needs, it is essential that further attention is given to empowering relationships among nurses, between doctors and nurses, and between healthcare professionals and patients. Nurses could facilitate empowering relationships by engaging in collaborative discussions about activities relating to pain. While these discussions need to address the subjective and individualized comfort needs of patients, they should also involve a process whereby healthcare professionals and patients work collectively to negotiate effective practices and behaviours for pain assessment and management.

#### LIMITATIONS

It is possible that nurses involved in this study may have had raised awareness of pain assessment and management as a consequence of the observations and pain questioning. This may have resulted in an increased number of nurse-initiated activities relating to pain during observation periods. However, previous research using participatory observation (Bucknall, 2000; Manias & Street, 2001) suggests that participants' awareness of being observed decreases significantly during observation periods. Another limitation is that the findings represent an observational study of one surgical unit within a particular hospital, and therefore, cannot be generalized to other units. Nevertheless, it may be useful for nursing staff in other hospital settings to use the findings to challenge their own assessment and management of postoperative pain.

## Conclusion

The observation findings of this study provided further insight into how nurses deal with the assessment and management of postoperative pain. It is unlikely that surveys and randomized controlled trials would have generated the rich data obtained. Similarly, individual and focus group interviews would not have fully captured the impact of nurse–patient interactions for pain assessment and management, and the potential barriers that affect pain management decisions. The study has demonstrated that the observational method is invaluable for exploring work demands in clinical areas, levels of accountability surrounding pain assessment and management, and the complexity of competing demands between nurses, doctors and patients. As this method considers individuals' experiences, feelings and expectations about pain, it resonates well with the multidimensional aspects of this complex phenomenon.

Influences described in this study, such as interruptions and competing demands of nurses, doctors and patients, have tended to be less visible to researchers and to be taken-for-granted by nurses. In identifying some of the complex influences, this study has enhanced the understanding of pain assessment and management that was lacking in previous work. Indeed, the study identified that pain decisions are not simply matters relating to education and compliance with a medication order but are the result of the complex interplay of many activities. Nurses need to be more aware of the barriers to effective decision-making and, by a process of collegial consultation, to raise their peers' awareness of such barriers.

These findings demonstrate that there is significant scope for the development and evaluation of strategic intervention programmes that analyse nurses' practices in postoperative pain management and in particular administration of opioid analgesics. These programmes could help nurses to identify and implement strategies that address patients' analgesic needs more effectively. For instance, they could evaluate changes in nurses' responses to interruptions, or in their attentiveness to patient cues. Clearly, programmes must address not only knowledge enhancement but also the wider complex influences on pain assessment and management.

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## References

- Bailey R. & Clarke M. (1989) *Stress and Coping in Nursing*. Chapman & Hall, London.
- Balfour S.E. (1989) Will I be in pain? Patients' and nurses' attitudes to pain after abdominal surgery. *Professional Nurse* 5(1), 28–33.
- Benner P. (1984) *From Novice to Expert: Excellence and Power in Clinical Nursing Practice*. Addison-Wesley, Redwood City.
- Bucknall T. (2000) Critical care nurses' decision-making activities in the natural clinical setting. *Journal of Clinical Nursing* 9, 25–36.
- Carr E.C.J. & Thomas V.J. (1997) Anticipating and experiencing post-operative pain: the patients' perspective. *Journal of Clinical Nursing* 6, 191–201.
- Fagerhaugh S.Y. & Strauss A. (1977) *Politics of Pain Management: Staff–Patient Interaction*. Addison-Wesley, London.
- Field L. (1996) Are nurses still underestimating patients' pain postoperatively? *British Journal of Nursing* 5, 778–784.
- Gillies M.L., Smith L.N. & Parry-Jones W.L.I. (1999) Post-operative pain assessment and management in adolescents. *Pain* 79, 207–215.
- Graffam S. (1981) Congruence of nurse–patient expectations regarding nursing in pain. *Nursing Leadership* 4, 12–15.
- Harmer M. & Davies K.A. (1998) The effect of education, assessment and a standardised prescription on postoperative pain management. *Anaesthesia* 53, 424–430.
- Heath D.L. (1998) Nurses' knowledge and attitudes concerning pain management in an Australian hospital. *Australian Journal of Advanced Nursing* 16(2), 15–18.
- International Association for the Study of Pain (1979) Pain terms: a list of terms with definitions and notes on usage. *Pain* 6, 249–252.
- Lebovits A.H., Florence I., Bathina R., Hunko V., Fox M.T. & Bramble C.Y. (1997) Pain knowledge and attitudes of healthcare providers: practice characteristic differences. *Clinical Journal of Pain* 13, 237–243.
- Manias E. & Street A. (2001) Nurses and doctors communicating through medication order charts in critical care. *Australian Critical Care* 14, 17–23.
- McCaffery M. & Beebe A. (1989) *Pain Clinical Manual for Nursing Practice*. C. V. Mosby, St Louis.
- McCaffery M. & Ferrell B.R. (1991) Patient age: does it affect your pain-control decisions? *Nursing* 21(9), 44–48.
- McCaffery M. & Ferrell B.R. (1992a) How vital are vital signs? *Nursing* 22(1), 42–46.
- McCaffery M. & Ferrell B.R. (1992b) Does the gender gap affect your pain-control decisions? *Nursing* 22(8), 48–51.
- McCaffery M., Ferrell B.R. & O'Neil-Page E. (1992) Does life-style affect your pain-control decisions? *Nursing* 22(4), 58–61.
- Morrison P. (1994) *Understanding Patients*. Bailliere Tindall, London.
- Nash R., Yates P., Edwards H., Fentiman B., Dewar A., McDowell J. & Clark R. (1999) Pain and the administration of analgesia: what nurses say. *Journal of Clinical Nursing* 8, 180–189.
- Ritchie J. & Spencer L. (1994) Qualitative data analysis for applied policy research. In: *Analyzing Qualitative Data* (Bryman A. & Burgess R.G., eds). Routledge, London, pp. 173–194.
- Schafheutle E.I., Cantrill J.A. & Noyce P.R. (2001) Why is pain management suboptimal on surgical wards? *Journal of Advanced Nursing* 33, 728–737.
- Seers K. & Friedli K. (1996) The patients' experiences of their chronic non-malignant pain. *Journal of Advanced Nursing* 24, 1160–1168.

- Sjöström B., Dahlgren L.O. & Haljamäe H. (1999) Strategies in postoperative pain assessment: validation study. *Intensive and Critical Care Nursing* **15**, 247–258.
- Sofaer B. (1984) *Pain: a Handbook for Nurses*. Harper & Row, London.
- Stannard D., Puntillo K., Miaskowski C., Gleeson S. & Kehrle K. (1996) Clinical judgement and management of postoperative pain in critical care patients. *American Journal of Critical Care* **5**, 433–441.
- Street A. (1995) *Nursing Replay: Researching Nursing Culture Together*. Churchill Livingstone, Melbourne.
- Thomas T., Robinson C., Champion D., McKell M. & Pell M. (1998) Prediction and assessment of the severity of post-operative pain and of satisfaction with management. *Pain* **75**, 177–185.
- Willson H. (2000) Factors affecting the administration of analgesia to patients following repair of a fractured hip. *Journal of Advanced Nursing* **31**, 1145–1154.
- Yates P. (1993) Towards a reconceptualization of hope for patients with a diagnosis of cancer. *Journal of Advanced Nursing* **18**, 701–706.
- Yates P., Dewar A., Edwards H., Fentiman B., Najman J., Nash R., Richardson V. & Fraser J. (1998) The prevalence and perception of pain amongst hospital in-patients. *Journal of Clinical Nursing* **7**, 521–530.
- Zalon M.L. (1993) Nurses' assessment of postoperative patients' pain. *Pain* **54**, 329–334.