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The reactions of nurses to the pain of their patients: a personal construct analysis

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THE REACTIONS OF NURSES TO THE PAIN OF THEIR PATIENTS:

A PERSONAL CONSTRUCT ANALYSIS

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ABSTRACT

This study of the impact of hospitalised patients pain upon nurses was generated by three concerns:

1. How does the pain nurses encounter as part of their work contribute to their occupational stress?
2. Why does acute pain, a common feature of the experience of hospitalised patients, continue to be mismanaged?
3. How do the ways nurses deal with their emotions about pain influence the way they manage pain relief?

The professional image of the nurses as carer and pain reliever is incompatible with the reality of the nurse faced with exposure to intense pain for long periods of time. Burns nurses must subject patients to repeated and painful-albeit therapeutic-procedures. These carers are necessarily also inflictors of pain. Most nurses feel responsible for pain control yet their control over resources to alleviate pain is limited. This affects neonatal nurses especially. These two groups of nurses, burns and neonatal, are the focus of this study.

From the literature and from concepts of personal construct theory, I developed a preliminary personal construct model of nurses' reactions to patients' pain. This model was tested and elaborated upon from analyses of interview data collected from 65 nurses working in the burns and neonatal intensive care units of four university teaching hospitals over a period of two and a half years.

Interview data (comprising responses to two open-ended questions) were scored for positive and negative affect and for the strategies used by the nurses to cope with pain. Hypotheses derived from the preliminary model were tested statistically and the results were incorporated into a new model. I used the results of qualitative analyses to elaborate on this model.

Four types of coping strategies were used by the nurses: distancing, engaging, social support and role reconstruction. Distancing was the most commonly adopted strategy. Engaging was a more assertive strategy and was more frequently adopted by neonatal nurses. Social support was more commonly used by burns nurses. Role reconstruction was used only by a small number of nurses.

It is apparent that nurses have received little guidance from theoretical and research literature on ways of dealing with pain that are consistent with their identity as nurses. Public debate is necessary for nurses to be able to reconstruct their roles so that the gap between the practice and the rhetoric of nursing is narrowed and nurses develop more useful coping strategies. When health care professionals develop means of protecting themselves and their patients from the consequences of the paradoxical nature of their work, the psychological health of nurses is likely to be enhanced.

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CHAPTER 1

NURSING AND PAIN

In this research I am concerned with the impact that the pain of hospitalised patients has on the nurses who care for them. There are three related reasons for undertaking it. The first reason is that the pain nurses encounter as part of their work, contributes to their occupational stress. To date there has been little study of the ways in which pain contributes to this stress or of the strategies that nurses use to cope with it. The second reason is that while acute pain is a common feature of the experience of hospital patients, there is abundant evidence that it continues to be mismanaged (Kilham et al., 1988; Edwards, 1990; Owen & Cousins, 1991). It is important that research focuses on why this is happening. The third reason is the interdependence of welfare of people in pain and of the nurses who care for them. The pain of patients affects nurses and the way nurses are affected influences the way they manage pain. My thesis is that a fresh approach to the study of pain is needed and that the approach should seek a better understanding of the interdependence of the welfare of patients and the welfare of those who care for them. As a first step on this road, I present an in-depth exploration of the ways that nurses make sense of the pain of their patients.

The central argument of this thesis is that strategies for improving pain management must include enhancement of our understanding of the psychological processes of the nurses and doctors who make decisions about the control of pain in hospitalised people. Health professionals who are struggling to maintain their own emotional functioning, may not be

well placed to meet the physical and emotional needs of patients. While this research focuses on nurses, many of the issues also have relevance for other health professionals, such as doctors (Schecter & Allen, 1986), social workers, (Addison, 1980) and dentists (O'Shea, Corah, & Ayer, 1984; Render, 1985).

Nurses caring for two different types of patients - victims of burn injuries and critically ill neonates - provide the focus for this research. Their experiences reflect many of the issues affecting nurses when they care for people in pain. The experiences of nurses caring for burn victims allow exploration of (a) the effect on nurses of constant exposure to severe pain and (b) the effect of subjecting people to repeated, painful, but therapeutic, procedures. The experiences of nurses caring for critically ill neonates provide opportunities for the examination of the effect on nurses when they are confronted by barriers to obtaining pain relief for their patients.

The issues surrounding the way pain affects nurses fall broadly into two areas: (a) problems encountered in the process of pain management in hospitals and of (b) the effect of pain on nurses. Each of these areas will be discussed in turn in the following sections.

PROBLEMS ENCOUNTERED IN THE PROCESS OF PAIN MANAGEMENT IN HOSPITALS

The literature on patients' pain reflects the paradoxical nature of pain management in hospitalised patients. Patients continue to experience unnecessary pain that could be relieved by adequate doses of readily available analgesia (Carr, 1990; Cohen, 1980; Cousins & Mather, 1989; Eland & Anderson, 1977; Strauss, Fagerhaugh, & Glaser, 1974; Kilham et al., 1988; Loeser & Cousins, 1990; Marks & Sachar, 1973; Melzack, 1990; Owen & Cousins, 1991; Schecter, 1989). Loeser and Cousins (1990, p.210) commented that "patients receive wonderful anaesthetic care during a surgical procedure but abysmal relief of their post-operative pain and suffering." Although health professionals may claim that their major goal is to alleviate as much pain as possible (Burokas, 1985), or even to achieve complete pain relief (Page & Halvorson, 1991), they often fail to take full advantage of opportunities to achieve these ends (Denyes, Neuman, & Villarruel, 1991; Fagerhaugh & Strauss, 1977; Marks & Sachar, 1973; Mather & Mackie, 1983; Perry, 1984b; Perry & Heidrich, 1982).

Hospitalised patients may experience physical pain as a result of injury (eg., burns), disease (eg., cancer), painful investigations (eg., biopsies) or therapies (eg., dressing changes). Although there is a growing interest in the use of non-analgesic methods of pain control, for

most patients, analgesia remains the most effective way of treating pain.

Analgesic options range from the milder types of drugs such as codeine, aspirin or paracetamol to narcotics such as morphine or pethidine. Manufacturers recommend appropriate doses according to the age and body mass of the patient. The use of analgesia is strictly controlled and only medical practitioners have the legal authority to prescribe it. As medical practitioners, however, spend only a very small portion of their time with any particular patient, requests for prescriptions are often made by nurses. In hospitals prescriptions may include a dosage range (eg., 4-6 milligrams) and state only the maximum frequency with which the drug may be administered. Analgesia is often prescribed to be given "prn" or "when necessary", (eg., when necessary, but no more frequently than fourth hourly). The actual administration of these medications requires nurses to make judgements about the "intensity" of the patients' pain, to select an "adequate" dose from the prescribed range and to decide when the next dose should be administered.

Studies focusing on nurses have revealed several disturbing trends. First, nurses tend to underestimate their patients' pain (Schneider & LoBiondo-Wood, 1992) and overestimate the effects of drug therapy (Bondestam, Hovgren, Johansson, Jern, Herlitz, & Holmberg, 1987). Second, despite evidence that prophylactic medication is the most effective way of controlling pain (McCaffrey & Hart, 1976), nurses often

wait until the patient's pain is sufficiently intense for them to request relief. It is then necessary to administer larger doses to achieve good control. Third, prior to conducting painful therapeutic procedures, nurses sometimes fail to administer ordered premedication even when patients rate the pain as moderate to severe (Choiniere, Melzack, Girrard, Rondeau, & Paquin, 1990). From a study of the management of post-operative pain, Mather and Mackie (1983) concluded that medication prescribed by doctors to be given "when necessary," is often interpreted by nurses to mean "as little as possible." Doctors often prescribe less than therapeutic doses and nurses tend to administer the lowest dose in the prescribed range, at less than ideal frequencies (Atchison, Guercio, & Monaco, 1986; Cohen, 1980; Marks & Sachar, 1973; Perry 1984a; Schecter & Allen, 1986; Watt-Watson, 1987). Just why nurses take such a conservative approach to pain control is unclear.

There is consistent evidence that the pain of adult patients is inadequately managed, yet children are even more disadvantaged (Eland & Anderson, 1977; Purcell-Jones, Dormon, & Sumner, 1988; Schecter & Allen, 1986; Schecter, 1989). Several studies that matched children and adults for type of surgery, and consequently for tissue damage, have found that children receive significantly fewer post-operative analgesic doses than adults. For example, Schecter, Allen and Hanson (1986) matched 90 adults with 90 children having surgical procedures involving similar pathophysiological problems. After controlling for length of

hospital stay, they found that the children were given approximately half the number of doses administered to adults. Similar results were found by Eland (cited in Eland & Anderson, 1977). Doctors are less likely to prescribe medication for children's pain (Beyer, DeGood, Ashley, & Russell, 1983; Mather & Mackie, 1983; Perry & Heidrich, 1982). They tend to prescribe milder non-narcotic analgesia for children and stronger narcotic analgesia for adults (Schecter et al., 1986). Nurses administer fewer doses to children (Beyer et al., 1983; Mather & Mackie, 1983) and as the time spent in hospital lengthens, so does the discrepancy between doses of narcotics administered to children and adults (Schecter et al., 1986).

It is critical that the reasons why many hospitalised patients experience unnecessary pain are studied. Previous studies have suggested that the problem stems from a variety of circumstances including inadequate education of health professionals (Carr, 1990; Cohen, 1980; Heidrich, Perry & Amand, 1981; Ketovuori, 1987; Loper, Butler, Nessly, & Wild, 1989; Max, 1990; Watt-Watson, 1987; Wilson, Brockopp, Kryst, Steger & Witt, 1992), poor accountability of health professionals for the pain experienced by patients (Fagerhaugh & Strauss, 1977; Manon, 1985), failure to involve patients in pain control decisions (Manon, 1985), a lack of accurate pain assessment tools (Choiniere et al., 1990), a misunderstanding of the nature of pain (Cupples, 1992) or their own or their offspring's previous pain experiences (Burokas, 1985; Freed, 1975).

Some research has indicated that nurses' clinical judgments about pain are influenced by patients' personal characteristics such as their culture (Davitz & Davitz, 1985) socio-economic status (Davitz & Pendleton, 1969) and age (Beyer et al., 1983; Davitz & Davitz, 1985). Few researchers have considered in detail the role played by nurses' psychological reactions to patients' pain.

THE EFFECTS OF PAIN ON NURSES

Pain research has tended to focus on patients' need for pain relief, for empathic understanding of patients' suffering (Königová, 1992) and the reactions of health professionals to those needs (Davitz & Davitz, 1980). The goals of pain management have been to improve the care provided to patients in pain, but the welfare of the staff providing the care has been largely overlooked. The impact of pain on nurses has implications, not only for the welfare of patients, but also for the nurses' own psychological well-being.

For many years, nursing has been shown to be among the more stressful occupations. For instance, Colligan, Smith and Hurrell (1977), who ranked 130 occupations according to the degree of stress, found that different types of nursing ranked 3rd, 10th and 27th. During a 1970 study, Menzies (1970, p. 3) remarked how the attention of the researchers was "repeatedly drawn to the high level of tension, distress and

anxiety among the nurses." Similarly, after comprehensively surveying studies of stress in nurses, Marshall (1980, p. 21) concluded that the nurse's role is " implicitly and chiefly one of handling stress. She is a focus for the stress of the patient, relatives and doctor as well as her own". There is no doubt that the pain nurses encounter in patients contributes to this stress (Atchison et al., 1986; Austin et al. 1988; Davidson & Jackson, 1985; Heidrich et al., 1981; Leatt & Schneck, 1980; Goodstein, 1985; Quinby & Bernstein, 1971 Steeves, Kahn, & Benoliel, 1990).

Three aspects of pain that must be considered when studying the psychological impact of pain on nurses are the effects on nurses of (a) being constantly exposed to pain, (b) being required to subject patients to numerous painful clinical procedures and (c) lacking direct control over the most effective pain control methods.

The Effects on Nurses of Exposure to Pain

Exposure to pain has been shown to affect such members of the health care team as social workers (Addison, 1980) and physiotherapists (Templeton, 1983). However, the nature of "the continuous care" (Street, 1992, p. 201) provided by nurses means that they spend the greater part of their working day at or near the patient's bedside. Nurses

are, therefore, exposed to the pain experienced by their patients more intensely than other health professionals.

Nurses caring for burn victims are exposed to more intense pain for longer periods of time than most other nurses (Quinby & Bernstein, 1971; Brough et al., 1991). Burn victims who survive their injuries face an often prolonged period of painful hospitalisation (Andreason, Noyes, Hartford, Brodland, & Proctor, 1972). Health professionals generally agree that complete control of burn pain is not possible, as doing so may mean keeping patients in such heavily sedated states that they would not be able to co-operate with the treatment that is essential for recovery.

While exposure to pain has the potential to create negative emotional effects on nurses, there have been few attempts to study it directly. Current understanding is largely based on assumptions drawn from studies in related areas. For instance, following a review of the literature of post-traumatic stress reaction, Davidson and Jackson (1985) concluded that for susceptible nurses, the long-term effects of exposure to stresses such as pain may be similar to the delayed post-traumatic anxiety reaction found in war veterans. They postulate that nurses working under conditions such as those caring for burn victims are likely to experience increased fears of death and mutilation and feelings of powerlessness. It follows that nurses may also experience feelings of

powerlessness and guilt when they are unable to alleviate the pain experienced by their patients.

There is some evidence that health professionals respond to constant pain exposure by decreasing their sensitivity to it (Choiniere et al., 1990; Fagerhaugh & Strauss, 1977; Perry & Heidrich, 1982). Baer, Davitz, and Lieb, (1970), for example, found that although nurses and doctors worked more closely with burn patients than social workers, they were less likely to recognise pain cues. Fagerhaugh and Strauss (1977) found that experienced nurses working in burns units gave smaller does of analgesia then the less experienced nurses. Similarly Von Baeyer and Krause (1983) found that in a simulated study of pain expression, nursing students with greater nursing work experience demonstrated less concern about pain and were less likely to recommend pain relief measures.

The results of these studies suggest that when nurses are exposed to pain for prolonged periods of times they are likely to protect themselves by becoming less sensitive to pain and to patients' need for pain relief. In-depth exploration of nurses' experiences is necessary to understand the processes by which they protect themselves, and to identify alternative ways that nurses might cope that do not result in insensitivity.

The Effects on Nurses of Inflicting Painful Clinical Procedures on Patients

No study of the effects of pain on nurses can be complete without considering the pain that nurses actually cause patients. For example, it is sometimes necessary for nurses to perform painful wound dressings, to coerce people into mobility after surgery or to move injured limbs. Dind (1989), a nurse educator from Switzerland with considerable involvement with Amnesty International, has gone so far as to argue that hurting is so much a part of the job of nursing, that nurses should be taught about torture to help them understand their own motivations and behaviour.

Nurses inflict more pain than most other health professionals (Daley, 1978). Although medical staff tend to prescribe painful procedures which nurses conduct, they are rarely present during the actual procedure. One of the most painful of these procedures is wound debridement which is part of the daily routine of nurses who work in burns units. It consists of placing the patient in a bath and removing the dead skin by alternately rubbing the burn and rinsing the area (Goodstein, 1985; Heidrich et al., 1981; Szyfelbein, Osgood, & Carr, 1985; Wernick, Jaremko, & Taylor, 1981). The resulting pain has been described by both patients (Andreason et al., 1972; Choiniere, Melzack, Rondeau, Girrard, & Paquin, 1989; Perry, Heidrich, & Ramos, 1981; Wernick et al., 1981) and nurses (Atchison, et al., 1986) as greater than the pain from the burn

itself. Understandably, patients respond by becoming highly anxious, depressed and angry (West & Schuck, 1978). Their anger may be directed at nursing staff in the form of either verbal hostility or physical violence (Mendelsohn, 1984).

Working in a burn unit not only invites hostility from patients but may also attract a certain amount of animosity from friends, family and from health professionals working in other areas (Atchison et al., 1986; Ravenscroft, 1982). Addison (1980, p. 346), a social worker, reported a colleague's comment that "Anyone who works here must be insensitive." Brodie (1984) similarly described the lack of admiration from nursing colleagues who remarked: "How can you work there?" Manon (1985, p. 254) a sociologist, encountered similar reactions from his "friends and associates" when he conducted an ethnographic study of life in a burn unit.

There have been some attempts to study the effects of painful procedures on nurses, but most are beset with methodological problems that limit confidence in the findings. In an early study for example, Quinby and Bernstein (1971) followed an unspecified number of nurses over a 12 month period following the opening of a new paediatric burns unit. They reported a gradual change in the nurses from optimism and enthusiasm to increasing disillusionment, anger and resentment as they confronted the difficulties of the daily debridement baths. Quinby and

Bernstein's (1971) results, however, must be accepted tentatively as they were accompanied by minimal methodological details and no evidence of the reliability and validity of their methods.

Several health care workers have documented their personal experiences of working in paediatric (Brodie, 1984; Templeton, 1983) and adult burns units (Hinsch, 1982). Templeton (1983, p. 2) wrote about her feelings about administering painful physiotherapy to children. She reported how she hated "feeling the fear - seeing the terror and hearing the screams of 'go away, I hate you' when I walk into the ward or bathroom." Brodie (1984) observed that the atmosphere was inevitably one of conflict rather than cooperation between the nursing staff and the children. Nurses were torn between their awareness of the children's distress, and their knowledge that discontinuing treatment would cause the child more pain in the long term from corrective surgery for deformities and scarring. Hinsch (1982) writing of her experiences of working with adult burn victims concluded that:

> There is no other aspect of nursing that requires nursing staff to continually inflict pain on other human beings in the course of necessary care. To be able to continue to work on a burns unit, the nurse must adapt herself with [sic] dealing with other peoples pain, both physical and emotional (Hinsch, 1982, p. 1).

Although these reports provide insights into the writers' experiences, they remain no more than anecdotal evidence. The themes they highlight, however, are similar to those of other studies. For example many have pointed out that nurses' distress may be complicated by doubts about the justification for inflicting painful treatments on patients whose disorders or injuries may seriously affect their quality of life (Brodie, 1984; Davidson & Noyes, 1973; Pauker, 1986; Quinby & Bernstein, 1971).

Other studies have found evidence of nurses' irritability, moodiness, sleep disturbances, (Lewis, Poppe, Twomey, & Peltier, 1990) and bizarre dreams involving themes of torture (Pauker, 1986; Perry, 1984a). The results of these studies, however, were based on small sample sizes from only one site.

In general the findings of research suggest that the atmosphere in the burns unit is dominated by the pain of the patients. Nurses are not only required to witness this pain but to add to it. They tend to respond with feelings of helplessness because they are unable to relieve the patients' suffering, with feelings of anger at the patient for failing to understand the nurses' position, and with anxiety, particularly in the form of guilt over their anger when patients may legitimately expect to elicit more sympathetic reactions (Sandroff, 1983; Doherty, 1979). Feeling inadequate and unappreciated, nurses may become defensive (Hinsch,

1982) and more angry (Quinby & Bernstein, 1971; Sandroff, 1983). Nurses may try to protect themselves by avoiding patients in pain (Doherty, 1979; Goodstein, 1985) or by decreasing their sensitivity and becoming less concerned about inflicting pain. Fagerhaugh and Strauss (1977) noted that some nurses were so unconcerned at the pain they were inflicting on burned patients that they hummed a tune while doing the dressings.

The Effects On Nurses of a Lack of Direct Control Over the Prescription of Analgesia

Nurses do not have direct control over the prescription of narcotic and non-narcotic analgesics which are the most potent forms of pain relief. The only way that nurses can obtain analgesia for their patients is by negotiating with the medical staff. Nurses and doctors do not always agree on the intensity of patient's pain nor do they always agree on the extent of the patient's need for analgesia. When disagreements occur it is the doctor's view that is more likely to hold.

The circumstances surrounding the pain experienced by critically ill neonates means that the nurses who care for them are more likely to be confronted by this problem than most other nurses. Since studies such as that by McGraw (1943) showed the central nervous system of neonates to be physically immature, the prevailing belief of the medical

profession has been that neonates are not capable of full adult pain perception (Anand & Hickey, 1987). This has lead to a reluctance to use anaesthesia and analgesia (Purcell-Jones et al., 1988). The practice of performing surgery on paralysed and mildly anaesthetised (or even unanaesthetised) babies up to 15 months of age, has been well documented (Anand & Hickey, 1987; Butler, 1989; Franck, 1986; Franck, 1987; Holve, Bromberger, & Groveman, 1983; Lawson, 1986; Marshall, 1989; Penticuff, 1989).

Nurses who have closer contact with neonates than most other health professionals have observed behavioural and physical signs of pain in neonates (Pigeon, McGrath, Lawrence, & MacMurray, 1989). Recently they have become vocal in their concern about the inadequacy of the control of neonatal pain (Franck, 1987; Purcell-Jones et al., 1988).

Over the last decade there has been much debate about the issue of neonatal pain perception (Anand & Hickey, 1987; Feeg, 1988; Franck, 1986; Franck, 1987; McLaughlin, Hull, Edwards, Cramer & Dewey., 1993; Owens & Todt, 1984). Research has gradually led to changes in medical beliefs about neonatal pain perception and many physicians now accept that neonates are capable of at least some pain perception (Coldítz, 1991; Purcell-Jones et al., 1988). However, uncertainty persists about the intensity of neonatal pain in comparison to that of adults and a

reluctance to risk the adverse affects of analgesia remains (McLaughlin et al., 1992; Mersky, 1970; Purcell-Jones et al., 1988).

Continuing medical uncertainty about the nature and extent of neonatal pain perception (Anand & Hickey, 1987; Franck, 1992; McLaughlin et al., 1992; Mersky, 1970) has created the potential for conflict between nursing and medical staff (Astbury & Yu, 1982; Austin et al., 1988). As nurses have more continuous contact with patients' pain, they are more likely than medical staff to be concerned about it. Several studies have shown that many nurses caring for critically ill neonates believe that pain medication is under-utilised (Franck, 1987; Marshall, 1989; Penticuff, 1989).

SUMMARY OF FINDINGS FROM THE LITERATURE ON NURSING AND PAIN

The pain that nurses face in their patients can be conceptualised as stemming from two sources: that which is inflicted by nurses, and that which is <u>not</u> inflicted by nurses, but arises from either the disorder itself or from surgery or other procedures conducted by medical staff. Very little is known about the psychological effects of the these types of pain on nurses. Methodological problems in previous research limit confidence in the findings. Findings have tended to be based on small samples, unsupported by rigorous research methods. Research has also tended to

be limited in scope, focusing mainly on the negative emotional reactions of nurses and failing to investigate the connection between the ways nurses manage their emotions and the way they manage pain relief. Similarly there has been little attention paid to any potential sources of satisfaction from caring for patients in pain.

THE GOALS OF THIS RESEARCH

The main goal in conducting this research was to develop a model of nurses' constructs of pain. Prior to conducting the study, a preliminary conceptual model was developed from theoretical and research literature. This model was then tested and elaborated from the findings of a study of the reactions of nurses to the pain of their patients.

The research specifically aimed at clarifying the reactions that nurses have to the painful events experienced by their patients. These reactions were complex, with several components. One component is the nurses' view of their own role in relation to their patients' pain. Another is the congruence between the way nurses believe they ought to manage their patients' pain and the way they actually manage it. A further component is the nurses' emotional reactions to the entire event.

A further goal of the study was to redress many of the methodological problems of earlier studies by the application of rigorous quantitative and qualitative methods to a larger sample size of nurses from a number of different sites.

The next chapter contains the preliminary conceptual model which I have used to describe the processes used by nurses to make sense of patients' pain and to manage their emotional reactions to it.

CHAPTER 2

A PRELIMINARY PERSONAL CONSTRUCT MODEL OF NURSES' REACTIONS TO THE PAIN OF THEIR PATIENTS

The preliminary model of nurses' reactions to patients' pain that is presented in this chapter emphasises the relevance of nurses' constructions of their patients' pain for the way they institute pain relief procedures. It raises questions about the implications of their construing for the welfare of their patients and for themselves. The lack of research, and the inadequacies of those studies which have been undertaken in this area, point to the need for more exploratory work so that research questions can be refined and the variables identified.

I have used personal construct theory as the conceptual framework for the examination of the nurses' reactions to the pain suffered by their patients. Personal construct theory is based on assumptions that make it a useful framework for research into nurses' reactions to their patients' pain experiences.

This chapter begins with a description of the assumptions of personal construct theory. This is followed by the preliminary personal construct model of the way nurses react to painful events. Finally, I put forward a series of hypotheses which were derived from the model and which were tested in this research.

AN OVERVIEW OF PERSONAL CONSTRUCT THEORY

Personal construct theory is one of the major constructivist theories and as such is one of the phenomenological, humanistic approaches that constitute the "third force" in psychology (Schultz & Schultz, 1987; Epting & Leitner, 1994). Constructivist theories are founded on notions of multiple perspectives, which cannot be disconnected from their context, and must be understood in terms of both the similarities and the differences between people.

Personal construct theory was developed by psychologist George Kelly (1955). Central to personal construct theory is the notion that we try to make sense of the world in the same way as scientists - by formulating and testing hypotheses. The assumptions underpinning personal construct theory are explored in this section.

Personal construct theory holds that we make sense of the world by building a system of constructs (or hypotheses) about its "elements". Kelly defined elements as the people, objects or events to which constructs are applied. Constructs consist of two poles, one of which is our interpretation of what the element *is*, the other is our interpretation of what the element *is not*.

Although Kelly (1955) acknowledged the existence of a single reality, he argued that we can only know it by our constructions. By using our constructs to interpret reality, we develop personal predictions about the nature and outcomes of future events. Each person thus develops a unique system of personal constructs.

Kelly (1955) conceptualised construct systems as organised into a pyramidal structure. A small number of influential superordinate constructs at the apex of the system consist of the abstract values that govern our psychological processes and subsume those lower in the structure. Those at the base are the influenced, or subordinate constructs, and are the more concrete characteristics and the behavioural expressions of our abstract values. For example, a person may have a superordinate construct of medicine as a rigorously scientific, but altruistic, vocation. His behavioural expression of this construct may be to accept unquestioningly the advice of his physician. Another person may construe medicine as a commercial enterprise and her behavioural expression may be to shop around for the "best deal" from a physician or medical centre.

According to Kelly (1955, p. 85) the way we organise our construct system may not always be "logic-tight and wholly internally consistent". He referred to this as "fragmentation". Behaviours that appear to be beset with inconsistencies may be logical if they are inter-

preted at a higher level of the person's construct system. A person, for example, may be a vegan (refuse to eat animal products) but wear leather shoes. These behaviours may seem inconsistent because the person appears to be unwilling to exploit animals, but to be willing to allow an animal to die so he may be shod. The superordinate construct, however, of "maintaining a healthy lifestyle" may govern both behaviours and explain the "inconsistency".

Core constructs are superordinate constructs that are fundamental to our sense of identity. Each person's set of core constructs form their core structure. Some core constructs concern the way we relate to others. Specifically, they govern the way we interact with society in general and other people in particular and are known as "core role constructs." Core constructs are, by their very nature, resistant to change.

Our construct systems act as templates which help us to anticipate events and predict outcomes. When our predictions are successful, our constructs are validated. Kelly (1955, p. 158) defined validation as representing "the compatibility (subjectively construed) between one's predictions and the outcome he observes."

When our constructs are validated, we experience positive emotions such as satisfaction and pleasure. When they are invalidated we experience negative emotions such as anxiety and hostility. In personal

construct terms, anxiety is the awareness that our construct system cannot adequately deal with the events with which we are confronted. When confronted by invalidating evidence we often become hostile. In personal construct terms, hostility consists of attempts to force others to behave in accordance with our predictions.

It is more useful for us to revise or replace invalidated constructs. In other words we can choose to construe an event in an alternative way. When, for example, the person who construes physicians as altruistic, reads about incidents of medical fraud, she may experience some anxiety about visiting her medical practitioners. Alternatively, she may revise her constructs of the medical profession to include avarice as well as altruism. This process, which Kelly (1955) termed "constructive alternativism," forms the philosophical position underpinning his theory.

Kelly (1955) described several methods by which we can deal with our anxiety. We may for instance tighten our construing. Tight constructs lead to unvarying predictions and allow us to impose order and structure on our world. For example, parents may construe their adolescent as rebellious and rarely vary that construction so that the child's behaviour is consistently interpreted as defiant. Alternatively we can loosen our construing. Loose constructs lead to varying predictions and are useful in trying out new ways of construing. For example, other parents may sometimes regard their adolescents as rebellious but on other

occasions construe that behaviour as showing initiative. Indeed, when our construct systems do not allow us to anticipate events successfully, a cycle of successive tightening and loosening can help us to rebuild them.

We may not, however, be ready to make these reconstructions. We may try to "buy time" by constricting our perspective and simply ignoring the invalidating evidence. Alternatively we may dilate our perspective so that we can see the situation in its broader context.

None of these processes is intrinsically adaptive or maladaptive. They are simply techniques which can be useful in the reconstruction process. Cyclical loosening and tightening are necessary for the creative thinking which can lead to successful revision of our construct systems. Dilation and constriction can help us confront or avoid incompatibilities in our construct systems. Nevertheless, it is possible to become stuck with any of the these processes and then we may need help before we can progress.

A PRELIMINARY PERSONAL CONSTRUCT MODEL OF NURSES' REACTIONS TO PATIENTS' PAIN

Concepts from personal construct theory (Kelly, 1955) and the literature on nursing and pain have been integrated in the development of this model. The model consists of 17 propositions about the way nurses

make sense of pain. In cases where there is a sizeable body of literature to support the propositions I show how this is so. Other propositions stem from personal construct concepts as supporting research has yet to be conducted.

The preliminary model also incorporates two types of pain. The first type of pain is the consequence of either the disease itself or of treatment conducted by health professionals other than nurses (eg., from surgical procedures). For the purpose of this study, this type of pain has been termed "disorder-induced pain." The second type is the pain that is the consequence of the painful investigative and therapeutic procedures conducted by nurses and is termed "clinically inflicted pain."

The propositions of the model are divided into four groups. The first group consists of two general propositions about the way nurses construe pain. The second set of propositions is concerned with the constructs that nurses apply to themselves when caring for people in pain. The third set of propositions is concerned with nurses' emotional reactions when these constructs are validated and when they are not validated. The final set of propositions is concerned with the ways that nurses revise or replace invalidated constructs about pain. Each set of propositions and accompanying explanations is presented in the following sections.

General Propositions About Nurses' Reactions to Pain

1.1 Nurses use their previous experiences of pain (both as nurses and as individuals) to develop a system of constructs about themselves as carers of patients in pain.

1.2 Nurses try to make sense of their own part in the management of the pain experienced by their patients.

The pain that patients experience may be inflicted clinically or induced by the disorder. Nurses' constructs of the different types of pain and of their own relationship to the patient in pain, depend on what they observe, read, and on what they are taught about pain and about nursing values and functions. Nurses construe pain in different ways. For example they may vary in the way they construe the intensity of pain. One nurse may evaluate a patient's pain as moderately intense, while another nurse may regard the same patient's pain as severe (Davitz & Davitz, 1981). Constructs of pain intensity may also vary between nurse and patient (Bondestam et al., 1987; Choiniere et al., 1990; Iafrati, 1986). Irrespective of their constructions, nurses try to understand their role in relation to the patient in pain.

Propositions About the Ways in Which Nurses Construe Themselves Professionally

2.1. "Caring" is a core construct which many nurses use to define themselves professionally.

2.2 The construct of "caring" subsumes the generally agreed upon functions of nurses. When caring for patients in pain, nurses construe their major function as the alleviation of the pain.

2.3. When caring for patients experiencing pain, the construct of "nurse as pain alleviator" subsumes the constructs of "having compassion for patients in pain," "facilitating well-being by relieving pain," "relieving pain that patients cannot relieve for themselves" and "carrying out the necessary procedures to restore the health of patients and relieve painful conditions."

2.4. When conducting painful procedures on patients the opposite pole to the construct of "nurse as pain alleviator" is "nurse as pain inflictor."

It is difficult to provide a concise explanation of caring in nursing. Caring has been conceptualised by nursing scholars in many different ways (Morse, Solberg, Neander, Bottorff, & Johnson, 1990). Many of the most influential writers have considered nursing as the practice of "caring" (eg., Benner & Wrubel, 1989; Gadow, 1985; Gaut, 1992; Henderson, 1980; Kahn & Steeves, 1986; Morrison, 1992; Newman, Sime, & Corcoran-Perry, 1991; Pearson, 1991; Watson 1979). Indeed this concept is embodied in the name "nurse" and forms the basis of the development of nursing as a discipline (Gaut, 1992; Kolcaba, 1992; Newman, 1990). Caring has been conceptualised by some as the essence of nursing practice (Leininger, 1984; Watson,1988) and is part of a national statement about nursing in Australia authored by four major Australian professional organisations (Australian Nursing Federation, College of Nursing Australia, NSW College of Nursing, & Florence Nightingale Committee, Australia, 1989).

One of the more influential exponents of caring in nursing is Watson (1979; 1988). She proposed ten "carative factors" which constitute the "moral ideal of nursing whereby the end is protection, enhancement, and preservation of human dignity" (Watson, 1988, p. 29). These factors consist of a combination of behaviours and philosophical stances that are related to the process of providing care. They include:

1. Humanistic-altruistic system of values 2. Faith-hope, 3. Sensitivity to self and others, 4. Helping and trusting human

care relationships, 5. Expressing positive and negative feelings, 6. Creative problem-solving caring process 7. Transpersonal teaching-learning, 8. Providing a supportive, protective and/or corrective mental, physical, societal and spiritual environment 9. Human needs assistance 10. Existential-phenomenological-spiritual forces (Watson, 1988, p. 75).

Caring is fundamental to the way nurses construe themselves and as such is a core construct. As nurses' superordinate constructs about nursing reflect their philosophical positions, these constructs tend to be more resistant to change than those they subsume (Bannister & Fransella, 1986, p. 52).

Caring underpins many of the reasons that nurses give for entering the profession, for example, a desire to take up a socially useful career where they can improve the lives of people who are incapacitated by illness or injury (Chapman, 1983; Slavinsky, Diers, & Dixon, 1981). Moreover, Helms (1983) found that nurses have higher needs for nurturance and affiliation than the general female population. Entering a "caring profession" may be a way of helping them to meet this need.

Caring subsumes six subordinate constructs which are the more concretely expressed nursing functions. The first is derived from the work of Anderson (1991). The remainder are adapted from those identi-

fied by Pellegrino (1985). When caring for people in pain these constructs are (a) facilitating the well-being of patients by reducing their pain, (b) having compassion for patients experiencing pain, (c) relieving pain that patients are unable to relieve for themselves, (e) caring for patients with actual and potentially painful health problems, (d) carrying out the necessary procedures to restore the health of patients and relieve painful conditions. Each of these in turn subsumes other more subordinate constructs such as the means by which these functions are executed.

The construct of "nurse as alleviator of pain" forms an integral part of nurses' sense of identity (Heidrich et al.1981; Manon, 1985; Oberst, 1978; Slavinsky et al., 1981; Steeves, et al., 1990). The relief of pain has been described as the "professional mandate of nursing" (Franck, 1992). The strength with which nurses take up this mandate is evident in the nursing literature (eg., Atchison et al., 1986; Benner & Wrubel, 1989; Denyes et al., 1991; Franck, 1992; McMahon & Pearson, 1991; Steeves et al., 1990; Vachon, 1987).

When nurses speak about the clinical infliction of pain, they frequently contrast it with images of themselves as pain alleviators (Sandroff, 1983; Koran, Moos, Moos, & Zaslow., 1983; Quinby & Bernstein, 1971). Subjecting patients to painful procedures has the potential to challenge their core constructs of themselves as health care professionals.

Propositions About Nurses' Emotional Reactions When Constructs are Validated or Invalidated

3.1. When nurses' constructs allow them to anticipate events surrounding their patients' pain, their constructs are validated and they experience positive emotions.

3. 2. When nurses' constructs of their patients' pain are invalidated, they experience negative emotions.

3.3 Nurses react to intense disorder-induced pain in patients with feelings of anxiety.

3.4. When nurses are unable to alleviate disorder-induced pain, they experience negative emotions, especially helplessness and a loss of self confidence.

3.5. When it is necessary to inflict intense pain, nurses respond with negative emotions, and especially with feelings of hostility.

When nurses are able to relieve pain effectively, and when caring for the patients does not require them to inflict additional pain on patients, their constructs of themselves as competent palliators of pain are

validated. These circumstances are likely to generate feelings of personal competence and self confidence (McCoy, 1981).

When they are unable to alleviate pain effectively, however, nurses are likely to experience a range of negative emotions such as guilt, anxiety (Kelly, 1955) uncertainty, shame, depression, and hostility and a loss of self confidence (McCoy, 1981). Pain that is particularly intense or is the result of catastrophic injury is likely to remind nurses of their own vulnerability, heighten their anxiety (Heidrich et al., 1981) and induce feelings of guilt (Atchison et al., 1986). Prolonged exposure to pain increases the likelihood that nurses will experience negative emotions (Davidson & Jackson, 1985).

Negative feelings are also likely to be aroused when nurses believe that the patient's pain is unnecessary, or could be relieved by adequate analgesia, but they are unable to convince doctors of the patient's need for analgesia. Denied access to the most effective means of alleviating pain, they may feel helpless and incompetent.

The infliction of pain contravenes nurses' constructs of themselves as palliators of pain, and ultimately as "carers." For example, when the nurses in Quinby and Bernstein's (1971, p. 90) study realised the extreme pain that they inflicted on patients during burn debridement, they found that their "...value systems, including their images of themselves as

palliators of pain and effective mother figures, were threatened in the course of their work." The construct of nurses as pain relievers may be sufficiently critical to their professional identity, that they may respond to its invalidation by trying to extort evidence that their behaviour is consistent with their identity. Kelly (1955, p. 565) defined attempts to extort validational evidence as hostility and argued that hostility represents "inability to cope with the outcomes of one's social experimentation." In such circumstances nurses may try to force themselves and others to continue to construe them as caring.

Propositions about the ways nurses revise their constructs

4.1. In order to avoid feeling negative emotions nurses must revise or replace invalidated constructs.

4.2. Nurses differ in the way they revise and replace their constructs.

4.3. When constructs of themselves as carers are invalidated, some nurses respond by withdrawing from the invalidating situation.

4.4. When constructs of themselves as carers are invalidated, some nurses respond by loosening their construct systems.

4.5. Some nurses defensively constrict their construing of patients' pain.

When invalidation continues, it arouses negative emotions and nurses need to modify their construct systems in order to reduce their discomfort. As no nurse's experience is identical to that of another, each develops a unique system of personal constructs. Moreover, the process by which each nurse modifies his/her construct system is different. Some may withdraw by taking up a non-clinical position within nursing (eg., a managerial position) or by changing their career to one where they are not confronted by pain (Steeves et al., 1987): high turnover is a problem that has plagued nursing for many years (Battersby, Hemmings, Kermode, Sutherland, & Cox, 1990), especially in such areas as the nursing of patients with burn injuries. It may be that those people who are more susceptible to the suffering of others choose one of these alternatives.

Those who choose to remain at the bedside must select other ways of dealing with the challenge. Some need to loosen their construing which has become too tight. Others may need to tighten construing

which has become too loose for predictive purposes. Some may need to dilate constructs that have become too constricted, others may need to constrict those which have been too dilated to be useful.

Many nurses have tight constructs of themselves as palliators of pain. They have accepted that their mandate is to alleviate pain (Steeves et al., 1990), and their constructs of caring lead to the unvarying prediction that patients therefore should be free from pain.

Loosening constructs as a means of managing the impact of patients' pain

The loosening of tight construing may help nurses reconstrue their role in relation to patient in pain. Loosening may enable nurses to manage their emotional responses by allowing them to make more varying predictions, and at the same time to retain the identity of the construct (Kelly, 1955). For example, loosening the construct of "caring" to subsume the construct "protecting patients from the harmful effects of drugs," enables nurses to accept that it is sometimes necessary for patients to be in pain. When such loosening occurs, the nurse's construct system can be validated. For example, it was not until Hinsch (1982) was able to loosen her constructs to accept herself as responsible for causing pain that she was able to take the turning point in her adjustment to work in a burns unit. Loosening, therefore, is important for accomplish-

ing change in construct systems because it permits people to extend the range of elements to which their constructs apply (Kelly, 1955), and makes constructs more permeable to different experiences. It also helps to protect the person from anxiety (Kelly, 1955, p. 1059).

Constricting Construing as a Means of Managing the Impact of Patients' Pain

Some nurses try to cope with the pain of their patients by using strategies based on constriction. Constriction is a process whereby nurses minimise perceptual incompatibilities by ignoring invalidating evidence. Constriction has been shown to be a defensive response to the invalidation of tight construing (Catina, Gitzinger, & Hoeckh, 1992). This type of construing has been variably identified in the literature as "detachment," "disengagement" or "distancing." These are the most commonly identified strategies used by nurses to manage their feelings about pain (eg., Madjar, 1991; Parente, 1982).

When the nurses' constructs of themselves as competent and effective palliators of pain are incompatible with their ability to control the pain, some nurses ignore the invalidating evidence that the patient is experiencing pain. In this way they can become desensitised, preserve their self image, and avoid negative emotions (Goodstein, 1985; Pauker, 1986). For example the inability of some patients (eg., infants or uncon-

scious patients) to be able to express their pain verbally, makes it easier for nurses and other health professionals to ignore their pain. The work of Baer et al., (1970) illustrates this point. These researchers gave nurses, doctors and social workers paired vignettes concerning patients in pain. The pairs differed as to whether the patients expressed their pain verbally or non-verbally. A major finding was that when vignettes were identical except for the verbal versus non-verbal expression of pain, all groups judged the patients who expressed their pain verbally as having greater pain.

Experienced Nurses' use of Constriction

Support for the view that nurses cope with pain by ignoring invalidating evidence comes from the literature on the effects of nursing experience on nurses' construing of pain. Davitz and Davitz (1981) for example, found that nurses who become sufficiently involved with the suffering of a patient to be psychologically traumatised, maintained emotional distance from subsequent patients by failing to acknowledge the extent of their suffering. Choiniere et al. (1990) found that nurses who were inexperienced in working with burn patients tended to rate pain levels higher than patients rated them, whereas nurses who were more experienced tended to rate pain levels lower than patients.

Constriction and Clinically Inflicted Pain

When it is necessary to inflict pain on patients, the temptation for nurses to constrict their view of the pain may be even greater. Perry (1984b) asked nurses and patients with severe burns to rate the patients' burn pain at three points: before the dressings were commenced, during the dressing and after the dressing was completed. There was no significant difference in the nurses' and patients' ratings prior to the procedure, however nurses' ratings were significantly lower than those of the patients both during and after the procedure. Similarly, Walkenstein (1982) found a correlation between nurses' and patients' reports of their overall pain experience but there was no correlation between nurses' and patients' ratings of pain during painful procedures. These results suggest that nurses are more likely to ignore evidence that patients are experiencing pain when the nurse is directly contributing to the pain.

Constriction and the Fear of Inducing Drug Addiction

A major obstacle to the satisfactory management of acute pain has been the fear of patients becoming addicted to pain relieving drugs (Morgan, 1985). Indeed, the risk of inducing addiction is often given as a major reason for withholding narcotic analgesia (Atchison et al., 1986; Cohen, 1980; Denyes et al., 1991; Manon, 1985; Marks & Sachar, 1973; Perry 1984b; Schecter, & Allen, 1986; Watt-Watson, 1987). In its most absurd form, such a risk has been given as a reason for withholding pain

relief from terminally ill patients (Charap, 1978; Perry 1984a). Heidrich et al., (1981) found that while most respondents regarded pain control as inadequate and that intravenous morphine was the most effective way to relieve it, they were reluctant to use it for fear of inducing drug addiction. None of the nurses in this study were prepared to increase the dose as the patients' tolerance increased. Sixty-three per cent of nurses reported delaying giving narcotics and using placebos to test the validity of the patient's pain. Similar results were found by Watt-Watson (1987).

Several studies were reported in the early 1980s that raised serious doubts about the likelihood that analgesia given post-operatively or after trauma resulted in addiction. Porter and Jick (1980, p. 123) reported that in a study of almost 12,000 hospitalised patients who had received at least one narcotic, only four cases could be identified of "reasonably well documented" addiction with no previous history of drug abuse. Of these four cases, only one could be classed as a major addiction. In a survey of 93 burns units in the U.S. "not one case of an actual iatrogenic addiction could be documented" (Perry & Heidrich, 1982, p. 277).

Constriction may account for the persistence of fears of drug addiction. Nurses may have initially loosened their constructs to believe that in order to avoid inducing drug addiction, it is sometimes necessary for patients to have unrelieved pain. Confronted by invalidating evidence that narcotics given in the short term for the relief of acute pain rarely

lead to addiction, nurses must deal with the realisation that they have exposed patients to unnecessary pain. This constitutes a threat to their core construct of themselves as carers. They may have little alternative but to deal with this event by constricting their view and ignoring invalidating evidence. The experience of Perry (1984a), a doctor working in a burns unit in the United States, provides support for this analysis. Perry (1984a) encountered resistance when he tried to have nursing and medical colleagues improve pain control for patients with burns. The fear of addiction remained even after he presented empirical evidence which showed these fears to be unfounded. Perry was forced to conclude that the expressed concerns of the staff were insufficient to explain their reluctance to medicate adequately. He argued that emotional defensiveness on the part of the staff was a more plausible explanation because it enabled them to maintain a sense of emotional invulnerability.

Constriction and the Fear of Causing Respiratory Depression

One of the adverse effects of narcotic analgesia is respiratory depression (Society of Hospital Pharmacists of Australia, 1989). Despite evidence that respiratory depression occurs in less than one per cent of patients receiving narcotic analgesia (Marks & Sachar, 1973; Porter & Jick, 1980) fear of inducing it is another common reason for withholding analgesia.

Constriction and Other Myths About Pain

The process of constriction can account for nurses' adoption of some questionable beliefs identified in the literature. These are (a) that patients exaggerate or fake their pain (Graffam, 1979; Schecter, 1989; Watt-Watson, 1987), (b) that children do not feel pain as acutely as adults (Parente, 1982), (c) that the more severe full thickness burns are less painful then partial thickness burns (Atchison, Osgood, Carr, & Szfelbein, 1991), or (d) that experiencing pain provides a person with an opportunity for spiritual growth and that indulgence in analgesia is a sign of weakness of character (Greipp, 1992).

THE RELEVANCE OF THE MODEL TO THE GOALS OF THIS RESEARCH

The goal of this research was to explore the reactions of nurses caring for burn victims and those caring for critically ill neonates to the pain experienced by their patients. This goal was accomplished in two stages; (a) the use of quantitative data to generate and statistically test hypotheses derived from the model and (b) the elaboration of the model from the results of a qualitative analysis of the texts of interviews with nurses.

HYPOTHESES BASED ON THE MODEL

The constructivist model of nurses' reactions to pain was used to formulate and test statistically seven hypotheses about (a) changes over time in the ways nurses react emotionally to their pain, (b) differences in the emotional reactions of nurses caring for burn victims and of those caring for critically ill neonates to disorder-induced pain, (c) differences in the emotional reactions of nurses caring for burn victims and of those caring for critically ill neonates to clinically inflicted pain, and (d) the strategies that nurses use to cope with the negatively toned emotions generated by their patients' pain. The hypotheses are listed below and the results of their analysis are provided in Chapter 4.

Hypotheses Concerning Changes in Reactions Over Time

1. The literature suggests that in order to protect themselves emotionally from the effects of patients' pain, nurses, over time, learn to distance themselves from the pain. It is hypothesised that those who have more nursing experience, and have therefore been exposed to patients' pain over a longer period of time, make greater use of constriction-based strategies for dealing with both disorder-induced and clinically inflicted pain than those with less experience.

2. The presence of pain challenges nurses' constructs of themselves as carers and invalidation of constructs tends to produce anxiety. Anxiety is the awareness that our construct system cannot adequately deal with the events with which we are confronted. It was therefore hypothesised that burns nurses, who are exposed to intense pain, demonstrate greater anxiety than neonatal intensive care nurses whose patients appear to experience less intense pain.

3. Neonatal intensive care nurses have greater conflict with medical staff over their patients' need for analgesia and care for patients with communication deficits. It was therefore hypothesised that neonatal intensive care nurses demonstrate greater helplessness than burns nurses, whose patients are more able to communicate their pain and whose need for analgesia is usually recognised by both nurses and doctors.

4. As neonatal intensive care nurses have greater conflict with medical staff over their patients' need for analgesia and as their patients are less able to communicate their pain, it was further hypothesised that neonatal nurses demonstrate a lower sense of personal competence than burns nurses.

5. Inflicting pain poses an even greater challenge than disorder-induced pain, to nurses' constructs of themselves as carers. It was therefore hypothesised that burns nurses who inflict more intense pain, experience greater invalidation of the core constructs and demonstrate greater anxiety than neonatal intensive care nurses who inflict less intense pain.

6. Burns nurses who inflict intense pain on patients are confronted with evidence that strongly invalidates their core constructs of themselves as carers. Hostility is the attempt to force others to behave in validating ways. It was therefore hypothesised that burns nurses demonstrate greater hostility than neonatal intensive care nurses who inflict less intense pain.

7. Burns nurses who inflict intense pain on patients attempt to deal with invalidating evidence by making greater use of constriction-based strategies than neonatal intensive care nurses who inflict less intense pain.

ELABORATION OF THE MODEL

The second stage of this research was concerned with elaboration of the model by the application of qualitative research methods to the nurses' accounts of the pain experiences of their patients. Qualitative

analysis focused on the circumstances that generated the nurses' emotional reactions to pain and the circumstances that influenced the way they coped with their negatively toned emotions. The results of the qualitative analyses are presented in Chapters 6, 7 and 8.

In the next chapter I discuss the range of methods available for achieving the aims of this research. I also present a rationale for the combination of quantitative and qualitative methods used to investigate this topic.

CHAPTER 3

THE METHODS OF THIS RESEARCH INTO NURSES' REACTIONS TO PAIN

In this research I have used a combination of qualitative and quantitative methods. As I noted in Chapter 2, hypotheses generated by the model were tested by statistically comparing quantitative data from the groups of nurses with different experiences of patients' pain. The circumstances that contributed to the differences between the groups were explored through a qualitative analysis of the interview data.

In this chapter I describe the processes of data collection and analysis and the recruitment of the research participants. The first section details the process of data collection and the reasons behind decisions about data collection strategies. The second section outlines the process of recruitment including a description of the participants and of the settings in which they worked. The third section focuses on the measurement of emotional states through the use of content analysis scales and the development of a measure of coping. This section includes an evaluation of the reliability and validity of the measures. The fourth and final section details the way in which criteria for ensuring the trustworthiness of qualitative analysis were applied in this study.

DATA COLLECTION

The method of data collection was selected for two reasons. Firstly to generate theory about the reactions of nurses to pain which would elaborate on the preliminary model presented in Chapter 2.

Secondly, to allow participating nurses maximum freedom of expression so that the model might reflect their experiences as fully as possible.

Generation of Theory

Duffy (1992) has argued that the most fundamental differences in research designs are between those that are primarily aimed at generating theory and those that are primarily aimed at testing theory. She points out that when theory testing is the aim, the theory determines the data collection process. When the aim of the research is the generation of theory, the phenomenon itself must guide the data gathering process. There has been very little investigation of the psychological impact of patients' pain on nurses, so there were few a priori assumptions to guide questions. As the primary aim of this research was to generate theory about the ways that nurses construe their experiences and manage the feelings associated with them, minimally structured interviews were used. This data collection method differed from the stories that normally obtained in qualitative research. However, the self reflection of the participants had the advantage of enhancing the ability of the findings to be based on the participants' experiences of the phenomenon rather than on my anticipations of their experiences. Data collection was based on the assumption that the nurses' constructs of the pain of their patients were located in their verbalisations about it (Agar, 1980, 1986; Viney, 1986). Data collection was also based on the Kellian principle of credulous

listening, whereby the listener accepts the speakers' responses as representing their personal constructions of life (Kelly, 1955, p. 964).

Freedom of Expression

An important aspect of theory generating research is that the participants in the research are able to reflect on their experiences with a minimum of direction from the data collection process. While participants must be directed to focus their reflections on the topic of inquiry, they must also be able to associate as freely as possible and not be constrained by the researcher's directions.

I decided to collect data in free association form for a number of reasons. First, there has been very little open discussion among health professionals about their feelings about the pain experienced by patients, perhaps because pain management is perceived to be a secondary focus of nurses' tasks (Fagerhaugh & Strauss, 1977). The lack of open discussion seems to be particularly noticeable about pain caused by health professionals during the course of treatment or care (Madjar, 1991). Second, people may have insufficient acceptance of their feelings to identify them, and feelings may be masked, especially when they have received little acknowledgment. Third, respondents may believe that investigators are looking for unusual feelings and may consequently regard their immediate responses as having little significance.

PROCEDURE

Participants were asked to respond to two open-ended questions. The first was about pain that was not the result of procedures conducted by the nurses (disorder-induced pain). The second question focused on the pain that was directly inflicted on patients by nurses (clinically inflicted pain). The questions were adaptations of those developed by Gottschalk, Winget and Gleser (1969).

> (1) I'd like you to talk to me for as long as you can and for at least five minutes about what it is like for you to work with patients who are in pain or discomfort. Once you have started I'll be listening to you; but I'd rather not reply to any questions that you may have until a five minute period is over. Do you have any questions that you would like to ask before we start? Well then you may begin.
>
> (2) I would like you to talk for another five minutes and tell me about what it is like for you when it is necessary to have to hurt patients or cause them discomfort.

Participants were encouraged to respond to the questions for as long as they were able, were not prompted for further responses and no follow-up questions were asked. A small pilot study (n=4) was conducted to check that the questions provided sufficient stimulus for the nurses to discuss their experiences of patients in pain.

The audio-taped responses were, with the permission of the participants, transcribed onto a word processor. Each tape was replayed and checked against the transcription for accuracy of verbal and non-verbal content. Non-verbal content included hesitations, long pauses, laughing and crying.

PARTICIPANTS

The sample included nurses working in both burns units and neonatal intensive care units. Overall, nursing staff from four university teaching hospitals participated in the study.

Nurses working in burns units were studied because their patients are exposed to extreme pain for prolonged periods of time and because nurses are routinely required to inflict severe pain on them. They were recruited from the permanent staff of all the four burns units in a large city. Three of the burns units cared for adult patients and one cared for paediatric patients.

Nurses working in neonatal intensive care units were included as they care for patients who are unable to speak for themselves. There is also a well documented history of disagreement between neonatal intensive care nurses and medical staff about the neonates' need for analgesia (Butler, 1989; Franck, 1987). The nurses working in neonatal

intensive care units were from the permanent staff of two neonatal intensive care units, each of which was located within a major teaching hospital.

All staff who qualified for the study were sent personally addressed letters inviting them to participate. The letters explained the purpose and procedure of the study and contained assurances of confidentiality. New staff were sent similar letters as they joined the unit. Recruitment continued in this manner for two years.

Sixty-five nurses (nine caring for paediatric burn victims, 23 caring for adult burn victims and 33 caring for critically ill neonates) completed at least one interview. As the sample of nurses caring for burned children was too small to be analysed separately, analysis was conducted on one group of burns nurses and one group of neonatal intensive care nurses. Interviews were conducted at 5-6 monthly intervals.

Data were collected for a total of three interviews after which time the attrition rate was such that the sample was too small for statistically reliable analyses. A limited number of participants (n = 17) completed five interviews. The 44 participants who completed a full set of three interviews consisted of those who joined the study sufficiently early to be able to complete the full set while continuing to work in the designated unit (see Table 3.1). Most of the nurses who failed to complete the full set of

interviews did so either because they ceased working in the area and thus no longer met the criteria for participation in the study, or because they began working in the nursing units after the commencement of the study.

At the time of the first interview the mean length of nursing experience of the participants was 8.61 years (sd = 5.78) and mean length of experience in the current specialty was 2.99 years (sd = 2.95). Thirty-five per cent of the sample had received tertiary education either at diploma (20%) or bachelor level (15%). The remaining 65% had completed at least one hospital certificate course. Thirty-one per cent were enrolled in further education at the time of their first interview.

Representativeness of the Participants

Although all the nursing staff of four burns units and two neonatal intensive care units were invited to participate, only 43% of them chose to do so. Demographic data from the sample were therefore compared to that collected by the NSW Nurses' Registration Board on all registered nurses in NSW (see Table 3.2). The sample appeared to be representative of the population of registered nurses with regard to gender and the proportion of nurse unit managers (NUMs). However, the sample tended to be younger than the general population and to consist of greater numbers of specialists and consultants and fewer ward nurses. The

results are therefore likely to reflect the construing of career nurses, who participated because of their commitment to nursing and their interest in nursing research. No data were available for comparison on the distribution of demographic characteristics of the population of nurses working in these areas.

Table 3.1

Numbers of Nurses in Each of the Three Interviews

	Interview		
Group	**1**	**2**	**3**
Paediatric Burn	9	8	2
Adult Burn	23	15	15
Neonatal	33	28	27
TOTAL	65	51	44
Attrition Rate		22%	14%

The response rate for this study was 33% for neonatal intensive care nurses and 51% for burns nurses (approximately 48% overall). While the sample size was too small for exhaustive statistical analysis, it was large for the qualitative analysis component of the study. As the size of the sample reflects not only the response rate but also the size of the population, national recruitment is recommended for future research.

Table 3.2

Comparison of NSW Nurses' Registration Board (NRB) Workforce Data With Demographic Profiles of the Participants in Percentages

Demographic Characteristic	Demographic Profiles	
	Nurses' Registration Board	Participants
	%	%
Females	92.0	90.8
Males	8.0	9.2
Aged less than 40	60.0	84.4
Aged more than 40	36.0*	15.6
Clinical nurse consultants	1.6	.2
Clinical nurse specialists	16.5	26.2
Clinical nurse educators	-	3.0
Nurse unit managers	9.2	9.2
Ward registered nurses	70.8	55.4

Notes:

* 4% of NRB data on age were corrupted.

NRB Data unavailable on percentage of clinical nurse educators Source: NSW Department of Health. Nurses' Registration Board Annual Workforce Survey and HOSPAY. 1990.

Assuming the same response rate, to enable a sufficiently large sample to be selected so that all subscales could be included in the statistical analysis, it would be necessary to recruit from a number of state capital cities. As the paediatric burns unit in the present study had an establishment of only eleven registered nurses, a nation-wide sample may also enable analysis to be conducted separately on adult and paediatric burns.

QUANTITATIVE ANALYSIS

The Rigorous Measurement of Emotional States and Coping Strategies

Content analysis scales were used to obtain measures of the emotions expressed by the participants during the interviews. These scales consist of a set of guidelines for identifying and scoring the emotional content of textual data (see Appendix A for an example of a content analysis scale). There are a number of reasons for the use of these scales. They are suited to the identification of both positive and negative emotional content of free association material (Gottschalk, 1977), they can be used to identify both directly and indirectly expressed feelings, they are suited to the investigation of the process of construing (McCoy, 1981), they are able to be used in an unobtrusive manner, they are particularly valuable for longitudinal studies as they avoid the practice effects that might occur with paper and pencil scales (Viney, 1986) and

they may be used quantitatively or qualitatively. Content analysis scales have been used to measure the emotional content of people with illnesses (Viney, 1990; Viney, Walker, Robinson, Lilley, & Ewan, in press) and of those who care for them (Bell, 1990; Viney et al., 1993-1994). They have also been used as criteria for deriving qualitative analysis codes (Viney, 1983b). In this study, as content analysis scales were used both quantitatively and qualitatively, I have adopted the convention of using the term "score" when referring to quantitative results derived from content analysis scales, and the term "code" to refer to qualitative analysis results.

Reliability and Validity of the Measures

Reliability is the consistency of a measure. Consistency over time, (commonly termed test-retest reliability), may not be applied appropriately to construing, such as that measured here, which is expected to change. Indeed Kelly regarded test-retest reliability as the insensitivity of a measure to change (Bannister & Fransella, 1986). However, the extent to which the measures are consistently, publicly verifiable (termed inter-judge reliability) is important (Viney, 1988). The inter-judge reliability of these scales has been shown to be satisfactory, with the average coefficient ranging from .79 to .96 (Viney, 1986). In order to evaluate the inter-judge reliability of the application of the content analysis scales to the transcripts collected for this research, a random sample of 40% of the

transcripts were scored by two judges. The resultant coefficients ranged from r .77 to r .98. There were no significant differences between the mean scores of the two judges for any scale. Details of individual coefficients and t-test results are included with the description of each scale in the next section.

Validity is concerned with the accuracy of a measure. Kelly defined validity as its usefulness (Bannister & Fransella, 1986). Validity is usually established by demonstrating that the scale measures all aspects of the construct (content validity), that the scale correlates positively with other ways of measuring the same construct (convergent validity), and that it correlates negatively with scales measuring dissimilar constructs (divergent validity). Further evidence of the external validity may be that it can discriminate between people who can be expected to construe in similar ways from those who can be assumed to construe in different ways (discriminant validity) and that it can predict future events (predictive validity).

The content validity of the Content Analysis Scales is assumed, as the feelings they measure are expressed by the speaker, and not inferred by the scorer. The construct validity of the scales is most important for the establishment of the usefulness of the measures used in this study (Viney, 1988). Construct validity is described in terms of convergent, divergent and discriminant validity. Each scale is described in detail in the

following section together with evidence of its validity and inter-judge reliability.

Content Analysis Scales

I hypothesised that the two groups of nurses would differ in their expressions of anxiety, hostility, helplessness and personal competence. However, as this research was exploratory, and it was not possible to anticipate the full range of emotions experienced by the participants, all content analysis scales were used that had acceptable reliability and validity documentation. The transcriptions were therefore scored for three positive emotions and for five negative emotions. The positive emotions were positive affect (measured with the Positive Affect Scale), personal competence and control (Origin Scale), and satisfaction with interpersonal relationships (Sociality Scale). The five negative emotions were uncertainty (Cognitive Anxiety Scale), hostility (Hostility Directed Outward Scale), depression (Hostility Directed Inward Scale), indirect hostility (Ambivalent Hostility Scale) and anxiety (the Total Anxiety Scale). The three positive emotion scales and the Cognitive Anxiety Scale were based on personal construct psychology definitions of the emotions they measured. Although the Total Anxiety Scale and the three Hostility Scales were based on psychoanalytic theory, they are very similar to the personal construct psychology definitions (McCoy, 1981).

Scales Measuring Positively Toned Emotions

Pleasurable, agreeable or desirable feeling states were measured by the Positive Affect Scale (Westbrook, 1976). Examples of comments scored for positive affect were: "It was very rewarding afterwards [that she cuddled me and gave me a big hug]," or "I feel a sense of satisfaction [when their pain is relieved]," or "It's a nice feeling [if you can manage without causing a lot of pain]," and "I love working with the babies." Satisfactory divergent (Westbrook, 1976) and discriminant validity have been demonstrated (Viney, 1980; Viney & Bazely, 1977). In the studies reported by Viney (1986), the average inter-judge reliability coefficient for the Positive Affect Scale was .93. In the present study it was r = .98, (t = .62, df = 27, p =.54).

Feelings of self confidence and personal competence were measured with the Origin Scale (Westbrook & Viney, 1980). This scale evaluated the extent to which participants regarded themselves as in control of their lives. "I've generally had satisfactory results over the years" or "I feel in control of the situation," or "I can cope with it" or "Most of the time I can handle it" and "I try to help them by alleviating some of the pain." Discriminant (Westbrook & Viney, 1980; Viney, 1981) and convergent validity have been shown to be satisfactory (Westbrook & Viney, 1980). In the studies reported by Viney (1986), the average inter-judge reliability coefficient for the Origin Scale was .92. In the present study it was r = .94, (t = 1.54, df = 27, p = .14).

The Sociality Scale was used to evaluate the extent to which the participants were experiencing satisfying interpersonal relationships with patients, colleagues, family and friends (Viney & Westbrook, 1979). It consisted of seven subscales measuring the relationship of the roles of initiator, reactor, and joint actor within the dimensions of solidarity, intimacy, influence and undifferentiated shared experience.

Solidarity was scored for references in which people were construed as resources such as "Any procedure I perform is not with the intent of causing pain, it's with the intent of doing something therapeutic for the patient" or "I have friends who are very good listeners who tend to be able to help me at the end of the day."
Intimacy was scored when relationships with people were construed as sources of personal satisfaction such as "I have a good rapport with my patients." Influence was scored when people were construed as sources of power such as "Older kids have the power to stop the procedure, sometimes purely by their own strength" or "It's hard to get doctors to agree that the person needs further pain relief." Undifferentiated shared experiences were scored when references were made to personal relationships, such as those between nursing colleagues, but the nature of the relationship could not be unambiguously coded as solidarity, intimacy or power for example, "There's little we can do to avoid pain."

Satisfactory divergent (Viney & Westbrook, 1979), discriminant validity (Viney & Westbrook, 1979; Viney & Westbrook, 1981b) and predictive validity (Viney & Westbrook, 1982) have been demonstrated. In the studies reported by Viney (1986), the average inter-judge reliability coefficient for the Sociality Scale was .96. In this study it was r = .80, (t = .11, df = 27, p = .91).

Scales Measuring Negatively Toned Emotions

Uncertainty was measured by the Cognitive Anxiety Scale which scored references to the inability of self and others "to anticipate and integrate experience meaningfully" (Viney & Westbrook, 1976, p. 146). Cognitive anxiety was derived from scores assigned to experiences (a) of novel stimuli such as "When they're not used to it, they often think I'm nutty when I talk to the babies," (b) where extra constructs were needed to understand the situation, "I don't know that I have really found a way to cope with that yet," (c) where the participants spoke of being confronted with incongruous stimuli, "It was such an amazing feeling to see this person get well again" or (d) where there was a high rate of stimulus presentation, "When I initially started in this ward there was so much pain I felt totally overwhelmed." The discriminant (Viney, 1980; Westbrook & Viney, 1980) and convergent validity of this scale have been demonstrated (Westbrook & Viney, 1980). In the studies reported by Viney (1986), the average inter-judge reliability coefficient was .96. In the present study it was r = .91, (t = 1.86, df = 27, p = .07).

The Pawn Scale (Westbrook & Viney, 1980) was used to measure helplessness. Specifically, verbalisations were scored for the extent to which participants regarded events as beyond their control, for example "It's not possible to take the pain away completely," or "There's nothing you can do about it and you feel helpless." Discriminant validity (Viney, 1983a; Westbrook & Viney, 1982) and convergent (Westbrook & Viney, 1980) and predictive validity (Westbrook & Viney, 1982) have been found to be satisfactory. In the studies reported by Viney (1986), the average inter-judge reliability coefficient was .90. In the present study it was r = .91 (t = 1.41, df = 27, p = .17).

There were many instances of both helplessness and competence being expressed in the same phrase when, for example, nurses spoke of the difficulty they had with helping or with managing their own feelings about it. Such comments were scored on the Origin Scale because they contained expressions of effort or an intention to do something about it, but they were also scored on the Pawn Scale as they contained references to the nurses' limited ability to make changes. The Pawn and Origin Scales yielded two separate scores that were taken as measures of helplessness and competence respectively. Examples of comments scored for both helplessness and competence were: "It takes a lot of gathering of yourself together to go in and do the baths" or "It is difficult to work with all this constant pain" or "We've had quite a battle with doctors over

the years to get doctors to write up analgesia post-operatively for these little babies."

The Anxiety Scale (Gottschalk et al., 1969) consists of six sub-scales, (a) death anxiety was scored for statements such as "I was afraid that baby would die" (b) mutilation anxiety - "He had the most horrific burns," (c) separation anxiety - "The doctors just ignore us, they won't listen to us," (d) guilt - "Part of you feels guilty for hurting them" (e) shame - "I felt bad that I hadn't done anything about it" and (f) diffuse (or free-floating) anxiety - "Sometimes I have problems coping with the work here." The convergent (Gottschalk, 1979), discriminant (Westbrook & Viney, 1982) and predictive validity (Gottschalk et al., 1969) of this scale has been demonstrated. In the studies reported by Viney (1986), the average interjudge reliability coefficient was .90. In the present study it was $r = .94$ ($t = 1.52$, $df = 27$, $p = 14$).

Hostility was measured using three scales developed by Gottschalk et al., (1969) (a) the Hostility Directed Outward Scale, (b) the Hostility Directed Inward Scale, and (c) the Ambivalent Hostility Scale. The Hostility Directed Outward Scale (Gottschalk et al., 1969) scored expressions of hostility directed overtly or covertly towards human beings, animals and inanimate objects. An example of a comment scored for overt hostility was: "Some patients are really outrageous and don't even try to conquer their pain." Covert hostility was that which was either

denied, "I know I'm not contributing to their pain" or attributed to others, "We had a patient who was assaulted and pushed into a fire." Undirected hostility (ie. not directed towards a person or object) was also scored. Hostility directed towards human beings was weighted more heavily than that directed towards inanimate objects or undirected hostility.

The convergent (Gottschalk, 1979), discriminant (Viney, 1980) and predictive (Gottschalk & Gleser, 1969; Viney & Westbrook, 1982) validity of the Hostility Scale have been established. In the studies reported by Viney (1986), the average interjudge reliability coefficient was .79. In the present study it was r = .77 (t = .68, df = 27, p = .5).

The Hostility Directed Inward Scale was used to score expressions of hostility directed towards the self. This scale was a measure of depression. Expressions of Hostility Directed Inward were weighted according to intensity: with those involving wishes to die incurring the heaviest weighting followed by those expressing severe self criticism or references to self injury. Lesser weightings were given to feelings of "deprivation, disappointment, lonesomeness, self criticism, self-punishing attitude" (Gottschalk et al., 1969, p. 93) and the lowest weighting was given to "statements about being painfully driven, or obliged to meet one's standards or expectations, denial of hostility towards the self, or feelings of disappointment" (Gottschalk et al., 1969, p. 93). Examples of comments that were scored for hostility directed inwards include, "I felt I

had failed in some sort of way," or "Sometimes I worry that I'm getting hard and callous."

The convergent (Gottschalk & Gleser, 1969; Gottschalk, 1979) discriminant (Viney & Manton, 1973; Westbrook & Viney, 1982) and predictive (Viney & Westbrook, 1982) validity of this scale have been established. In the studies reported by Viney (1986), the average inter-judge reliability coefficient was .94. In the present study it was r = .88 (t = 1.93, df = 27, p = .06).

The Ambivalent Hostility Scale scored expressions of others' hostility directed towards the self "Some physically lash out at you" or "They swear at you." Expressions of others' attempts or threats to kill were weighted more heavily than denial of ambivalent hostility or threats from animals or inanimate objects. The convergent (Gottschalk & Gleser, 1969), discriminant (Viney, 1980; Viney & Manton, 1973) and predictive (Gottschalk & Gleser, 1969; Viney & Westbrook, 1982) validity of this scale have been established. In the studies conducted by Viney (1986), the average interjudge reliability coefficient was .94. In the present study it was r = .82 (t = 1.96, df = 27, p = .06).

The Process of Scoring using Content Analysis Scales

Scoring required the division of the transcripts into clauses and assignment of a score of 1 to each clause containing an expression of the

relevant emotion for each scale. Weightings were added to scales measuring emotions which were considered to vary in intensity (Viney, 1986). These were the Cognitive Anxiety Scale, the Anxiety Scale, the Ambivalent Hostility Scale, the Hostility Directed Outward Scale and the Hostility Directed Inward Scale. Verbal samples of 70 words or less have been found to be unreliable indicators of the content analysis scale variables, (Gottschalk et al., 1969). In the present study, the longest interview consisted of 2,870 words and no interview consisted of less than 100 words. As participants who spoke for longer periods of time had greater opportunity to express their emotions, the raw score for each scale was entered into an equation which corrected for the number of words in the verbalisation (see Appendix B for the equation for each scale).

Measuring Coping Strategies

For the purposes of this study, coping scores were calculated according to the method used to calculate the emotional content analysis scale scores (Viney & Westbrook, 1976; Viney, 1986; Gottschalk et al., 1969). The transcripts were coded for text lines that contained references to any actions or thought processes which helped the nurses manage their feelings about patients' pain. For example, text lines containing such phrases as "It helps me if I... " or "It is easier when..." or "... makes me feel better" or "I deal (cope) with it by..." were coded as

"coping." When all the transcripts had been so coded, they were then subcoded according to the type of coping strategy. Nineteen strategies were identified. Criteria for each coping type were developed (see Appendix C). The 19 strategies were then classified into three groups according to the intent of the strategy. Details of the three classification groups are presented later in this section. An independent rater was also asked to classify the strategies. There was 100% agreement between raters. See Chapter 8 for greater detail about the different coping strategies.

A correction factor was calculated to adjust for the length of the verbalisation by dividing the total number of text lines spoken into 100. The score was equal to the square root of the number of text lines coded for each coping category on each topic, multiplied by the correction factor for that topic, plus half the correction factor (see Appendix B). Scores were calculated for each coping classification at each interview.

Inter-rater reliability of coding was checked by having an independent rater score the transcripts. A random sample of transcripts from 50% of the participants was selected and a list of the criteria for the coping codes was given to an independent rater with experience in qualitative analysis. This rater was asked to code the transcripts and to mark the text according to when the code commenced and finished. This was important as the number of text lines that the person devoted to each coping category was entered in the formula to calculate the coping

scores. The correlation coefficients for inter-judge reliability were calculated for each category. The coefficients ranged from $r = .98$ to $r = .99$. A paired t-test conducted to test for differences between the mean scores of the two raters showed no significant differences.

As the construct validity of the coping measures has not been established, they must be regarded as relatively crude measures. Conclusions based on the statistical analysis of coping scores should therefore be treated with caution. However, the identification of the components of coping is a strength of this research. These components may form the basis for the development of an instrument which can be appropriately validated for future research.

The coping strategies are detailed in Appendix C. The three coping classifications were as follows:

(1) Distancing coping strategies which consisted of seven constriction based strategies by which nurses physically and emotionally focused their attention away from the patient's pain. Examples of text that were coded as distancing include "I find it easy to cope with because I know that you have to be cruel to be kind" or "I guess you just have to switch off" or "I put it in the back of my mind otherwise I don't think I could have lasted." Distancing coping strategies were derived from the qualitative analysis codes 5 1 2 to 5 1 2 7. A complete list of codes is provided in Appendix C. The interjudge reliability coefficient was r .99. There was no signifi-

cant difference between the mean Distancing scores of two independent raters (t = 1.82, df = 34 ,p = .08).

(2) Engaging coping strategies consisted of nine strategies aimed at gaining personal satisfaction by improving the patients' comfort and reducing their pain. Examples of text that were scored as engaging were "We're able to spend time, after we've inflicted pain on patients, doing good things. Which makes them realise we are good as well, we're not just people that are there for pain. That makes it easier on us too" or "It's just by talking to them or sitting beside them and giving them a massage or something like that you know. Often doing something helps you feel better, helps them feel better and it takes away that guilt of not being able to do anything." (codes 5 1 1 to 5 1 1 9). The interjudge reliability coefficient was r .98. There was no significant difference between the mean Engaging scores of two independent raters (t = .88, df = 34, p = .38).

(3) Social support coping strategies consisted of attempts to manage feelings by seeking interpersonal help from colleagues, family and friends, professional counsellors and from patients and their families. In some cases the source of the support was not specified. Examples of text coded as social support coping are "Sometimes I need some debriefing because I push down all my feelings about the horrificness of the injuries that they have and the pain that they have so I sometimes need to talk it

out afterwards", "I'm lucky, because I have very good listeners at home and very good friends - very good listeners amongst my friends outside, who tend to be able to help me by the end of the day," (codes 5 3 1 to 5 3 5). The interjudge reliability coefficient was r .98. There was no significant difference between the mean social support scores of two independent raters (t = 1.78, df = 34, p = .08).

A further strategy emerged which involved reconstruction of the nurse's core role (code 5 1 3). As it was used by very few participants, it was not included in the statistical analyses. Role reconstruction is described in greater detail in Chapter 8.

Quantitative Analysis Procedures

Data were analysed statistically by submitting them to procedures from the SAS program for personal computers (SAS Institute Inc., 1985). Hypotheses were tested using multi-variate procedures. Separate analyses were conducted to test hypotheses about disorder-induced pain and clinically inflicted pain.

Burns and neonatal intensive care nurses were compared in terms of their scores on the content analysis scales and their coping scores from the time of the first interview to the time of the third interview with a repeated measures multi-variate analysis of variance (Hypothesis 1).

Analyses of covariance (ANCOVAs), using experience as the covariate, were used to compare burns and neonatal nurses' content analysis scales and coping scores (Hypothesis 1).

Multi-variate analyses of variance (MANOVA) were used to compare the entire sample of 32 burns and 33 neonatal nurses on the content analysis scales and coping scores at the time of the first interview. Discriminant function analyses were used to interpret the nature of any significant group differences (Hypotheses 2 to 6).

QUALITATIVE ANALYSIS

Qualitative analysis was aimed at elaborating on the model of the reactions to patients' pain of nurses working with burns and neonatal intensive care. Transcriptions were imported into the qualitative data analysis computer program NUDIST (Non-numerical, Unstructured Data, Indexing, Searching and Theorising) (Richards & Richards, 1988). NUDIST was used because it had greater flexibility than other software by allowing for an unlimited number of codes and permitting codes to be combined or separated. NUDIST also enabled codes to be developed from key word searches.

One line in the transcript was the smallest unit that could be coded. All lines were numbered. Hard copies of each interview were printed with a wide margin on the right hand side for coding notes.

The first transcript was read and text which seemed relevant to the aims of the research was highlighted. On the second reading, a few words summarising each of these segments of text were noted in the margin. When several transcripts had been so read, the notes were scrutinised in order to generate labels that most faithfully represented the themes that were emerging from the data. These labels then became the code names. Coding criteria were developed for each code. The codes were grouped according to whether they related to the emotional content, or to constructs of people, behaviour, pain or of the nurses' professional world.

As the coding system developed, the coding rules were defined and criteria for inclusion or exclusion from the category were clearly defined (Turner, 1987). Coding rules continued to be refined throughout the coding process (examples of coding rules are provided in Appendix C). Refining sometimes entailed broadening the criteria to include further instances. Sometimes it entailed narrowing them. At other times, when the criteria were becoming too broad for the code to be useful, it was necessary to divide it into two or more sub-codes. For example, many of the nurses working in paediatric settings mentioned the children's

parents, so a subcode "people\relatives\parents" was generated. It was then necessary to identify what the nurses were saying about the parents. Many nurses construed parents as hostile to nurses who were performing painful procedures on their children. So a further subcode "people\relatives\parents\hostile" was developed. Other constructions of parents were also sought and subcodes were accordingly generated, for example construing parents as partners in the child's care (harmoniously) or nurses expressing understanding of the parent's problems (empathically). Sometimes a code became so specific that it covered too few instances and was not "reducing the data" sufficiently. Rules were then broadened so that codes could be combined. This process continued until all the transcripts were coded. When the transcription process was complete, the contents of each code were scrutinised to (a) ensure that all text units met the criteria for inclusion and (b) that the code label accurately represented the contents. Cognitive mapping was used to set out the categories and examine the relationship between them. All the codes that were contained in the final list were included in the analysis and in the reports of the results provided in Chapters 6, 7 and 8 (see Appendix C for a complete list of the codes).

The Application of Rigorous Methods to the Qualitative Analysis

In this section I address issues concerning the trustworthiness of the qualitative analysis of textual data. While quantitative methods have

a tradition of applying rigorous criteria, the same has not been as systematically true of qualitative methods. It is critical that criteria be applied, so that whatever the method, the research can be shown to have been conducted in an exacting and honest manner and the results can be convincing.

Although the use of the words "reliability" and "validity" seem to be well accepted in the evaluation of quantitative methods, there are a variety of alternative terms that have been used in relation to qualitative methods. Debate has centred on whether findings are "trustworthy", "relevant" (Guba, 1981), "credible" (Patton, 1990), and whether they have been "verified" (Miles & Huberman, 1984). According to Miles and Huberman (1984), the main problems in the acceptance of qualitative methods have been that statistically based conclusions are believed to be more accurate than human judgements and that qualitative researchers have failed to detail the methods they have used to arrive at their conclusions. Qualitative researchers have thereby failed to give readers the opportunity to judge the relevance of the findings to their situation.

The dominant discourse of psychology has not favoured the application of qualitative methods to psychological research. Consequently there has been a lack of vigorous debate about the trustworthiness of qualitative data gathering and analysis techniques. Without such debate, researchers have very little "protection against self delusion"

(Miles, 1979). Consequently, qualitative research has often consisted of superficial analyses of clinical observations or of interview data with very little or no evidence of attempts to ensure trustworthiness. This is true of much of the literature on the effects of pain on nurses (eg., Atchison et al., 1986; Davitz & Davitz, 1975; Heidrich, et al., 1981; Quinby & Bernstein, 1971).

Ultimately, the reader of research requires evidence (i) that the researchers have not gathered their data from participants who are distinctive or "high profile" at the expense of those who, for example, may be less articulate or enthusiastic; (ii) that they have studied what they purport to have studied; (iii) that they have not become sidetracked into issues that are of particular interest to them and of limited relevance to the participants or to phenomena being studied; and (iv) that the study has contributed to understanding of the phenomena. Unless safeguards are in place, informants and data that are attractive to the researcher are more likely to be noticed (whether consciously or unconsciously), to be reported and to contribute to the conclusions.

Qualitative analysis must be subjected to accountability requirements to be accepted as a valuable method of inquiry. The trustworthiness of the study must be demonstrated by documenting in the research report the processes whereby participants were selected and whereby decisions were made about the type of data to be gathered, the represen-

tativeness of the sources and about the analysis of the data. The credibility of interpretations of the data must be demonstrated and procedures aimed at guarding against bias must be documented for readers.

Guba (1981) and Lincoln and Guba (1985) argue that the term "trustworthiness" is more appropriate than the terms "reliability" and "validity" for research conducted within a constructivist paradigm. They identified a set of four criteria which parallel those used in positivist methods, but are more appropriate to the aims of qualitative methods. These are (a) "credibility" (paralleling internal validity), (b) "transferability" (external validity), (c) "dependability" (reliability) and (d) "confirmability" (objectivity). They maintain that the relationship between credibility and transferability is a "trade-off" because as greater control is exerted over variables, the findings become more applicable to the experimental laboratory and less applicable to naturally occurring conditions. The nature of qualitative research therefore is to present findings which produce greater understanding of the complexity of the studied phenomenon, and therefore have greater relevance. In the next section, each of the criteria for trustworthiness is discussed and the ways that they were met within this study is described.

Credibility

Credibility is similar to internal validity. It is the extent to which the findings represent the beliefs, feelings and values of the participants, rather than "a flight of fancy" on the part of the researcher. In qualitative analysis, checks and balances must be built in so that decisions made in the process of data analysis result in credible conclusions and so that appealing and dramatic data are not over emphasised. Miles and Huberman (1984) warn against conclusions that arise from a passion for tidying up loose ends of data that don't quite fit the conclusions. A researcher, for example, may be tempted to develop theory from those data that make logical sense and to ignore or underplay less co-operative data that upset the neatness of the theory. The result is a "holistic fallacy" resulting from a tendency to interpret events "as more patterned and congruent" than can be justified from the data (Miles & Huberman, 1984, p. 230).

Two main issues had the potential to interfere with the credibility of the findings in this study: (a) the possibility of intrusion of my expectations (or prior theories) so that they might assume priority over the data from the participants (Morse, 1992b), and (b) the potential effects of data gathering and analysis methods on the study findings and conclusions.

Managing the Influence of Prior Theory

Before any coding was attempted, I generated a list of all the codes that I expected to emerge from the data. This coding list is included in Appendix C. Some of these codes represent guesses based on my own nursing experiences, others arose from the literature. The first aim in doing this was to be aware of my expectations so that these could be carefully checked against the text to reduce the chances of my expectations unduly influencing or distorting the findings. The second aim was to compare the actual findings with my expectations. During the study, regular discussion of emerging theory with colleagues who were aware of my expectations of the data, also helped to focus attention on potential misrepresentations.

The Potential Effects of Data Gathering and Analysis Methods on the Study Findings and Conclusions

The potentially distorting effects of the data gathering and analysis process on the conclusions were guarded against (a) by triangulating data sources and by (b) triangulating analysts, (c) having members of the groups of nurses studied check the interpretations for credibility and (d) checking the emerging theory against the data.

Triangulating data sources draws upon information from multiple sources and sites (Patton, 1990). The phenomenon of interest in this study was nurses' construing of pain. To develop a richer theory, partici-

pants were selected from six different sites (six units in four hospitals) and from two groups of nurses for whom the context of dealing with pain was different. Nurses working in burns units cared for patients who had suffered devastatingly painful and disfiguring injuries. In addition, these nurses conducted severely painful treatments on their patients, some of whom were burned children. Most of the critically ill neonates had not suffered such painfully severe tissue damage as the burn victims, nor did they undergo such painful treatments. In contrast to the burned patients, however, the pain suffered by neonates was, in the nurses' view, often underestimated by the doctors who at the same time maintained control over the most effective means of treating it. This occurred in a context where the patients were especially vulnerable and who were unable to speak for themselves. A consequence of the selection process was that the two different groups of nurses represent many of the problems associated with dealing with patients in pain: extreme pain, clinically inflicted pain, vulnerable and sometimes dying patients, and lack of agreement over the extent of pain with the controllers of analgesia prescriptions.

Triangulation of analysts was used to check that the extracted text met the coding criteria. Once codes or categories were refined and the process of applying them to the data was complete, other researchers familiar with qualitative methods were asked to check the coding. These coders were given the code label, the coding criteria and the extracted

text. Each coder was asked to check that the extracted text for each code met the coding rules. Resulting discrepancies helped highlight vaguely defined coding categories and differences in the coding process and were resolved by discussion. This process continued until consensus between coders was reached.

Participant checks of interpretations Psychological research is the attempt to interpret the construing of others and is therefore an exercise in sociality. It is a risky exercise to interpret the construing of 65 others without providing opportunities for them to confirm or disconfirm the interpretations. Participant checks have been recommended previously for researchers using personal construct psychology as a theoretical base (Kelly, 1965; Viney, 1987). Guba (1981) asserts that this is the single most important credibility check and that the way in which the findings were altered as a result of these checks should be documented.

Groups of nurses, which included some of the research participants were asked to check the interpretations in the following way. Four meetings were organised: two meetings were held with nurses caring for adult and paediatric burn victims (one of these meetings did not include study participants). One meeting involved a group of nurses working in paediatric burns units, in general paediatric wards or in neonatal intensive care units; one meeting involved a group of nurses working in neonatal intensive care units.

As the groups were not familiar with the philosophy behind the research, I first explained that it was not my intention to describe what actually happens when nurses encounter pain in their patients, but to interpret the nurses' responses to the two questions. I also explained that I was not asking them to verify the *data*, but *my interpretations of it*. The results of the study were then presented to them and they were asked to contribute their reactions concerning the credibility of my interpretations. No person indicated that any of the findings lacked credibility. However, they did raise issues that had not been raised by the participants. One adult burns nurse, for example, pointed out that she believed that one way in which nurses coped with the burns bath was to turn the music in the bathroom up very loud. She believed that this was how some nurses attempted to detach emotionally.

<u>Testing emerging theory against the data</u> Of critical importance to the credibility of the study are comprehensive checks of the fit between emerging theory and the data. This appeared to be a particular problem with using a computer program to store and code the data. While focusing attention on small segments of decontextualised text for an extended period of time, it is easy to lose sight of overall meaning of the data. Once themes and their linkages had been revealed, I returned to the complete transcripts and re-read them to ensure that my conclusions fitted with the stories from which they had been generated.

Transferability

Transferability is similar to the concept of external validity. It is concerned with the extent to which the findings are applicable to other settings. Transferability can be enhanced by providing as detailed a description of the study context as possible and by improving the representativeness of the participants and of the data.

As I have noted in Chapter 2, the philosophy of constructivist research is based on the notion that reality is context-bound (Lincoln & Guba, 1985). The construing of research participants can only be understood within the context to which it applies (Kelly, 1955). Removing information from its context results in loss of meaning and conclusions may not apply in another context. The constructivist position holds that because reality is related to context, it is only possible to transfer the findings to another setting or situation in which the context is similar. Transferability is then to do with the *relevance* of conclusions to settings other than those studied. It is, therefore, critical to transferability that the context of a particular study is clearly explained. Guba (1981, p. 86) recommends the gathering and reporting of "thick descriptive data" that allows the study context to be described as fully as possible so that similar contexts can be recognised. The reader is then able to decide about the value of the research in another context. In constructivist

inquiry therefore, the onus for decisions about transferability shifts from the researcher to the reader of the research.

Description of the Study Context

A "thick description" of the context of the study was presented to a small group of participants. They were asked if they agreed with the descriptions of their working environment. Changes suggested by the group were made to ensure that the descriptions faithfully reflected the nurses' working environment.

Representativeness of Data

The participants were interviewed at approximately five monthly intervals. The participants were asked to talk about the topic for at least five minutes, and they were also encouraged to talk until they had nothing more to say. In this way participants were provided with as much opportunity as possible to express their thoughts. The analysis was thus more likely to exhaust the range of views held by the participants and to allow maximum opportunity for relevant themes to emerge from the data. A total of 208 separate interviews were conducted over the period of the study.

Later interviews were checked for codes which had not appeared in earlier interviews. Most of the themes that emerged from this study did so in the first two rounds of interviews. No new themes emerged from

the fourth and fifth interviews. This suggests that the themes that are of most importance to the phenomena have been covered by the participants.

Dependability and Confirmability

The concept of reliability refers to the extent to which observations deviate from their true value (Kidder & Judd, 1986). Clearly, such definitions have little value in constructivist research that disclaims the existence of a "single truth." As previously noted, Kelly, (Bannister & Fransella, 1986, p. 54) argued that reliability is the extent to which a measure is insensitive to change.

Dependability or consistency of interpretations is a more useful concept as it refers to the extent to which variations in the data can be accounted for by the changes in the phenomena under study. Guba (1981, p. 81) refers to this as "trackable variance." The balance between acceptable and unacceptable inconsistencies is a delicate one. The nature and philosophy of constructivist research requires that allowances be made for the inconsistencies revealed by different constructs. However, it is also important that the data represent as many aspects and perceptions of the phenomenon under study as possible.

Confirmability refers to the extent to which conclusions are able to be verified by others. It is similar to the objectivity and replicability claims of positivist research. The context-bound nature of constructivist inquiry mitigates against any notion of replicability as it studies a particular place at a particular time. Many writers (Guba, 1981; Henwood & Pidgeon, 1992; Kirk & Miller, 1986; Miles & Huberman, 1984; Sandelowski, 1986; Strauss & Corbin, 1990) emphasise the need for thorough documentation of the process whereby the study was designed and the data gathered, interpreted and described (Kirk & Miller, 1986). Thorough documentation enables readers to judge whether another researcher at *this* time and place and using *this* methodology would arrive at similar conclusions. Guba (1981, p. 88) recommends that "a confirmability audit" be undertaken in which the audit ensures that data exist in support for every interpretation, and the interpretations are consistent with the data.

The dependability and confirmability of the research findings were addressed by providing an "audit trail" of the entire data collection and analysis process. The details of the process have been the subject of this chapter. Chapters 5, 6, 7 and 8 contain the results of the qualitative analysis. Codes are referred to by number throughout the chapter so that the reader may follow the process by comparing the code numbers with the final coding list presented in Appendix C.

SUMMARY OF THE METHODS USED IN THIS STUDY

In this chapter I have provided details of the data collection and analysis procedures used in this research. Statistical analyses of measures were used to test hypotheses arising from the model. Qualitative analysis of qualitative data was used to further elaborate the model by clarifying the nurses' reactions to the pain experienced by their patients.

The following chapter presents the results of the statistical analysis of the emotional content of the nurses' interviews and the coping strategies they described. The following four chapters contain the results of the qualitative analysis of the reactions of nurses caring for burn victims and critically ill neonates.

CHAPTER 4

RESULTS I:

NURSES' REACTIONS TO DISORDER-INDUCED AND CLINICALLY INFLICTED PAIN

The results of the statistical analyses of the emotional content and coping measures obtained from the nurses and described in Chapter 3 are presented in this chapter. Exploration of the nurses' reactions are presented in Chapters 5, 6, 7 and 8.

Analysis was concerned both with exploration of the data and testing of hypotheses about the emotional reactions and coping of two groups of nurses caring for patients experiencing two types of pain. The two groups of nurses were those caring for burned adults and children (burns nurses) and those caring for critically ill neonates (neonatal nurses). The two types of pain were that resulting from the disease process or treatment administered by other members of the health care team (disorder-induced pain) and that inflicted by the nurse in the course of caring for the patient (clinically inflicted pain).

The nurses' reactions were investigated using nine emotional content analysis scales and three coping measures. A list of the content analysis scales and the constructivist concepts they represent are provided in Table 4.1 and a list of the coping measures and associated constructivist concepts are provided in Table 4.2. A map of the analytic process is provided in Appendix E.

Table 4.1

Constructivist Concepts and Associated Content Analysis Scales

Constructivist Concepts	Content Analysis Scales
Personal satisfaction	Positive Affect
Helplessness	Pawn
Self confidence	Origin
Satisfaction with interpersonal personal relationships	Sociality
Uncertainty	Cognitive Anxiety
Diffuse anxiety & anxiety arising from fears of death bodily mutilation, separation, guilt & shame.	Total Anxiety
Depression	Hostility Inward
Hostility overtly and covertly directed towards others	Hostility Outward
Hostility from others directed towards the self	Ambivalent Hostility

Table 4.2

Constructivist Concepts and Associated Coping Measures

Constructivist Concept	Coping Strategies
Constriction of constructs	Distancing
Loosening of constructs	Engaging
Sharing of constructs	Social support

STATISTICAL EXPLORATIONS OF THE DATA

Means and standard deviations were calculated for all content analysis scales, coping scores for both types of pain and on the years of nursing experience and specialty experiences scores (see Appendix D, Tables D.1 to D.6). Correlational analyses were conducted on the content analysis scales and coping scores for both types of pain. Scores on both experience variables were included in the correlational analysis (see Appendix D, Tables D.7 to D.10). References are made to the patterns revealed by these results in relevant sections throughout the remainder of this thesis.

TESTS OF THE STUDY HYPOTHESES

Seven hypotheses were examined. These hypotheses were based on those listed in Chapter 2, but are now worded in terms of the operational definitions used in the research.

Hypothesis Concerning Changes in Reactions Over Time

1. When dealing with disorder-induced pain and clinically inflicted pain, nurses with greater nursing experience will have higher Distancing Strategies scores than those with less experience.

Hypotheses Concerning Differences between Burns and Neonatal Nurses' Reactions to Disorder-Induced Pain

2. Nurses caring for burn victims will score higher on the Total Anxiety Scale than those caring for critically ill neonates.

3. Nurses caring for critically ill neonates will score higher on the Pawn Scale than those caring for burn victims.

4. Nurses caring for burn victims will score higher on the Origin Scale than those caring for critically ill neonates.

Hypotheses Concerning Differences between Burns and Neonatal Nurses' Reactions to Clinically Inflicted Pain

5. Nurses caring for burn victims will score higher on the Total Anxiety Scale than those caring for critically ill neonates.

6. Nurses caring for burn victims will score higher on (a) the Hostility Directed Inward Scale, (b) the Hostility Directed Outward Scale and (c) the Ambivalent Hostility Scale than those caring for critically ill neonates.

7. Nurses caring for burn victims will have higher Distancing Strategy scores than those caring for critically ill neonates.

The remainder of this chapter contains details of the statistical analyses of the data. In the next section I discuss ways in which the power of the analyses was optimised. This is followed by a discussion of the data analysis procedures and their assumptions. The final sections contain results of the tests of hypotheses concerning changes in nurses' reactions over time, and differences in the reactions of the two groups of nurses.

IMPROVING THE POWER OF EXPLORATORY RESEARCH

It is desirable for research to maintain power at the highest possible level. Power is dependent on the study effect size, the alpha level and the sample size. In exploratory research such as the present study, the effect size is unknown, so keeping power at acceptable levels is highly dependent on alpha level and on sample size.

Stevens (1986, p. 9) has pointed out that "results that are not statistically significant may be due simply to poor power" and that this may be a particular problem for studies with small sample sizes. He argued that small samples sizes are less likely to uncover significant results because the tests have less power and are thus more prone to type II errors. Stevens (1986, p. 9) emphasised that sensitivity to the issue of power and to type II errors may prevent the researcher aborting "a promising line of research ... because significance is not found." Stevens' (1986) argument is particularly pertinent to this research which explores a phenomenon that has received little previous attention with a sample size that is not large. In an attempt to improve the power of the analysis, and control the type II error rate, the overall alpha level was maintained at .15. In this way, relationships that may be fruitful in further research were more likely to be identified.

LIMITATIONS IMPOSED ON THE ANALYSIS BY THE SIZE OF THE SAMPLE

The size of the sample imposed a number of limitations on the analyses. While analyses of the differences between the groups' guilt, shame and mutilation anxiety may have revealed some interesting results, they could not be studied statistically. Future research involving national recruitment may yield a sufficiently large sample for separate analyses to be possible.

Similarly the sample of paediatric burns nurses was not sufficiently large to allow separate analysis of paediatric and adult burns nurses. A multi-variate analysis of variance (MANOVA) comparing the paediatric nurses and adult burns nurses' coping and emotional content scores for the first interview showed no difference between the two groups of burns nurses. In addition, as the paediatric nurses' experiences of pain intensity and pain infliction were more similar to those of the nurses caring for adult burn victims than those caring for critically ill neonates, the burns nurses were treated as one group for the statistical analysis.

MULTIVARIATE ANALYSIS AND ITS ASSUMPTIONS

Hypotheses were tested using multivariate procedures. Hypotheses concerning longitudinal changes were evaluated with repeated measures

MANCOVAs and those concerning cross-sectional differences between the groups were evaluated with analyses of covariance (ANCOVA) and MANOVAs. Significant MANOVAs were interpreted with discriminant function analyses.

The assumptions underlying multivariate analysis were evaluated (Tabachnik & Fidell, 1989) and, apart from the presence of a number of multivariate outliers, were found to be satisfied. Multivariate outliers were identified from studentized residual scores representing greater than three standard deviation units (Stevens, 1986). Twelve outliers were identified in 12 different variables for 11 different participants. As discriminant function analysis is particularly sensitive to the inclusion of outliers (Tabachnik & Fidell, 1989), these values were deleted from the data set. This had the effect of reducing the degrees of freedom in analyses which included the affected variables.

Changes in Nurses' Reactions Over Time

Longitudinal Changes

Hypothesis 1

As nurses became more experienced in working with patients experiencing both types of pain, the emotional content of their reactions was expected to change. Hypothesis 1, (that nurses with greater nursing experience will have higher Distancing Strategies scores when dealing

with both types of pain, than those with less experience) was tested with two different types of analyses. First, a series of repeated measures MANCOVAs evaluated changes in burns nurses' and neonatal nurses' content analysis scales and coping scores over the time of the three interviews using length of nursing experience as the covariate. Second, the effect of the nurses' experience was evaluated in a series of analyses of covariance (ANCOVAs).

The first set of analyses examined longitudinal changes in emotional content and coping. The literature showed that nurses tend to become increasingly more detached over time, so it was predicted that over the period of the first three interviews, nurses would make progressively greater use of Distancing (constriction-based) Strategies for dealing with both disorder-induced and clinically inflicted pain.

In order to evaluate these changes, the scores for the 44 participants who completed the full set of three interviews were subjected to a series of repeated measures MANCOVAs. The means and standard deviations for the variables included in these analyses are presented in Appendix D, Tables D.11 to D.16. Separate analyses were conducted for each type of pain. As this research was not only concerned with testing hypotheses, but with exploring the data, all variables were entered in the analyses. In order to control the ratio of variables to subjects in each analysis (Stevens, 1986), longitudinal changes in nurses' constructs of

pain were evaluated by three separate repeated measures MANCOVAs for each of the two types of pain.

Disorder-Induced Pain

A series of repeated measures MANCOVAs evaluated longitudinal changes in burns and neonatal nurses' content analysis and coping scores over the period of the first three interviews. Length of nursing experience was entered as the covariate. For the 44 participants who completed three interviews, the mean Distancing scores increased from 1.92 (sd = 2.04) at the first interview to 3.12 (sd = 2.23) at the third interview for burns nurses and from 1.62 (sd = 1.16) to 2.09 (sd = 2.13) for the neonatal nurses.

The first repeated measures MANCOVA evaluated the changes in the three types of coping strategies (distancing, engaging and social support) using length of nursing experience as the covariate. The results showed that over the period of the first three interviews neither group demonstrated any changes in their scores for coping strategies (F = 1.89, df = 2,40, p = .17). There was therefore no support for Hypothesis 1 concerning disorder-induced pain during the period of the first three interviews. Later in this chapter, the results of analyses of the relationships between coping strategies and the nurses' experience are reported.

Two separate repeated measures MANCOVAs evaluated changes over the period of the three interviews in (a) the three scales measuring the positive emotions (the Positive Affect, Origin and Sociality Scales) and (b) the six scales measuring negative emotions (the Hostility Directed Inward, Hostility Directed Outward, Ambivalent Hostility, Cognitive Anxiety, Total Anxiety and Pawn Scales). Again length of nursing experience was entered as the covariate. There were no changes in the nurses' positively toned emotion scores (F = .7, df = 2,40, p = .5), nor in their negatively toned emotion scores (F = .12, df = 2,40, p = .88). These results suggest that, at least in the short term, nurses' emotional and coping reactions to disorder-induced pain do not change.

Clinically Inflicted Pain

A further series of repeated measures MANCOVAs evaluated changes in content analysis scales and coping scores for clinically inflicted pain over the period of the three interviews. Length of nursing experience was entered as the covariate. The burns nurses' mean Distancing scores changed from 2.58 (sd = 2.59) for the first interview to 3.06 (sd = 2.19) for the third interview. The neonatal nurses' mean Distancing scores changed from 2.15 (sd = 1.53) for the first interview to 3.3 (sd = 2.37) for the third interview. A repeated measures MANCOVA evaluated changes in the coping scores. As there were no significant changes in the coping scores, there was no support for Hypothesis 1 concerning clinically inflicted pain (F = .7, df = 2,40, p = .49).

Two separate repeated measures MANCOVAs evaluated changes in the nurses' scores for positively toned emotions and for their negatively toned emotions with length of nursing experience as the covariate. There were no significant changes in the positively toned emotion scores (F = 1.45, df = 2,40, p = .34), or in the negatively toned emotion scores (F = 1.34, df = 2,40, p = .27).

The results of the repeated measures MANCOVAs suggest that the nurses' reactions to disorder-induced and clinically inflicted pain are, at least in the short term, unchanging and stable. In the next section, I evaluate the effects of long-term experience on the ways the nurses construed the pain experienced by their patients.

The Implications of Longitudinal Results for Subsequent Analyses

The results presented in this section demonstrate that over the period of the first three interviews, the nurses did not change the way they construed pain. Mindful of Stevens' (1986) warning about the problem of increased type II error rates in small samples, I decided to conduct the remaining analyses only on the data from Interview 1. This decision had the advantage of improving the power of the remaining analyses by confining them to the full sample size of 65 and therefore reducing the probability of type II errors.

The Effects of Nursing Experience on Reactions to Pain

The second set of analyses evaluated the effects of experience by comparing nurses with differing levels of experience. Experience was measured in two ways. The first measurement was the number of years that each participant had worked as a practising nurse (Nursing Experience). The second was the number of years that each participant had spent working in their present specialty area (Specialty Experience). The distribution of the Nursing Experience of both groups of nurses is presented in Table 4.3. and that of the Specialty Experience of both groups of nurses is presented in Table 4.4

The differences in experience between the two groups of nurses were evaluated with t-tests for independent groups (see Table 4.5). Neonatal nurses were found to have significantly longer Nursing Experience ($t = 4.16$, $df = 63$, $p < .001$) and to have significantly longer Specialty Experience than burns nurses ($t = 2.23$, $df = 63$, $p < .03$).

A correlational analysis identified variables that were highly correlated with each measure of experience. A series of analyses of covariance (ANCOVAs) was conducted to evaluate the effect of experience on each of these variables for each group of nurses. The type of nursing (burns or neonatal intensive care) was entered as the group variable and Nursing Experience or Specialty Experience as covariates.

Table 4.3

Distribution of Years of Experience in Nursing for Each Group of Nurses

Years of nursing experience	Groups			
	Burns Nurses		Neonatal Nurses	
	n	%	n	%
1 - 3.99	11	34	1	3
4 - 6 .99	12	38	7	21
7 - 9.99	6	19	7	21
10 - 12.99	0	0	6	18
13 - 15.99	1	3	5	15
> 16	2	6	7	21
Total	32		33	

Table 4.4

Distribution of Years of Specialty Experience for Each Group of Nurses

Years of specialty experience	Groups			
	Burns Nurses		Neonatal Nurses	
	n	%	n	%
< .99	14	44	0	0
1 - 3.99	13	41	1	3
4 - 6.99	2	6	7	21
7 - 9.99	2	6	7	21
10 - 12.99	0	0	6	18
13 - 15.99	1	3	5	15
> 16	0	0	7	21
Total	32		33	

Table 4.5

Means and Standard Deviations of the Years of Experience for Burns and Neonatal Nurses

Type of experience	Groups: Burns Nurses		Groups: Neonatal Nurses			
	Mean	S.D.	Mean	S.D.	df	t
Nursing Experience	5.9	4.9	11.23	5.39	63	4.16**
Specialty Experience	2.19	2.94	3.77	2.78	63	2.23*

* $p < .05$ ** $p < .001$

Disorder-Induced Pain

It was predicted that when dealing with disorder-induced pain, Distancing scores would be higher among those nurses with longer Nursing Experience, and among those nurses with longer Specialty Experience.

Correlational analysis showed that as Distancing was not associated with either of the experience variables, the hypotheses were not supported for disorder-induced pain. However, Specialty Experience was negatively correlated with Total Anxiety ($r = -.25$, $p < .05$). ANCOVA results showed that after the group means for Total Anxiety Scale scores were adjusted for the effects of Specialty Experience, a significant difference remained between the groups ($F = 11.43$, $df = 1,62$, $p < .01$). This suggested that differences in Total Anxiety scores were related to group membership and not to the effects of Specialty Experience. The difference between the groups' Total Anxiety Scale scores for disorder-induced pain is evaluated later in this chapter.

Clinically Inflicted Pain

It was similarly predicted that when dealing with clinically inflicted pain, Distancing scores would be higher among those nurses with longer Nursing Experience, and among those nurses with longer Specialty Experience.

Correlational analysis revealed that Nursing Experience was not associated with Distancing scores for clinically inflicted pain. However, Nursing Experience was negatively correlated with Total Anxiety (r = -.27, p < .04) for clinically inflicted pain. ANCOVA results showed that after the group means were adjusted for the effects of experience, the scores for Total Anxiety were significantly different (F = 5.16, df = 1,62, p < .03). These results suggest that differences in scores on the Total Anxiety Scale were related to group membership and not to Nursing Experience. Group differences in scores on the Total Anxiety Scale are investigated further in the next section.

Specialty Experience was negatively correlated with scores for Distancing coping strategies (r = -.25, p < .05). The ANCOVA results showed that in controlling for the effect of Specialty Experience, there was no difference between the Distancing coping strategy scores of the two groups of nurses (F = .47, df = 1,61, p = .5). As nurses who had longer experience in their specialty were less likely to use Distancing as a strategy to cope with clinically inflicted pain, the results were in the opposite direction to that predicted by the hypothesis.

Summary of the Effects of Nursing Experience

The results of these analyses suggest that as nurses work longer in their specialty area, they are less likely to use distancing to cope with clinically inflicted pain. However, it was the nature, rather than the

length of the nurses' experience that affected their anxiety about the pain experienced by their patients. The next section contains results of more detailed explorations of the effects of the nature of nursing experience on nurses' constructs of pain.

Comparisons of the Reactions to Pain of Burns and Neonatal Nurses at Their First Interview

In this section, multivariate analyses of variance (MANOVA) were used to examine hypotheses about the differences between the reactions of the two groups of nurses. For each type of pain, a MANOVA was used to assess group differences on the nine content analysis scale scores and a separate MANOVA was used to assess differences in the three coping scores. When significant differences between the two groups of nurses were revealed, discriminant function analysis was used to interpret the nature of the differences.

Discriminant function analysis is a set of statistical techniques used to conduct simultaneous investigations on the differences between two or more groups according to a set of variables (Klecka, 1980). Discriminant function analysis has the particular advantage of enabling group differences to be interpreted with the use of a multi-variate technique, rather than multiple univariate techniques. In this way, better control of the type I error rate is provided (Borgen & Seling, 1978).

Discriminant function analysis has been recommended for the interpretation of differences between naturally occurring groups rather than those formed artificially from random assignment (Tabachnik & Fidell, 1989). As this research is exploratory and aimed to discover

variables which usefully discriminated between the two groups of nurses, a stepwise procedure was used (Klecka, 1980).

Disorder-Induced Pain

Hypotheses 2, 3 and 4

Burns nurses were expected to score higher on the Total Anxiety Scale (Hypothesis 2) and Origin Scale (Hypothesis 4) and neonatal nurses were expected to score higher on the Pawn Scale (Hypothesis 3). A MANOVA showed that there were significant differences between the content analysis scale scores for the two groups of nurses ($F = 2.89$, $df = 9,53$, $p < .01$).

A forward stepwise discriminant function analysis was used to interpret the nature of the differences between the emotions expressed by the two groups (see Table 4.6). As was expected, the burns nurses scored significantly higher than the neonatal nurses on the Total Anxiety Scale ($F = 13.78$, $df = 1,61$, $p < .001$) and on the Origin Scale ($F = 5.81$, $df = 3,59$, $p = .02$). There was no difference in The Pawn Scale scores for the two groups. The Positive Affect Scale was found to be an additional and unexpected discriminator. Neonatal nurses scored higher on the Positive Affect Scale than the burns nurses ($F = 4.89$, $df = 2,60$, $p = .03$). The sample sizes were used to estimate the a priori probability of group membership which was 50% for each group. Cross validation showed that the discriminant procedure correctly classified 72% of the

burns nurses and 71% of neonatal nurses. Compared with the a priori probability, this was considered acceptable.

Table 4.6

Stepwise Discriminant Function Analysis of Reactions of Burns and Neonatal Nurses to Disorder-Induced Pain

	Groups			
Variable	Burns Nurses	Neonatal Nurses		
	Mean (sd)	Mean (sd)	F	p
Positive Affect	.39 (.13)	.46 (.24)	4.89	.03
Origin	1.16 (.38)	.1 (.38)	5.81	.02
Total Anxiety	2.59 (.62)	2.15 (.61)	13.78	.00

* overall α set at .15

A separate MANOVA used to investigate differences between the two groups of nurses on their coping scores, showed there were no significant differences (F = 1.13, df = 3,59, p =.34).

Clinically Inflicted Pain

Hypotheses 5 and 6

As the nurses' experiences of clinically inflicted pain differed, burns nurses were expected to score higher on the Total Anxiety Scale (Hypothesis 5) the Hostility Directed In Scale, the Hostility Directed Outward Scale and the Ambivalent Hostility Scale (Hypothesis 6). In order to

examine these hypotheses, the scores for clinically inflicted pain on the nine emotional content scales were submitted to a MANOVA. The results showed an overall difference between the two groups (F = 3.5, df = 9,51, p = .00).

Forward stepwise discriminant function analysis of the content analysis scales revealed that, as expected, the burns nurses scored higher on the Total Anxiety Scale (F = 7.22, df = 2,58 p = .01) and on the Ambivalent Hostility Scale (F = 3.18, df = 4,56 p = .08) than the neonatal nurses. There were no differences in the scores on the Hostility Directed Outward and Hostility Directed Inward Scales. Those caring for burn victims scored higher on the Origin Scale (F = 11.17, df = 1,59, p = .00) and the Sociality Scale (F = 2.21, df = 5,55, p = .14) (see Table 4.7). Nurses caring for critically ill neonates scored higher on the Positive Affect Scale (F = 4.61, df = 3,57, p = .05). The a priori probability of group membership was .5 (50%) for each group. Cross validation showed that, with regard to the emotions associated with clinically inflicted pain, the discriminant procedure correctly classified 64% of burns nurses and 73% of neonatal nurses. This suggests that the classification for both groups of nurses was adequate.

Hypothesis 7

Burns nurses were also expected to have higher Distancing scores than the neonatal nurses (Hypothesis 7). A MANOVA showed a signifi-

cant difference between the coping scores of the two groups (F = 5.86, df = 3,58, p < .01). Forward stepwise discriminant function analysis showed that neonatal nurses had higher scores for the Engaging coping strategies (F = 13.72, df = 1,60, p < .01) and burn nurses had higher scores for the Social Support coping strategies (F = 3.22, df = 2,58, p = .08). There was therefore no support for Hypothesis 7.

Coping scores correctly classified 97% of burns and 41% of neonatal nurses. This indicates that the coping scores were accurate for the classification of burns nurses. However as they were unsatisfactory for classification of neonatal nurses, coping scores were not used to identify nurses using typical or atypical coping patterns.

SUMMARY OF NURSES' REACTIONS TO DISORDER-INDUCED AND CLINICALLY INFLICTED PAIN

In this chapter statistical procedures were used to test hypotheses derived from the model of nurses' reactions to the pain experienced by their patients. The nurses' reactions did not change during the period of approximately 18 months between the first and third interviews. In contrast with the literature, nurses who had greater experience in their current specialty were less likely to use Distancing coping strategies. However, the attrition rate may have contributed to this result as nurses

Table 4.7

Stepwise Discriminant Function Analysis for Reactions of Burns and Neonatal Nurses to Clinically Inflicted Pain

Variable	Groups: Burns Nurses	Neonatal Nurses		
	Mean (sd)	Mean (sd)	F	p
Emotions				
Positive Affect	.40 (.25)	.43 (.18)	4.16	.05
Origin	1.19 (.36)	.88 (.32)	11.17	.00
Sociality	.63 (.29)	.53 (.30)	2.21	.14
Total Anxiety	2.19 (.55)	1.74 (.63)	7.22	.01
Amb. Hostility	.56 (.41)	.38 (.14)	3.18	.08
Coping				
Engaging	1.52 (1.75)	2.39 (1.87)	13.72	.00
Social Support	1.30 (1.07)	1.00 (.41)	3.22	.08

* overall α set at .15

The nature of the work in the different nursing specialties also appeared to have certain effects. When dealing with the type of pain that arises from the disorder suffered by the patients, nurses caring for patients with severe burns were characterised by their greater total anxiety, and at the same time, by greater self confidence. Neonatal nurses experienced greater positive affect, but did not express as much self confidence as the nurses caring for burn victims.

The necessity to inflict pain on their patients also generated greater anxiety in the burns nurses. They were more likely than neonatal nurses to construe other people as holding hostile feelings towards them and less likely to express greater positive affect. Nevertheless, burns nurses experienced greater feelings of personal competence and greater feelings of satisfaction with their personal relationships.

In the next four chapters I present the results of the qualitative analysis of the entire 208 interviews. The aim of the qualitative analysis was to understand how the nature of caring for burned patients aroused negative emotions in the nurses, but at the same time gave them a sense of personal competence. Qualitative analysis was also used to understand the nature of the experiences that reduced neonatal nurses' ability to feel competent, but also increased their positive feelings about caring for patients in pain.

CHAPTER 5

RESULTS II:

CONSTRUCTS OF CARING

In the preliminary model of nurses' reactions to patient's pain presented in Chapter 2, I proposed that "caring" was a core role structure by which nurses understood themselves professionally. I further proposed that "caring" subsumed the nature of nursing work. When caring for patients in pain, alleviation of pain was a subordinate construct of "caring" and was expressed by having compassion, facilitating the patients' well-being, and relieving pain that patients cannot relieve for themselves.

The preliminary constructivist model of nurses' reactions to their patients' pain took into account the differing effects that disorder-induced and clinically inflicted pain had on the ways nurses construed themselves. I proposed that when nurses were unable to relieve disorder-induced pain they would construe themselves as ineffective carers. I further proposed that when it was necessary for nurses to inflict pain on patients, they would have difficulty maintaining an image of themselves as pain alleviators.

The accounts that the nurses in this study gave of both types of pain provided evidence that supported these propositions. In addition, their accounts indicated another core role construct of importance when caring for patients in pain. This was the construct of "nurses as advocates for their patients". Advocacy has been assuming greater prominence in the nursing literature in recent years and has been defined in various ways (Abrams, 1978; Gadow, 1989; Segesten, 1993). The

nurses in this study believed strongly that effective care of patients in pain required nurses to accept responsibility for ensuring that medical staff wrote prescriptions for adequate medications.

In the next four chapters, I present the results of the qualitative analysis of the data. The qualitative codes that were drawn from the text of the interviews are listed in Appendix C and are explored in the following chapters. Descriptions of the various codes (or themes) are illustrated with quotations selected from the text of the interviews. The identification number of the relevant participant is included at the end of each quotation. The quotations were selected because they exemplified the participants' descriptions and as such make a valuable contribution to the reader's understanding of the reactions of nurses to the pain of patients.

In this chapter, I draw from the text of the interviews to elaborate that part of the model that focuses on nurses' constructs of themselves as carers (codes 6 1 4 to 6 1 4 5 1). The core constructs are presented first, because they were central to the way the nurses reacted to their experiences of patients' pain and because these core constructs also influenced the ways that the nurses coped with their emotional reactions to pain. In Chapters 6 and 7, I focus on the way that nurses reacted when these core constructs were validated and when they were invalidated. In Chapter 8 I focus on the strategies used by the nurses to manage the emotions that were generated by the pain they observed in their patients.

In defining themselves as carers, nurses construed themselves both as alleviators of pain and as advocates to the medical staff for patients in pain. It is important to note that the constructs reported in this thesis relate only to the ways the participants construed themselves as *nurses dealing with pain*. The participants did not discuss their other role structures, nor did they discuss their other functions as nurses.

ALLEVIATORS OF PAIN

The results of the qualitative analysis confirmed that when caring for people in pain, the nurses appeared to subsume the construct "pain alleviator" with the construct "carer." Thirty-four per cent of participants (38% of burns and 30% of neonatal nurses) explicitly stated that relieving pain was an important component of caring for patients. The ways in which nurses construed pain alleviation were consistent with four of Watson's (1988) ten carative factors. These involved their sensitivity to themselves and to others (code 7 2 1), the development of helping and trusting relationships with patients (code 5 2 1), the ability to solve creatively problems of pain relief (code 5 2 4, 5 2 6 to 5 2 9) and the ability to provide a supportive, protective and restorative environment (code 5 2 2, 5 2 5, 5 2 6 to 5 2 9).

When the nurses were unable to relieve unnecessary disorder-induced pain, they felt invalidated (code 6 1 4 1). Some explicitly expressed their feelings of invalidation. *Your role is there as a carer and to*

alleviate pain... It's very dreadful and difficult ... especially when you can't alleviate it entirely." (bw4-3). *I think that if I'm looking after someone that's in a lot of pain or discomfort then I'm not doing my job because I feel that as nurses we should be able to relieve that patient's pain with the help of the doctors in ordering analgesia, etc.* (nc2-2). While the statements of other nurses were less direct, their obvious distress when pain was unrelieved implied that they held similar core role constructs.

The nurses' sense of invalidation was particularly evident when it was necessary for them to inflict pain on patients. *It goes against all - it goes against everything you sort of initially thought nursing was all about, which is essentially a caring profession, and you're doing exactly the opposite at times, you're sort of inflicting pain which goes against everything that you've sort of - everything you thought you would be doing in nursing, it goes against that* (bk7-2). Some of the nurses caring for burn victims, who inflicted particularly severe pain on patients, indicated that the extent to which they had to hurt patients not only conflicted with the way they construed themselves as nurses, but also with their personal values and the way they understood societal values. *It goes against all my upbringing and social standards and also of course what I've been taught in.. along in my life as a nurse* (bw6-1).

The nurses had certain expectations of themselves as pain alleviators. Analysis of these expectations showed that many nurses interpret-

ed their failure to alleviate disorder-induced pain as ineffective nursing practice. The opposite pole of the construct "pain alleviator" was "ineffective pain alleviator." Sixty-eight per cent of the participants (61% adult and 78% paediatric burns and 70% neonatal) indicated that it was important for them to regard themselves as technically competent and effective practitioners in a variety of the aspects of their work with people in pain (codes 6 1 4 3, 4 4 1, 4 4 2). Some nurses spoke about the feelings of pride and achievement they gained when they believed they had fulfilled their obligations to relieve pain (code 3 1). At other times they spoke about their feelings of inadequacy when they were unable to achieve their pain relief goals (code 3 2, 3 7, 4 4 2).

Analysis of the text of the interview responses of the nurses provided elaboration of the construct "pain alleviator." Those who expressed feelings of competence and control spoke about having gained theoretical knowledge and understanding, technical competence, and interpersonal skills (codes 5 2 1 to 5 2 9, 3 3). When they were confident about their knowledge and skills, they were able to see themselves as the means by which patients could achieve emotional well-being and physical recovery. *Because they're virtually just a body of pain they have very little control over their own external and internal environment (um) and so you're their lifeline* (bc1-1).

Nurses' expectations of themselves also included coping effectively with the undoubted emotional pressures of working with people in pain

(codes 4 4 2 4, 3 3, 6 1 4 4). Some spoke of their sense of achievement that they were able to cope with the emotional and physical demands made on them by their work. Others spoke of their fear of not being able to cope and of the effect that this may have had on the patients (code 4 4 2 1). *I must always, as a practitioner - I'm the person who has the responsibility of being in control. If I lose control, then there's no way in the world that I can expect the patient to have any kind of control. You set yourself up as a role model. If I start to blow that!* (bc1-4)

Many nurses expressed feelings of inadequacy about some aspect of their work with people in pain. These feelings were most commonly associated with a lack of pain assessment skills (code 4 4 2 2), causing patients unnecessary pain (code 4 4 2 3), ineffectiveness in controlling the patients' pain (4 4 2 6), making errors that jeopardised the patient's recovery (4 4 2 5), being unable to cope emotionally (code 4 4 2 4). Profound feelings of inadequacy occurred when the nurses believed they had failed to act as effective advocates for the patients (code 6 1 4 5 1).

PATIENT ADVOCATES

Analysis of the interviews revealed that an important core role construct subsumed by "nurse as carer" was that of "nurse as patient advocate." Advocacy meant acting as an intermediary between patients and medical practitioners, and accepting responsibility for advising the doctors of the patients' need for analgesia. The nurses believed that if

doctors resisted requests for analgesia, the nurses should exert pressure on the doctors until they did order adequate analgesia.

Nurses caring for infants and children had particularly strong beliefs about their advocacy role. Sixty-one per cent of neonatal nurses and 44% of paediatric burns nurses explicitly spoke of their conviction that patient advocacy was a fundamental component of caring (code 6 1 4 5); only nine per cent of those caring for adult patients spoke about themselves as advocates.

Other writers have also noted the growing importance of advocacy as a professional construct (Franck, 1992). The importance of advocacy has been particularly strong among nurses whose patients have difficulty in communicating their needs (Gadow, 1983) such as critically ill neonates (Wocial, 1993). The prominence of the view among neonatal and paediatric nurses reflected the particular helplessness of their patients. *Letting [a baby] cry all night in pain, is not, you know, an advocacy for that baby. You're not being an advocate and doing the right thing by that baby. Really I would tend to just classify it as total, ah, neglect. You're negligent in your duty to care for that baby. That's how strong I see it. And it's really in black and white and if you litigated against it, that's how it would come out* (nc23-2).

IMPLICATIONS OF THE FINDINGS ABOUT CONSTRUCTS OF CARING FOR THE MODEL OF NURSES' REACTIONS TO PATIENTS' PAIN

Analysis of the nurses' accounts of dealing with both disorder-induced pain and clinically inflicted pain suggests the addition of the following propositions to the model of nurses' reactions to pain.

When caring for patients experiencing disorder-induced pain, the opposite pole to the construct of "nurse as pain palliator" is "nurse as ineffective palliator."

When the patients' well-being is threatened by unrelieved pain, nurses' constructs of themselves as effective carers partially depend on their ability to successfully advocate for the patient in order to obtain adequate analgesia.

In the next chapter I consider the implications of nurses' core role constructs for the ways that they cared for patients experiencing disorder-induced pain. In a later chapter I examine the implications for nurses when it was necessary for them to inflict pain on their patients.

CHAPTER 6

RESULTS III:

NURSES' REACTIONS TO CARING FOR PATIENTS WITH DISORDER-INDUCED PAIN

In the preliminary model of nurses' reactions to patients' pain presented in Chapter 2, I proposed that nurses who were restricted in their ability to alleviate disorder-induced pain would experience greater feelings of incompetence and of helplessness. As medical staff have tended to believe that the immaturity of the neonatal nervous system limit the ability to feel pain, nurses caring for critically ill neonates were likely to face greater impediments in obtaining analgesia for their patients. The results of the statistical analyses showed that while there was no difference in the feelings of helplessness between the two groups of nurses, nurses caring for neonates demonstrated a lower sense of competence and control than those caring for burn victims. An unanticipated finding was that nurses caring for critically ill neonates also expressed greater positive affect than nurses caring for burn victims.

In the preliminary model I further proposed that as exposure to intense disorder-induced pain directly challenges nurses' constructs of themselves as pain alleviators, it raises their feelings of anxiety. The results presented in Chapter 4 showed that nurses who were confronted with patients experiencing the intense pain of burns expressed greater anxiety than nurses caring for neonates whose patients experienced less severe and less obvious pain.

In this chapter I present the results of the qualitative analysis of the nurses' accounts of their experiences with disorder-induced pain. Specifi-

cally, I examine the way in which the situations of nurses caring for burn victims (burns nurses) and those caring for critically ill neonates (neonatal nurses) influenced their (a) positive affect, (b) sense of personal control and competence and (c) feelings of anxiety.

POSITIVE AFFECT

An unanticipated finding was that while neonatal nurses appeared to experience many difficulties in caring for people in pain, they seemed to find greater sources of pleasure in their work than the burns nurses.

Analysis of the text of the interviews revealed a number of reasons for this. Firstly, neonatal nurses seemed to derive a great deal of pleasure from their relationships with the infants. Indeed the analysis showed considerable overlap between text coded for neonatal nurses' satisfaction with their relationships with patients (code 3 5) and for positive affect (code 3 1). In contrast, burns nurses derived greater satisfaction from their relationships with colleagues than with patients, but they attached less positive affect to their relationships. Caring for babies seemed to provide intrinsic satisfaction and many of the neonatal nurses spoke about how much enjoyment they derived from caring for fragile, dependent infants.

Neonatal nurses also experienced much satisfaction and a heightened sense of achievement when they believed that they had been instrumental in comforting and relieving the pain of a distressed infant. While the nurses often had difficulty in ascertaining whether or not an infants' distress was due to pain, when analgesia was administered and the infants settled, the nurses caring for them experienced a great deal of satisfaction and pleasure. Therefore, while neonatal nurses were likely to be distressed by pain, they also appeared to have the potential to experience satisfaction from its relief. Seeing the patients relieved of their pain was validating for them and was consequently very rewarding (code 6 1 2 1). During the acute phase of recovery from burn injuries, however, complete pain relief was rarely possible. As mobility was important for healing and recovery from severe burns, and large doses of analgesia tended to have hypnotic effects, it was often not possible to give burn patients sufficient analgesia to fully relieve their pain.

PERSONAL COMPETENCE AND CONTROL

The nurses' attempts to help their patients were not always straightforward and they frequently encountered obstacles which affected their sense of personal control and competence. There were two major factors that tended to diminish the nurses' confidence in their ability to manage the patients' pain. Both factors assumed greater importance in

the neonatal intensive care units. The first concerned the nurses' perceived ability to evaluate "accurately" the intensity of the patients' pain (code 4 4 2 2). The second concerned their ability to enlist the cooperation of medical staff to alleviate the pain (code 4 4 2 6, 4 3 2 3). Feelings of personal responsibility for the alleviation of disorder-induced pain pervaded their accounts of difficulties in overcoming both of these problems.

Competence and Control in the Assessment of Pain

Most nurses believed that accurate pain assessment was a prerequisite for the fulfilment of their pain control obligations. Pain assessment of neonates necessarily relied on subjective judgements about whether the facial grimaces, crying and restlessness they observed in the infants could be attributed to pain. The nurses' perceived lack of pain assessment skills was responsible for feelings of inadequacy in many of them (code 4 4 2 2). The lack of "objective" assessment tools was one of their most common complaints. *You have to be able to judge if they are in pain by the way they act and the way they cry, if they are not sedated. Um, you have to pick up the signs of these babies in pain. It can be distressing because you are not always sure it is correct what you see and what you think it is* (nc5-2).

Once again a theme of personal responsibility emerged from the data. This time it was attached to the nurses' discussions of pain evaluation. Despite the difficulties in assessing pain, the neonatal nurses accepted a great deal of personal responsibility about "getting it right." "Getting it wrong" was associated for many nurses with a feelings of personal inadequacy, frustration and feelings of helplessness (codes 3 1, 3 7, 4 4 2). The inability of neonates to speak for themselves gave the neonatal intensive care nurses an added sense of responsibility (code 4 1 5).

Difficulties in assessing pain were not confined to neonates and children. An intriguing finding was that even when they were assessing the pain of adult patients, few spoke about being able to rely on the patient's self-reports and once again the nurses assumed responsibility for making decisions about the extent of the patients' pain (code 7 1 3 4). The following is an extract from an interview with a nurse caring for adult burn victims. *You may be put in a position where you have to judge a person's pain and how genuine it is, how intense it is, and it's a very difficult thing to judge because some people internalise it and don't express it and other people will express it in various different ways, and a lot of the time it depends a lot on how that person's feeling at the time* (bw4-3). Some expressed the belief that patients' complaints of pain could not be relied upon and that sometimes they exaggerated, or even faked pain. *[It's] important to realise that [some] people are lying to you*

and that they haven't got pain (bw6-1). *I cut the dressings. I'd cut the outer layer of dressings off and she would be flinching at the pain, even though I know darn well I wasn't doing anything to her. I was just cutting away a layer of dressing that I could have - if I had covered her eyes - she'd never have known were coming off.* (bw3-1).

Thus it seems that sometimes, as in the case of neonates, pain assessment problems were unavoidable. At other times, in the case of conscious adults, some nurses remained unwilling to accept the patients' evaluation. This phenomenon has been noted previously. For example, Oberst (1978) found that nurses rated patients' vocalisation of pain and request for relief as only the fourth and fifth most important cues for assessing pain after facial expression, diagnosis, position and movements.

A small number of nurses caring for adult patients were concerned about the subjectivity of their judgements and argued that the imposition of such subjective, and often inaccurate, judgements was often the very reason why patients received inadequate analgesia. *It's our perception of pain that we put on them, so although it's very upsetting to see these people in pain, we still do judge a bit and I still do feel that sometimes I can sit back and think that it was my judgment there rather than taking the patient's judgement saying 'Yes! I am in a lot of pain!', especially if you've given them pain relief 30ml higher and they're still saying they're in a lot of pain.* (bw9-1).

Referring to the different constructions that nurses placed on pain, one nurse caring for adult patients voiced the opinion that administration of analgesia should be independent of nurses' pain assessments. *We tend to be very judgmental. I think um, PRN* [when necessary] *pain medication a poor idea. We're a varied group with different interpretations of pain and how it's expressed, to determine whether someone deserves or doesn't deserve pain medication and I find often that people don't get enough analgesia. If it's left PRN, people tend not to give it rather than give it and I think it's much better if right from the beginning um, they have adequate analgesia.* (bw4-3)

Pain assessment was an important theme in the nurses' accounts of their experiences with disorder-induced pain (codes 4 4 2 2, 7 1 3 4). Unless they could have confidence in their pain assessments, they could not properly discharge their pain relief responsibilities. Nevertheless the nurses in the neonatal units continued to regard themselves as responsible for making these judgements and for ensuring that the patients' pain was properly controlled (code 6 1 4 1 1). Of particular interest was the observation that while patients were able to free the nurse from responsibility for pain assessment, some nurses were unable to accept the patients' word. It seemed that in their attempts to gain an element of control of often uncontrollable situations nurses appeared to "set up" the situation so that it was self defeating. Theoretical explanations of these issues are advanced in Chapter 9.

Competence and Control in the Alleviation of Pain

A notable theme emerging from the nurses' accounts of caring for patients experiencing disorder-induced pain, was their feeling of personal responsibility for the alleviation of pain (code 6 1 4 1 1). In order to effectively fulfil this responsibility, they believed they should act as advocates for the patients to ensure that patients received appropriate analgesia (code 6 1 4 5).

Most nurses agreed that administration of appropriate analgesia was the speediest and most effective way of alleviating pain. A minority of some nurses expressed reservations about the adverse effects of analgesia (such as respiratory depression, abnormal metabolism by critically ill people, and drug addiction). As only medical staff could prescribe analgesia, the nurses' sense of personal competence and control was, to a certain extent, dependent on the nature of their relationships with medical staff who tend to have greater power and status than nurses.

In the next section I examine the nurses' constructs of themselves as advocates. In particular I examine how various ways of approaching advocacy affected nurses' interactions with medical staff and the nurses' feelings about themselves.

Competence, Control and Advocacy

The ability of the nurses to behave in accordance with their own expectations was at least partly dependent on the medical staff. Patient advocacy was an important part of the construct of caring for patients in pain for two reasons (code 6 1 4 5). First, the nurses believed that their continuous presence at the bedside gave them insights which were not possible for doctors who visited more intermittently. Second, the nurses held themselves responsible for ensuring that doctors prescribed adequate analgesia and caused as little discomfort to the infants as possible.

Many neonatal nurses were convinced that medical staff often misinterpreted infants' reactions to pain and believed that they were obligated to give the doctors the benefit of their special insights (codes 4 4 1, 4 3 2 3 3 3). Caring meant passing on to the doctors their unique understandings of the patients' needs for pain relief, negotiating the patients' pain requirements with the doctors and intervening if the doctors caused unnecessary discomfort to the infants (6 1 4 1, 6 1 4 1 1). *Often they [the doctors] just take the baby off morphine and don't put them on anything else... doctors often perceive that as soon as the baby's quiet, that it's not in pain, but often I think the babies actually withdraw and they just give up crying. And so therefore nurses, particularly in the neo-natal area, have to play the sort of patient's advocate, and to be acutely aware of um subtleties that the baby um exhibits, when it's in*

pain (nc18-2). *That's also our responsibility. If I'm standing beside a baby and a doctor is causing the child pain, without giving any analgesia or comfort, then I'm just as responsible as the doctor if I don't do something about it* (nr8-1).

Advocacy was a theme that emerged more frequently and with greater strength among the neonatal nurses than the burns nurses, partly because of the particular helplessness of the neonates and partly because there was less agreement between neonatal nurses and doctors about the neonates' capacity for pain perception and their pain relief requirements (6 1 4 5). Given these circumstances it is not surprising that nurse-doctor interactions in the neonatal intensive care units were characterised by conflict (code 4 3 2 3). Sixty-four per cent of neonatal nurses (compared with 25% of burns nurses) reported conflict with medical staff about pain medication. Moreover, the cause of the conflict in burns and neonatal intensive care units tended to be different.

Some neonatal nurses pointed out that doctors today were less likely to regard neonates as incapable of pain perception (code 4 3 2 9), however many believed that this view still influenced pain control decisions by medical staff. *I get angry at people who say that babies don't feel pain um, that they have no whatever it is, cognitive development or whatever to actually feel the pain as it is, that's distressing to me be-*

cause I feel that that allows them to cope with it and not to think about how much pain they are actually inflicting (nc4-1).

Nurses accepted responsibility for pain relief. The realisation of their pain relief goals, however, was affected by their relationships with medical staff. This was particularly so for the neonatal nurses as their work was more likely to involve nurses' and doctors' reactions to changes in the conditions of the neonates. The work of the burns nurses tended to be more routine and to be conducted more independently of the medical staff. The importance that neonatal nurses attached to their professional relationships with the medical staff was evident from the frequency with which they mentioned doctors in their discussions of pain. Sixty-four per cent of neonatal nurses compared with 34% of burns referred to the medical staff in their discussions about their pain relief goals (code 7 1 1). The importance of nurse-doctor relationships has been noted previously by Battersby et al. (1990), who found that nurses were less likely to leave their jobs in hospitals where the medical staff were construed as co-operative.

When doctors disregarded nurse's insights and recommendations about patients, the nurses were prevented from fulfilling their obligations to the patients (code 4 3 2 3 3 3, 4 4 2 6). Examination of the text that was scored for Separation Anxiety revealed that neonatal nurses felt slighted when the medical staff did not appear to value their contribution. In the words of one of them, *It's one thing that affects the morale of the nursing*

staff dreadfully (nc22-2). When the doctors did not agree with their assessment of the patients' need for analgesia, the nurses tended to deal with the situation by choosing one of two approaches. First, they could choose to maintain pressure on the doctor to prescribe analgesia that the nurse believed was adequate. This approach often lead to conflict (code 4 3 2 3). Second, they could decide to accept the doctor's evaluation and withdraw further advocacy. This frequently led to the nurses feeling that they had failed to fulfil their obligations to the patients (code 6 1 4 5 1). When the nurses withdrew from conflict with the medical staff and patients consequently suffered unnecessary pain, nurses felt they had failed the patients (code 6 1 4 5 1). Indeed, a major portion of the guilt expressed by neonatal nurses arose from their belief that they had abrogated their responsibilities as advocates (code 3 6 4). On the other hand, when nurses persisted in placing pressure on the medical staff, they frequently ended up in conflict with them (code 4 3 2 3). Advocacy therefore added to the stress of caring for vulnerable patients.

The nurses were often torn between their conviction that they should continue to place pressure on the doctor and the difficulty of opposing a staff member with greater power and higher status (code 6 1 4 5 2). *A local anaesthetic isn't used as often or as frequently as it could be um, and certainly a lot of people are still hesitant in suggesting to the doctors that it be used.* (nc6-3). *The other main important thing is to realise that when doctors are dealing with the babies, and although they might be causing the*

hurt, that you aren't scared to stand up and to tell them and to get them to do something about it. (nr8-1).

The nurses developed a range of tactics for persuading doctors to provide what they regarded as adequate pain control for their patients (code 4 3 2 3). These tactics ranged from wheedling to demanding[1]. The "doctor-nurse game," originally described by Stein in 1967, was evident in the way that some nurses dealt with the medical staff. The "doctor-nurse game" requires nurses to give doctors their opinions while appearing not to do so. In this way, the doctors' professional superiority remains unchallenged while they are given the benefit of the nurses' experience. For example, one hospital in the study had a policy that each person was allowed only three unsuccessful attempts to insert an intravenous cannula into a neonate. After this, the infant was given time to recover and another person tried to insert the cannula. A nurse described how nurses attempted to uphold the policy, *It's something that most of the girls learn very quickly to say 'listen, you must be really tired, why don't you have a cup of tea and we might get someone else to do it?' And people can approach it in that way.* (nc8-3) Others were more forceful, *The doctors, they sort of tell you*

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[1] It is important to note that when nurses working in neonatal intensive care were asked to check on my interpretations of the data, they pointed out many interactions between nurses and doctors were co-operative. However, they agreed that most differences of opinion occur over analgesia or over doctors subjecting infants to repeated painful procedures especially the insertion of cannulae.

to go away and [you] say "No, no, do it now' or they say they'll come back, and you say 'No, I want it done now.' and they say "Well, OK." (nc18-1).

A neonatal nurse related her experience when an X-ray was ordered for an infant who was in severe pain. *[The baby] was lying there moaning and she was really awful and the girl came to do the X-ray - chest X-ray - and I said to the doctor "I'm not letting them do a chest X-ray on this poor little thing unless you give her some morphine. I don't care if you have to intubate her. So we started her on some morphine - not a huge dose, and it really worked for her, it really helped her a lot, so um, that was great,"* (nc10-5). Still others resorted to heated arguments and their interactions with the medical staff tended to be characterised by conflict, *[It] can mean sort of having stand-up fights with doctors. There's screaming from one end of um a room to another. Um, it has happened at times, sort of away from the patient area, of course. You can get into - what I would call excited and even agitated debates with um, medical staff, ah, to ensure that your patients do get adequate pain relief* (bk7-2).

Some nurses commented that doctors were more prepared to listen to the nurses' point of view than they had been in the past (code 4 3 2 4 3), but no nurses described interactions with doctors that could be classified as "negotiated interactions." Negotiated interactions occur when the nurse and doctor are not in agreement about the best course of action for the patients, but discuss the matter, each of them contributing their understand-

ing of the situation, until they reach consensus. The words of a neonatal nurse, speaking about the need for more negotiation, encapsulate most of the issues. *I feel that it should be a standardised practice for all health practitioners, namely doctors, as well as the nurses to get together and discuss a patient and so that both feel comfortable about what should be done for that patient... It is hard, very upsetting, to me as a nurse when it is ignored. You're ignored, yourself, in your own capacity - it's like they don't care what you're saying, they just think that the baby doesn't feel pain, so don't give it anything. I mean the baby's not telling the doctor itself, so why listen to the nurse. That's a very generalised statement, but basically it's saying what I feel and a lot of other nurses I work with feel and that you're not listened to and it makes you very angry underneath, and um, so consequently once you've been in a unit, like I've been for a while, you tend to get quite pushy and jump up and down for something to be given to that patient, otherwise you make it very clear to your nursing unit manager that it's totally unsatisfactory and let it be known what treatment has happened to that baby. So that particular doctor - -. At least people are aware of the way he's treating the babies. So it does affect us very deeply and it's something that needs to be done. It's not satisfactory.*(nc23-1)

The increased sense of personal control and competence observed among the burns nurses reflected the greater probability that their clinical decisions would be endorsed by the medical staff. Nurses and doctors caring for burned patients were more likely to agree that maximum doses of

analgesia were counterproductive for the patients' overall recovery (4 3 2 4 2). The findings of this study with regard to conflict between nurses and doctors in burns units were similar to those of Manon (1985). Conflict was more likely to occur on burns units over medical decisions leading to more painful procedures being conducted on patients than over pain medication orders. The burns nurses' ability to maintain a greater sense of personal control and competence meant that the legal limitations to their power to control pain were not so apparent. The nurses saw themselves as very much a part of the health care team. However, there were times when it had required considerable effort and anguish on the nurses' part to persuade the medical staff to order analgesia. When there was conflict between nurses and doctors, doctors were in a better position to have their views predominate. *We always tend to fight for the babies to stop people doing things that we think are unnecessary, but we don't, as nurses, necessarily win. Generally the doctors have the last say* (nc2-3). Nurses' lack of power and status was thus emphasised, and their sense of competence and control was diminished (codes 3 2, 3 3).

These findings suggest that, at least with regard to pain management, the morale of nurses was linked with the quality of their professional relationships with medical staff. Nurses' acceptance of responsibility for pain alleviation accentuated their dependence on the doctors' cooperation. The importance of nurse-doctor relationships to nurses' satisfaction with their work deserves further study.

ANXIETY

The nurses' accounts of their experiences showed that pain was a major issue for both groups, but was a particular source of anxiety for those working in burns units. After studying data from psychiatric and non-psychiatric patients, Gottschalk and Gleser (1969) concluded that a score of 2.2 was indicative of moderate anxiety and 3.0 or more indicated the presence of pathological anxiety. Using these values as a guide, at the time of their first interview, burns nurses demonstrated high anxiety about disorder-induced pain (mean = 2.71, sd = .57). Furthermore, comparison of the nurses' Total Anxiety scores with those reported by Viney (1980) shows that the burns nurses' scores were equal to those of a group of elderly women facing disability and death (mean =2.70, sd = 1.04). The anxiety of the neonatal nurses was more moderate (mean= 2.15, sd = .61).

Kelly (1955, p. 565) defines anxiety as the "awareness that the events with which one is confronted lie mostly outside the range of convenience of their construct system." With regard to disorder-induced pain, analysis of the text showed that a large part of the burns and neonatal nurses' anxiety was attached to challenges to their constructs of themselves as alleviators of their patients' pain. In addition, the anxiety of the burns nurses was attached to the challenges to their sense of personal invulnerability posed by constant contact with victims of severe trauma.

Anxiety Attached to the Alleviation of Pain

The extent to which the nurses felt validated as pain alleviators was, of course, dependent on their ability to relieve pain. When they believed that the patients were suffering unnecessary pain, nurses from both groups articulated their belief that they had failed as nurses. This belief was associated with expressions of anxiety, including shame and guilt. One burns nurse, for example, commented: *Sometimes I find that I feel very inadequate in myself, with not being able to make some patients totally and utterly comfortable ... I suppose it stems from the ideology of being a nurse that you are supposed to do everything for your patients. Sometimes if you can't make a patient totally comfortable it seems that maybe we're failing to a certain degree* (bw8-2). A neonatal nurse remarked, *It sort of reflects on the person I think, if your baby is noticeably in pain* (nc18-1).

Pain alleviation was very closely tied to notions of personal responsibility. The importance the nurses attached to these responsibilities was highlighted by the nature of their criticism, albeit rare, of their nursing colleagues (code 4 3 1 1 1). Invariably these criticism were levelled at those nurses who appeared to be insensitive to the patients' pain and failed to take responsibility for its relief. The nature of these criticisms provided additional insight into the values nurses held for themselves as a group. Insensitive nurses were regarded as more likely to make inaccurate pain assessments and less likely to provide adequate pain relief. When they were unable to

fulfil their expectations of themselves, their disappointment in themselves and in their colleagues was very evident. *I find that everyone claims they know about neonatal pain, but only a minority of people will actually act on it without being, sort of, um, reminded that, you know, that they need to take some action. Everyone knows everything about it, but it's like a lot of things, they don't implement that knowledge and use it in their practice, which is kind of um, distressing. I mean I'm sort of guilty of it myself sometimes. I sometimes think "oh, I should have done something"... I do feel quite uncomfortable when I know - when we should have done certain things that we haven't done.* (nc18-4)

The seriousness with which nurses regarded their pain relief mandate was reflected in the frequency with which the terms "responsible" and "responsibility" appeared in their accounts of disorder-induced pain. None of the nurses suggested that pain relief was, or even should be, a joint responsibility of the nursing and medical staff. The nurses seemed to have set themselves an almost unachievable goal. Theoretical explanations for the persistence of this phenomenon are presented in Chapter 9.

Anxiety Attached to Constructs of Personal Vulnerability

Given the topic of interview, it is not surprising that the Mutilation Anxiety sub-scale was the major contributor to the Total Anxiety scores, especially for the burns nurses (see Table 6.1). Mutilation anxiety was high

for both groups, but higher for burns nurses. At the time of their first interview, the mean for the burns nurses was 1.8 (sd = .69) and for the neonatal nurses it was 1.69 (sd = .59).

The extent of Mutilation Anxiety among the nurses in this study can be seen when their scores are compared with those of women making life transitions (Viney, 1980). Using the same content analysis scales, Viney (1980) reported the mean Mutilation Anxiety scores for non-psychiatric adult women making transitions to life as a university student and to life as an employee were .47 (sd = .43) and .43 (sd = .23) respectively. Furthermore, the Mutilation Anxiety scores of both groups of nurses were higher than Viney's (1980) sample of adult women experiencing severe illness and disability (mean = 1.08, sd = .75).

Table 6.1: Means of Anxiety Subscale Scores for Disorder-Induced Pain, Interview 1 compared with 50% normative scores*

Variable	Burns Nurses	Neonatal Nurses	50% normative mean
Death Anxiety	.36	.45	.42
Mutilation Anxiety	1.80	1.69	.34
Separation Anxiety	.46	.42	.37
Guilt Anxiety	.54	.57	.31
Shame Anxiety	.56	.5	.68
Diffuse Anxiety	1.35	1.03	.33

*(from Gottschalk & Gleser, 1982)

The particularly high Mutilation Anxiety scores of the burns nurses reflects the high visibility of the burned patients' injuries. Although the burned patients and the neonates were both debilitated by illness, the disfigurement of the burn was less escapable. As the majority of nurses caring for burned patients were young adults, issues of body image and physical vulnerability might have been especially relevant. Twenty-five per cent of the nurses caring for burned patients were young adults aged 25 or younger and 81% were females. Early adulthood is a time when young people (Lerner, Karabenick, & Stuart, 1973; Maude, Wertheim, Paxton, Gibbons, & Szmukler, 1993), and especially women (Davies & Furnham, 1986; Tiggemann & Pennington, 1990), are trying to resolve body image issues for themselves. The nurses' acute awareness of the patient's struggles to cope with the pain of the injury and the treatment, and of the patients' attempts to come to terms with a major change in their body image only added to the complexity of mutilation anxiety in these nurses.

The nurses' vivid descriptions of the pain suffered by patients demonstrated how their patients' experiences raised the nurses' fears of vulnerability. *Donor sites are the most painful of the lot. I've left it somewhere written down, that if I ever get burnt, shoot me before they do a donor site. (Um), I don't want to know about it. You ah, have this layer of fine mesh material on this donor site, raw skin. You cut all the way down the dressing and invariably the dressing's stuck to the donor site without anything protecting it, and you, um, pull it off* (bw3-3).

The neonatal nurses' accounts of pain evoked less graphic images. Most disorder-induced pain in the neonatal unit was post-operative. As neonatal disorders were more often internal, the pain was less immediately obvious than was the case for burn victims. A further factor contributing to the differences in mutilation anxiety between the two groups may have been that nurses caring for adults and older children were more likely to identify with their patients than were those caring for neonates. The patients' pain and trauma may, therefore, have greater potential to give rise to mutilation anxiety in the nurses who care for them.

THE IMPLICATIONS OF THE FINDINGS FOR A PERSONAL CONSTRUCT MODEL OF DISORDER-INDUCED PAIN

While neonatal nurses seemed to find greater satisfaction in caring for patients in pain, there were many times when nurses from both groups found themselves in an untenable position. At least part of their professional identity depended on their ability to relieve their patients' pain.

The nurses accepted responsibility for pain control in the face of three factors that mitigated against them actually being able to achieve it. The first was the severe pain suffered by burn victims for which it was not always possible to provide satisfactory pain relief. The anxiety of both groups, but particularly that of the burns nurses was heightened by daily

confrontation with patients who suffered disorders and injuries that were severe and painful. Such confrontation reminded them of their own physical vulnerability and challenged their constructs of themselves as pain alleviators. The second factor concerned inherent difficulties in knowing when, and to what extent, patients were actually experiencing pain. The third involved the difficulties of the neonatal nurses in gaining the cooperation of medical staff who generally enjoyed greater power and status than the nurses, and who frequently failed to recognise the nurses' potential to contribute to clinical decisions about the patients.

When the nurses' views about a particular patient's need for analgesia did not coincide with those of the medical staff, the nurses could either continue to place pressure on the doctor or they could withdraw and watch the patients' continued suffering. The first alternative often led them into conflict with medical staff, the second led to dissatisfaction with themselves as nurses.

The nurses did not only accept responsibility for their own behaviour with regard to pain management. Many also accepted responsibility (on behalf of the patients) for evaluating the extent of the patients' pain and their pain relief needs and most accepted responsibility for ensuring that the doctors played their part by prescribing appropriate analgesia.

Burns nurses knew and understood that it was often not possible to completely relieve the patients' pain. The nature of burn injuries were such that nurses were more likely to be confronted with unrelievable pain and their anxiety was consequently heightened. Neonatal pain was less obvious and less intense and the nurses were less anxious about it.

Since burns nurses' pain relief goals were more likely to concur with those of the medical staff, they approached their work with greater confidence. Neonatal nurses however, were more likely to encounter resistance from medical staff when they tried to achieve their pain relief goals. Their sense of competence and personal control was thus more likely to be compromised.

The findings presented in this chapter suggest the following additions to the model of nurses' reactions to patients' pain.

Nurses, whose behaviour is consistent with caring, accept personal responsibility for the alleviation of pain.

Nurses, whose behaviour is consistent with caring, advocate for the patient with the doctor, when the patients' well-being is threatened by unrelieved pain.

The ways in which the nurses tried to cope with this situation are considered in Chapter 8. In the next chapter, the findings on the nurses' reactions to inflicted pain are examined.

CHAPTER 7

RESULTS IV: NURSES' REACTIONS TO INFLICTING PAIN ON PATIENTS

In the preliminary model of nurses' reactions to patients' pain presented in Chapter 2, I proposed that the process of inflicting pain on patients posed profound challenges to nurses' core role structures. Nurses who care for burn victims (burns nurses) found it necessary to inflict severe pain on patients and were therefore expected to be more likely to try to exhort validational evidence from those around them. Accordingly, they were expected to demonstrate greater hostility than nurses caring for critically ill neonates (neonatal nurses). The results presented in Chapter 5 showed that burns nurses' accounts contained greater positively toned emotions as measured by the Origin and Sociality Scales. Neonatal nurses' accounts contained greater positive affect. At the same time, burns nurses' accounts of inflicting pain contained greater anxiety and ambivalent hostility than those of the neonatal nurses.

This chapter focuses on the implications of the nurses' experiences of clinically inflicted pain for the model. Specifically, I explore the nurses reactions to clinically inflicted pain. In the first section I discuss the ways that burns and neonatal nurses commonly inflicted pain on their patients. This is followed by an exploration of the positively toned emotions that nurses experienced despite the need to inflict pain on their patients. The next section contains an account of the negatively toned emotions associated with inflicting pain. In the final section, I discuss the implications of the findings presented in this chapter for the model.

INFLICTING PAIN IN BURNS AND NEONATAL INTENSIVE CARE UNITS

The most painful procedures conducted by the nurses caring for burn patients were the daily debridement baths, usually referred to as "the burns baths." These were the main form of treatment prior to skin graft surgery. The following excerpt from an interview with a burns nurse illustrates the emotional and physical exhaustion experienced by most nurses after a day of inflicting pain on patients (code 6 1 1 3). *I often leave work feeling as though I haven't done a good day's work, (and I class having done a good day's work as doing 10 or 11 baths), because all I've done is inflict pain. And I find I hurt myself, just, well almost, perhaps not almost as much, but I'm hurting myself by the time I come around to bath number two or three. I'm quite distressed and quite exhausted* (bk9-1).

There was greater variation among the neonatal nurses about the painfulness of the procedures they conducted on their patients. The procedure referred to most often by neonatal nurses was that of pricking the neonates' heels with a lancet to obtain blood samples. Some nurses said that this was the only procedure which they conducted that was painful for the patients. Others pointed out the various ways that nurses cause pain to neonates from rough handling to inserting and removing intra-gastric tubes. Others said that they rarely inflicted pain and commented that procedures performed by doctors such the insertion of intravenous cannulae, were more likely to be painful for the babies than those carried out by nurses.

Although neonatal nurses did not inflict as severe pain as burns nurses, most believed it was very painful for a small baby to have a heel prick and they hated having to do it. Typical comments include *I feel awful about it* (nc10-3, nc3-1, nr10-2), *It's horrific to have to hurt them...It's the worst part of the job* (nc11-2) and *You're always having to do something cruel* (nc12-5).

POSITIVELY TONED EMOTIONS ASSOCIATED WITH INFLICTED PAIN

The nurses varied in the way they reacted to the clinical infliction of pain. For many it was an unequivocally unpleasant experience while others, despite the necessity to inflict pain on their patients, managed to find some pleasure in their work.

Positive Affect

When speaking about clinically inflicted pain, the neonatal nurses expressed greater positive affect than those of the burns nurses. A large part of this positive affect arose from caring for vulnerable and fragile infants. The neonatal nurses expressed considerable satisfaction when they were able to use a variety of methods to improve the comfort level of the infants. *I'm the person who can comfort the baby afterwards, whether that be by picking them up and nursing them or if that's not possible because they're on a ventilator, by giving them a dummy to suck or just by gently*

stroking them or giving them some form of person contact. Indeed, achieving this kind of satisfaction was characteristic of the "engaging coping strategies" that distinguished neonatal nurses from burns nurses. The implications of the predominant coping strategies used by the two groups of nurses are discussed in greater detail in the next chapter.

Personal Control and Competence

The Origin Scale measured the extent to which the nurses felt a sense of personal control and competence over their work. As indicated in Chapter 5, a sense of personal control and competence was more characteristic of burns nurses than neonatal nurses.

The main factor contributing to the higher personal competence of the burns nurses was that the debridement process was very much a nursing activity. Doctors visited occasionally to inspect progress but tended not to intervene. The nurses were more likely to give pre-medication analgesia in a dose that they believed was as effective as possible. They were also able to use their own clinical judgment to pace the procedure. The burns nurses indicated that they saw themselves as in charge of the procedure: *I'm the person who has responsibility of being in control [of the debridement process]* (bc4-1).

On the other hand, as the neonatal nurses were likely to be responding to less predictable changes in the neonates' condition, their activities were more under the direction of the medical staff. They had less autonomy in decision-making. Consequently, they had less opportunity to "own" their work. When neonatal nurses spoke about control they tended to use modifiers: *You have an **element** of control* (nc1-4); *we **sort of control a bit** how much pain we inflict on them* (nc2-1) (my emphases).

Sociality

In the context of inflicted pain, the nurses interacted with patients and their family members, and nursing and medical colleagues. Sociality was a measure of the extent to which nurses obtained satisfaction from their personal relationships. The high scores of the burns nurses on the Sociality Scale reflected the satisfaction gained from their relationships with nursing colleagues rather than from their other relationships. When they were confronted with criticism, whether explicit or implicit, nurses tended to depend on each other for validation. Indeed "other nurses" were the most frequently named source of support.

Collegial relationships were based on the understanding that comes from shared experiences. The following statement illustrates the particular value the burns nurses placed on the support they received from each other. *I think that's what makes the people very special who work there, I think.*

Because they are supportive of each other, and I think there are times where (um), you can say to your workmate 'I've been in the bathroom for the last 4 days. I can't go in there today', and they say 'no problem, I can do it'. You don't have to sit down and tell them why. They understand, because they feel exactly like that. (bk4-2). There tended to be little acknowledgment of the difficulties in caring for burn patients from people outside the unit, so their support for each other was particularly valuable. Social support was an important coping strategy that gave the burns nurses a sense of being understood. The implications of such support are considered in greater detail in Chapter 9.

NEGATIVELY TONED EMOTIONS ASSOCIATED WITH INFLICTED PAIN

Anxiety

Mutilation Anxiety, Diffuse Anxiety, and Guilt Anxiety were the strongest components of Total Anxiety for both neonatal and burns nurses (see Table 7.1). Comparisons with normative values showed that the topic of clinically inflicted pain aroused high anxiety, particularly among the burns nurses. Gottschalk and Gleser (1982), for example, reported that the Total Anxiety normative score for the 50th percentile was 1.45. In the present study, the mean Total Anxiety about clinically inflicted pain at the time of their first interview was 2.19 (sd = .55) for burns nurses, and 1.74 (sd = .63) for neonatal nurses. The Total Anxiety scores of the burns nurses were

similar to those of a group of young women who were negotiating the transition to new motherhood (mean = 2.26, sd = .8) (Viney, 1980). The neonatal nurses' Total Anxiety scores were similar to those experienced by a group of young women who were in the process of adjusting to their first job (mean = 1.79 sd .71) (Viney, 1980).

Table 7:1

Means of the Anxiety Subscale Scores for Inflicted Pain in Interview 1 Compared With 50% Normative Scores*

Variable	Burns Nurses	Neonatal Nurses	50th percentile normative score
Death Anxiety	.46	.41	.42
Mutilation Anxiety	1.27	1.05	.34
Separation Anxiety	.47	.39	.37
Guilt Anxiety	.71	.63	.31
Shame Anxiety	.42	.47	.68
Diffuse Anxiety	1.01	1.00	.33

(* from Gottschalk & Gleser, 1982)

Anxiety was associated with a series of events that for the nurses created tension between the way they believed they should practice nursing and the way they actually practised. Anxiety was aroused when they became aware that their construct systems were inadequate for the events with which they were confronted (Kelly, 1955). The accounts of the nurses caring for burn victims revealed particular discrepancies between their

constructs of themselves as alleviators of pain and the intense pain that they were required to inflict daily on their patients.

The nurses caring for burn victims often found themselves in "Catch 22" situations. For example, they were acutely aware that healing, and consequently scarring, would be much worse if debridement was not performed conscientiously and this awareness contributed to their anxiety (code 7 1 3 2). However, when patients resisted treatment or accused them of being "too rough" or compared them unfavourably with other, more gentle, nurses, (codes 4 1 4 1 1, 4 1 4 1 2) they felt ashamed, rejected and guilty (codes 3 6 3, 3 6 4, 3 6 5).

Inflicted pain was less likely to cause anxiety to neonatal nurses because the procedures they conducted on their patients did not appear to be as painful as those conducted by burns nurses. The insertion of intravenous cannulae is a procedure that had been exclusively conducted by the medical staff and was construed by many neonatal nurses as causing more pain to the patients than many of the nursing procedures. However, during the course of this study, the medical staff in one of the hospitals were teaching some of the neonatal nurses to insert intravenous cannulae. Finding veins in such small babies is very difficult, and repeated attempts are sometimes necessary. All the nurses involved in this programme spoke about how distressing they found it. During the follow-up sessions that I conducted with the participants to check on my interpretations of the data,

I was interested to learn that most of the nurses who had been participating in the cannulation programme had decided to withdraw from it.

Anxiety Associated with Ethical Dilemmas Concerning Inflicted Pain

A number of nurses referred to situations that posed ethical problems for them about inflicted pain and the anxiety that this provoked. Many spoke of situations that raised questions in their minds about the value of painful procedures for certain patients.

Adult patients who were undergoing burn debridement sometimes resisted the procedure and begged the nurses to stop. Some nurses construed this behaviour as effectively constituting withdrawal of consent for the nurses to continue the procedure (code 7 1 3 1). Patients' pleas to stop were generally resisted, partly because it was assumed that resistance was a natural reaction to the pain of the burns bath. Nurses, however, also believed that it was in the patient's long term interests to continue the treatment. A few nurses expressed some disquiet about these practices and about the legality and the morality of continuing treatment under these circumstances. There were, however, neither precedents for interpreting such patient behaviour as withdrawal of consent, nor any established protocol for responding to it as such. So the nurses continued treatment despite their own and their patients' anguish.

Some nurses commented that when patients strongly resisted painful procedures it was difficult for the nurses to conduct the procedures as meticulously as they did when the patients were cooperative. As a consequence, the quality of the patient's treatment was affected and feelings of guilt anxiety were aroused in the nurses. One nurse, for example, told of a woman who had suffered facial burns in a plane crash and strongly resisted treatment. The nurse spoke of her conflicts about the right course of action. She finally said *You know, I probably didn't do as much work on her face as I would have done, if someone had been happy for me to go ahead and do it* (br3-1). The nurse was left feeling dissatisfied that she had not acted in the woman's best interests.

Another situation concerned the justification for exposing those facing a poor quality of life to painful procedures (code 7 1 3 2). For example, a burns nurse told the following story. *I sent one bloke, who was 21, home without a nose. I mean, where's the point in madly trying to save this guy. I mean, I don't mean [to say] "so don't save him." But the looks and everything he's going to get from the people in the public! I mean - I think - what I get the most is -. There's a lot of frustration, there's a lot of, um, self-examination. You wonder if you're doing the right thing just about every day of the week (bw3-4).* Dilemmas such as these were common among the neonatal nurses: ... *you're having to put them through these painful treatments and you wonder, especially if the baby's got a poor chance of*

survival. You think, well. Why? Why are we inflicting all this pain on them um, when the outcome isn't good anyway? (nc7-4)

Some nurses questioned the usefulness of conducting painful treatment on patients who were unlikely to comply with long term treatment after discharge from hospital. For example, in order to reduce scarring after sustaining a burn injury, it is necessary for patients to wear thick elasticised "Jobst" garments over the burn site for several years. These garments reduce disfigurement by flattening scar tissue. However, they are hot and unsightly and most patients dislike wearing them. Many nurses wondered about the advisability of subjecting patients to painful procedures aimed at reducing disfigurement when it is clear that the patient (or the parent of a paediatric patient) does not intend to persist with wearing the Jobst garments.

A third situation concerned the administration of painful procedures that some nurses suspected were unnecessary. A neonatal nurse for example questioned the necessity for babies to have four or five heel pricks per day. A burns nurse wondered if there was not a better way than painful debridement baths to treat burn injuries.

In general, inflicting pain seemed to create confusion about the nature of their work. There were many instances when the nurses felt that they were unnecessarily subjecting patients to procedures that were distressing to both

the patients and to themselves. There seemed to be little help available for nurses to resolve these dilemmas.

Hostility

According to Kelly (1955, p. 565), hostility is the "continued effort to extort validational evidence in favour of a social prediction which has already been recognised as a failure." For the nurses in this study, the social prediction was that nursing was concerned with the palliation of pain and this belief could not be sustained in the face of the daily necessity to inflict pain on patients. Many burns nurses were angry when the behaviour of patients and their families suggested that they regarded the nurses as *cruel sadists*, and as *inhuman, vindictive bullies*.

In the following sections I explore the effects on nurses of perceived hostility (a) from patients, (b) from the parents of paediatric patients and (c) from other sources such as friends, family and colleagues.

Hostility From Patients

From the nurses' perspective, the hostile reactions of the patients were among the more distressing aspects of the burns baths (codes 3 9, 4 1 4 1 1, 4 1 4 1 2). Nurses recalled incidents where patients swore and screamed at them. Patients sometimes resorting to physical violence such

as hitting and kicking. Others were more passively reproachful. One nurse described them as *just sitting there and waiting for us to hurt them* (bc3-1). The nurses' resentment was evident in some of their descriptions of the patients' attitudes. One nurse commented: *[Patients] see us as on a personal vendetta, inflicting pain for the sake of it, because nurses like to hurt (bw4-2).*

Many children cried when they saw the nurses and tried to get away from them. Older children were especially difficult. One nurse described her reactions to a particularly hostile 12 year old boy. *There were about four of us holding him down and (ah), and then he'd start kicking and moving around so you couldn't do anything... That was an awful bath. After, you know, he abused me, he took I suppose about one and a half hours. He abused me the whole time with lovely four letter words and everything. But then the hatred afterwards in his eyes. And then he was at me. If I didn't stand further than his arm length away I would have been hit numerous times. Oh, and the sheer hate in his eyes...* (bk2-1).

The distress that the nurses felt in the face of such hostility was evident. They felt anxious, rejected and misunderstood. While many nurses understood the patient's anger at the time of the procedures, those caring for adult patients felt disheartened when the patients did not appreciate the nurses' efforts on their behalf. It was then more difficult for them to obtain satisfaction from their work. *It can shatter your self-esteem when you sit*

and you think you've done a brilliant job and the patient just doesn't care (bw3-4). *You cry about it, you're upset by it and when they don't acknowledge that you're trying to do anything for them sometimes I- it makes it emotionally very difficult to cope with.* (bw4-2)

Hostility From Parents

The paediatric nurses had to endure hostility, not only from patients but also from the children's parents (codes 3 9, 4 2 1 1). Parents played an important part in the burns unit and they were encouraged to be with their children as much as possible. Some stayed in the unit all day, sleeping in hospital hostel accommodation at night and returning early in the morning. It was then necessary for the nurses to form working relationships with parents as well as with the children for whom they were caring.

The bathroom became the setting for many strained interactions between nurses and parents. Sometimes parents were construed as overtly hostile, *His mother um, not just questioned what you did, but sometimes she could be quite antagonistic and made you feel like it was your fault the child was in hospital and that um, we willed him to be burned so we could torture him. That was how she made me feel.* (bk3-1). At other times the nurses inferred hostility from the parents' behaviour. *You know the parents must think you're an ogre, even though most of them know, most of the time, that what you're doing is good for their child. I mean what they see*

up front is the fact that their child's experiencing pain purely from what you're doing to them. And that's sort of really difficult to cope with, at times (bk7-1).

Most nurses sincerely tried to understand the parents' anger and their compassion was evident (code 4 2 1 3), *It's becoming a little bit easier because I can see that it's just their way of coping, although it still is very difficult and the parents find it difficult to cope and leave in tears and so you feel sorry for them as well as for the patient* (bk3-1). At other times, because they expected parents to have insight that the baths were also very trying for the nurses, their resentment gained the upper hand (code 4 3 1 1). Many nurses indicated that parental hostility was *the hardest thing to deal with* (bk2-2). One nurse described her feelings in the following way: *I get really upset when I'm accused of being cruel [by parents]. I just hate it. I used to go and talk to someone after I've been accused of it and get it off my chest. Otherwise I just stew and stew and feel really terrible, like if I take it to heart too much because you are aware that you are inflicting pain. But to be told you're cruel like you're negligent or you're enjoying it, is very difficult and I haven't learnt how to cope with that yet* (bk3-2).

Nurses had various theories about the reasons for the parents' behaviour. One was that parents needed to displace their guilt about the child's injuries onto the nurses. Another was that parents' hostile reactions

were founded in their difficulty in yielding control of their child to the nurses during the bath, especially when the child was very upset.

Nurses provided detailed accounts of trying to do the best they could in very difficult circumstances. While some were tempted to ask the parents to leave while the procedure was carried out, few actually did so because they believed that parents were an important resource for children. They acknowledged the right of parents to be present and of the child to have their support.

The general picture was one of the nurses fluctuating between feelings of anxiety (code 3 6 6), empathy (code 4 2 1 2), resentment (code 3 8) and guilt (code 3 6 4). An important outcome was, however, that the way nurses perceived parents seemed to affect the way nurses and parents worked together. Sometimes nurses and parents seemed to form a team, cooperating in a kind of therapeutic partnership, to help the child recover (code 4 2 1 3). At other times there was a tendency to form sides - the patient and parent versus the nurse (code 4 2 1 1).

Hostility From Other Sources

Burns nurses also spoke of the negative reactions to their work from their own families and friends and even from colleagues working in other areas (code 3 9). One nurse commented: *I don't tell people I work in a*

burns unit now, I just tell them I'm a nurse and I work at ----- Hospital. If they keep pushing, I work in a critical care area where lots of sick people go. I don't mention I work in a burns unit (bw3-5). Such situations had clear implications for limiting the sense of pride the nurses were able to achieve from their work.

THE IMPLICATIONS OF THE FINDINGS FOR A PERSONAL CONSTRUCT MODEL OF CLINICALLY INFLICTED PAIN

Most of the nurses had a preferred construct of themselves as carers with general goodwill towards patients and their families. One of their reasons for choosing nursing as a career was *to make people feel better* (bk3-2). The infliction of severe pain was a greater part of the daily routine of the burns nurses and as such created greater anxiety in them, especially as it tended to have negative effects on the nurses' relationships with other people in their professional lives.

Those caring for burn patients were affected not only by the painfulness of the injury but also by the pain of the treatment. When burns nurses had to inflict pain on patients, the messages they received from almost all quarters had invalidating effects. This invalidation created in the nurses a sense of disillusionment which affected their emotional and physical well-being.

The burns nurses' sense of personal responsibility appeared to be the force directing them to continue. Many declared their determination to continue with the treatment that they believed was essential for the patients' recovery. Feeling marginalised by others, they looked to their colleagues in the Burns Units for support and validation.

The findings reported in this chapter had implications for the model and certain changes were indicated. Proposition 3.5 is therefore modified as follows:

> When it is necessary to inflict intense pain, [nurses respond with negative emotions, and especially with feelings of hostility] **the hostile reactions of others invalidate the core role construct of "nurse as carer."** Nurses respond to this invalidation with **anxiety and hostility.**

The findings indicated the necessity for two further propositions:

> **Unresolved ethical dilemmas about the infliction of pain on patients contribute to the nurses' anxiety.**

> **When nurses' core role constructs are threatened, they tend to seek the support of colleagues with whom they have a shared understanding.**

The next chapter contains a description of the various ways that nurses' attempted to cope with their negatively toned emotions aroused by their patients' experiences of pain. It concludes with a discussion of the implications of their choice of coping for the model.

CHAPTER 8

RESULTS V:

COPING WITH PAIN

Analysis of the literature from a personal construct perspective revealed that nurses managed the emotions generated by disorder-induced and clinically inflicted pain using strategies that could be classified into one of two types: those that aimed at loosening their construing of pain and those that aimed at constricting it. These types of strategies were incorporated into the model of nurses' reactions to pain that was presented in Chapter 2.

Analysis of the data gathered for this study identified 17 separate coping strategies that the nurses used to cope with both types of pain. These strategies were classified into four groups (a) distancing, (b) engaging, (c) seeking social support and (d) core role reconstruction. The process by which these strategies were identified and classified was described in Chapter 3. The first three groups were widely used by the nurses in the study and were thus included in the statistical testing of hypotheses reported in Chapter 5. The fourth strategy was used by too small a number of nurses to be included in these tests. In the remainder of this chapter, each type of coping is described separately, together with the implications of each for both nurses and patients. Finally the implications of the findings for the model are discussed.

DISTANCING

"Distancing" was the most commonly reported group of coping strategies and was used by 86% of all participants (see Table 8.1). Distancing consisted of attempts to constrict the nurses' construct systems by ignoring the evidence that the patient was in pain. Pain had the effect of invalidating the nurses' constructs of themselves as carers. Distancing was not an attempt to deny the existence of pain, but was rather an attempt to lessen its impact by directing the nurses' attention away from the pain.

Table 8.1

Coping Strategies of Burns and Neonatal Nurses and The Entire Sample

Coping Strategies	Burns Nurses	Neonatal Nurses	Entire Sample
	N (%)	N (%)	N (%)
Distancing	30 (94)	26 (79)	56 (86)
Engaging	19 (59)	24 (73)	43 (66)
Social Support	19 (59)	4 (12)	23 (35)

Distancing consisted of five separate strategies, four of which focused on detaching emotionally and one of which created a physical distance between the nurse and patient.

(1) Emotional detachment was sometimes achieved by *switching off, tuning out, not dwelling on the pain*, by accepting the inevitability of pain, by

deliberately trying not to think of the patient as a person or by focusing attention on the procedure rather than the patient and the pain. *There is really no way of getting around what you have to do but just get on and do it. I try and um isolate myself a bit I think from the fact that the patient is actually in agony at the time. I think it is the only way to get through it I think.* (bc7-1)

(2) A second strategy aimed at focusing the nurses' attention on the long term benefit of the procedure and/or pain to the patient rather than focusing on the pain itself. *Usually inflicting pain is not something that um, I really worry about, and I find, yes, I find it easy to cope with because the um - I just feel that it's something I have to do to help the person. So if I'm making them uncomfortable I'm sorry about that. But I continue to do it and don't find myself hesitating on the things I have to do for them, and um, if they're writhing in pain I try as much as I can just to be pleasant with them* (bc2-1).

(3) A third strategy involved attempts to structure the painful event so that the nurse was prevented from being emotionally overwhelmed by the pain. For example nurses might direct the procedure and maintain control of the situation rather than allow the patient to do so. *Providing people with limits helps me to feel less guilty because I always feel guilty if I have to give somebody some pain.* (bw6-1) *I feel it works best when I have a sense of control. That I am the one in control of the whole procedure. Again when*

I've got the patient in a position, where he or she is completely passive with me, I feel all the more confident with the procedure. The whole procedure is more predictable... It's a sort of sense of power of any given situation, a power over the situation. That you have control, makes it easier both for you and the patient (bw1-1).

(4) A fourth strategy consisted of attempts to "act out" negative emotions with families, friends or colleagues. This allowed the nurses to avoid expressing emotions in situations where pain was dominant. Sometimes this strategy achieved the additional benefit of marshalling support. *You get frustrated, you get fed up and you take it out on your husband and they tell you "pull yourself together" and you say "OK well we'll try again" and then you go and you try again and you go and you do it* (bw5-1).

(5) Finally nurses sometimes attempted to place a physical distance between themselves and their patients. This was achieved by taking 'time out' such as having a brief or extended break from the unit or from carrying out painful procedures; by arranging for another nurse to look after a particularly stressful patient; by having a tea break; by going home; by having a holiday or using recreational activities. *I found doing the burns dressing where you inflict a lot of pain really personally exhausting. And after you did it the way you coped with it, I found, that you had basically to walk out of the room. Because after you did the dressing I found it really hard to do anything else because you're dealing with it* (bw2-1)

The Implications of Using Distancing Strategies

Distancing was the most commonly used set of coping strategies and was used equally by both groups of nurses. Distancing had certain advantages. Those who made greater use of distancing also reported greater feelings of competence and control over disorder-induced pain (r = .34, df = 64, p =.005). Distancing enabled nurses to ignore invalidating evidence of pain and gave them a sense of pride that they were able to continue their work when patients were in pain. *I keep [the pain] in the back of my mind and maintain it there, because if it isn't I don't think I could last on that unit as long as I've lasted. I think, on and off, I've been working there since 1990, early 1990, and we do see a high burn-out in nurses* (bk7-2).

While other studies have not attempted to identify the components of distancing, some form of emotional detachment has been the most common strategy reported in the literature (eg., Madjar, 1991). Street (1992) for example, found that distancing helped nurses to deal with the sense of inadequacy that arose from working under the constant and obvious surveillance of the many people who are inevitably present on a busy ward. Many of the burns nurses in this study used distancing strategies in response to the hostility they perceived in patients and their families.

However, distancing as a strategy also had its costs. The more nurses used distancing as a coping strategy, the less their satisfaction with relationships (r -.28, df = 64, p = .02). Distancing led nurses to become "technique-oriented rather than people-oriented" (Kreidler, 1984, p. 174) and reduced their sensitivity to patients' needs. Madjar (1991, p. 245) commented that distancing tended to result in the nurse becoming "self, rather than patient focused." Distancing thus tended to deny nurses the satisfaction that comes from intimate involvement with patients.

It is ironical that while distancing was used to protect the burns nurses' identity as carers, it tended to have the effect of desensitising them to the needs of the patients. A number of nurses noted their own tendency to become hardened to the patients' needs for pain relief, and they had mixed feelings about it. On one hand the nurses felt a sense of achievement that they had control over their emotions, and that they were able to face the more unpleasant aspects of their work. *These days it doesn't bother me. I just do it, it's a job I have to do* (bw3-5). On the other hand, they also worried about becoming *cold, hard and callous.* A nurse working in a burn unit said, *I don't like being able to go into a person with a smile on my face and proceed to bring tears to their eyes and tell them to calm down, it's for their own good. I didn't think I'd ever be able to say that and not even flinch* (bw3-5). A number of nurses were concerned about the dangers of over-reliance on distancing. *Once you stop caring! If you think that you could*

become immune to the patient's discomfort then it's time for you to move on (bk4-1).

Certain conditions seemed to encourage the use of distancing strategies. For example, several nurses indicated that they found it easier to be emotionally detached when carrying out painful procedures on smaller children (codes 4 1 3 1 to 4 1 3 3). There were a number of reasons for this. First, infants and toddlers had less power to control the situation. They were not as fluent verbally or strong physically as older children, so nurses did not have to exert as much force on them to carry out a painful procedure. Second, as small children cry more readily than older children, it was easier for the nurse to dismiss their crying. Third, as babies did not know who hurt them and toddlers tended to forget and forgive more readily, the nurses were not confronted by as much rejection as they were from older children. Finally, small children were less aware of the implications of their burns for the future so caring for them was less confronting and nurses were more able to "switch off" emotionally.

A Case Study in the Development of the Distancing Group of Strategies

Sandra (nc4) was a neonatal nurse in her early thirties. She had been nursing for 13 years and six of these had been spent in neonatal intensive care. Over 16 months, she underwent a marked change in her attitude to

pain and the way she coped with it. Her account of her experiences illustrates the issues associated with using distancing as a coping strategy.

In her first interview, Sandra made many insightful comments when expressing her concern about the detachment she had noted in herself and others. At the same time Sandra showed that she was aware of the pain suffered by some of the infants. *I think you block out your actual causing of pain sometimes and that's, um, that's distressing when you actually realise that you're doing that, that you're not being as aware as you should be, that you, you're not taking other people's feelings into consideration... we more offer the babies pain relief for our own peace of mind it's said and also because it keeps them still, you know, it stops them wiggling around, it stops them being a management problem for us, it makes our life easier.*

I think that a lot of the futility of the pain we inflict is maybe what hurts more, when the baby dies, but its life was awfully painful because of the things we did, it was only a short life but it was a dreadfully painful life.

And even babies which you see which have been here long term, who obviously don't like anybody touching their nose, or hear a suction go on and they're off. It really distresses them, these noises, so they must have some sort of learned response to those sort of stimulus and it um, that's distressing, you know. We actually did this to this kid and we didn't even think about it when we did. We only think about the long term effects of

what we're doing and the lack of soothing and nurturing which we do in intensive care. There's no - you don't spend time you know, stroking them on their face, or talking to them and things, and often the parents aren't encouraged to do that, and maybe if we did encourage that we would be, it would counter some of the effects of the pain that we actually influence (nc4-1)

By the time of her second interview, which was six months after the first, Sandra displayed a noticeable change in tone, demonstrating greater emotional detachment, with few of her earlier insights. There was, however, an attempt to use some engaging strategies. *Working with patients that are in pain or discomfort isn't something which plays on my mind at the moment. I know that there are times when it does. I try as hard as I can to avoid doing things which I consider unnecessary, if I think that they are going to cause pain and try as hard as I can to do procedures in ways which I see as not being painful. I, generally I think there are a lot of.. probably the most important thing to me is the pacifying afterwards, after a painful procedure it's not so much doing the procedure itself and I think that pacifying the baby pacifies me as well and makes me feel better if they're no longer in pain. Then it's something that no longer plays on my mind* (nc4-2).

Five months later at her third interview, Sandra had arranged to work part time and her detachment was even more noticeable. *I think that (um)*

my attitude to babies in pain and being in an intensive care area, has, sort of, especially in the last sort of 4 months or so I found myself working less hours and so becoming less involved in the cause and much less the (um) - certainly not allowing it to play on my mind as being a major problem. I don't know that it sits lightly, but it certainly hasn't - I'm aware that it hasn't actually been a concern - it's not something that I've thought about over the last few months. The (um) - inherently I suppose I have to believe that it isn't something that I like to do, to inflict pain on babies and I don't - and when I think about it, it is something that concerns me, but I can't actually say that over the last couple of months that it has been something that has been of any concern to me at all and I feel that that's sort of a distancing process of myself from the area that I'm working in, you know, partly, partly related, and made easier certainly by the fact that it's an Intensive Care area and (um) dealing with babies that don't necessarily cry. (Um), the babies that are having mainly the most pain inflicted upon them don't necessarily cry.

I haven't had any (um) major incidents in this past couple of months that has sort of driven home that maybe the callousness of some of the things we do. The, you know, like babies having things inflicted upon them when they are dying or whatever, and whereas I know that in the past that's been a major concern of mine, that babies aren't made comfortable in that situation. ... I feel badly when I do actually see it happening, but at the same time I've had an attitude I think of acceptance and, and, and

hopelessness, as far as sort of being able to do anything to prevent it. I think that's all I can say (nc4-3).

By the fourth interview five months later, Sandra had changed her work position in order *to be a little bit further back from the bedside with babies in Intensive Care.* She had actually completed the emotional detachment by placing greater physical distance between herself and the babies. She had removed herself so that the issue of pain was no longer a problem for her. *My job doesn't involve inflicting pain, so it's easier to sort of go 'oh' and walk out, and no longer see it. You know, I am susceptible to it and I'm not exposed to it for all of my working hours and it certainly makes my job a lot easier. I think I'm receptive to it, but I certainly don't think that I'm affected by it* (nc4-4). Sandra's fifth interview showed little change from the fourth.

Sandra's experience is interesting in light of the fact that she had been working as a nurse for 13 years, but it was only after six years in the intensive care nursery that she distanced herself to the extent described here. Firstly, it is possible that Sandra's withdrawal was precipitated by her participation in this study. Perhaps regular confrontation of her feelings about pain accelerated the distancing process. Secondly, the study may have coincidentally captured Sandra at a time when she was following a course that many other nurses take as they become progressively more distant from the suffering with which they are confronted in their work.

Further research may provide more light on the process whereby nurses develop distancing patterns.

ENGAGING

Engaging was a group of strategies that enabled nurses to match their behaviour with their core constructs. Engaging consisted of seven strategies which had the effect of loosening constructs of pain alleviation to include a wider range of methods. Some strategies focused on alleviating pain, others focused on alleviating the associated emotional discomfort. The seven strategies were as follows:

(1) Preparing patients for painful experiences so they can manage the pain better. *I cope when I have to inflict pain if um, by explaining to the patient each time before I do something painful, like a painful procedure that is, and that sort of makes me understand again, so it justifies my giving them pain and um, hopefully the patient understands then better too and accepts that* (bc4-2).

(2) Attempting to improve technical competence and knowledge so that pain is managed better and painful procedures were conducted as quickly and efficiently as possible. *I suppose you feel a lot better about it if you if you feel that whatever procedure it is that you're doing, that you're doing it competently, that you're doing it as quickly and as easily as possible, that*

you're well trained to do the procedure and that you've taken every avenue available to minimise the discomfort and pain for the child (nr4-4).

(3) Providing emotional comfort to the patient during or after a painful episode or procedure such as cuddling children and babies, talking soothingly to neonates who were in humidicribs and connected to life supporting apparatus (5 1 1 2). These activities gave the nurses satisfaction because they helped patients deal with their pain. *It's just by talking to them or sitting besides them and giving them a massage or something like that you know. Often doing something helps you feel better, helps them feel better and it takes away that guilt of not being able to do anything* (bw6-1)

(4) Sharing control over painful a event with patients, for example by allowing patients to pace painful procedures, by giving them "permission" to express their pain freely and by responding promptly and conscientiously to their requests for pain relief. (code 5 1 3 3) *When you have control and they have control. And with sharing, there's a very sort of intimate type of relationship ... I feel that it allows me to continue working on a long-term basis with these people* (bc1-1).

(5) Helping to relieve or reduce the pain by using all possible pain control measures. Nurses explored both pharmaceutical and non-pharmaceutical means to make the patient as pain free as possible (code 5 1 1 4). *Normally, 99% of the time, it doesn't bother me, because I always make*

sure that I've done all the things that I can to try and alleviate the pain or lessen their discomfort in some way (bw5-1).

(6) Providing physical comfort enabled nurses to gain satisfaction (code 5 1 1 6). *But it's quite a satisfying feeling when you've finished a certain procedure and make the baby comfortable again, and the baby settles down and if the parents are there, they feel happier, so that's a good feeling* (nr2-3)

(7) Spending time with patients in non-painful activities so they did not associate the nurse solely with pain. This helped reduced nurses' feelings of rejection. *If we're able to spend time, after we've inflicted pain on patients, doing good things. Which makes them realise we are good as well, we're not just people that are there for pain. That makes it easier on us too. When later on we see that they still like us, and they realise that we do good things for them, as well as things we do things that aren't so good* (bk8-1).

The Implications of Using Engaging Strategies

Sixty-six per cent of participants reported using some form of engaging, but it was a strategy more characteristic of nurses working in neonatal intensive care units. When engaging was used as a means of coping with clinically inflicted pain, it was associated with lower anxiety ($r = .39$, $p < .002$). When used as a means of coping with disorder-induced

pain engaging was associated with greater positive affect ($r = .25$ $p < .05$) and with greater self confidence ($r = .37$ $p < .01$).

Engaging strategies were effective for a number of reasons. Nurses were able to maintain their identity as caring and competent professionals. There was less tension between the nurses and patients because patients understood what the nurses were trying to do and why it was necessary. Patients tended to be more cooperative, so the nurses' work was easier and more likely to be successful.

A neonatal intensive care nurse succinctly expressed her feelings about using engaging strategies to cope with pain: *Pain makes my job more demanding and gives me more responsibility, and it actually makes my job more satisfying in that I can develop skills to eradicate the pain, and it is quite satisfying when you realise that* (nr8-1).

A Case Study in the Development of the Engaging Group of Strategies

Some nurses spoke of their early experiences in working with neonates or burn victims when their anxiety about their ability to care for the patients was particularly high. In order to cope with this anxiety, the nurses tended to focus on their own need to develop technical mastery of their work. In the process, they seemed to have little excess energy to focus on

the emotional needs of the patients. As the nurses gained greater experience, they became more able to focus on the patients and to gain satisfaction from meeting the patients' needs for emotional and physical comfort.

This stage seemed to require some time to achieve and during the course of this study there were no nurses who actually progressed through these stages. However, based on the nurses' memories of their early experiences, it was possible to trace the development of engaging strategies.

Helen was a neonatal nurse in her early thirties. She was one of the more experienced nurses in the study. At the time of her first interview, she had 11 years nursing experience and eight years experience as a neonatal intensive care nurse. Helen gave an account of the process by which she believed she had developed into a more "caring nurse" who, as she became more experienced and more confident, made greater use of engaging strategies.

At the time of her first interview, Helen was already reflecting on the way she had changed since she began working in the neonatal intensive care unit. *I'm aware of it much more these days than perhaps I was in the earlier days of my work in intensive care where I guess you - more when you're - when you're new to intensive care you spend a lot of time dealing with*

monitors and just the regular nursing that usually needs to be done and that takes up a lot of your time but when you become more confident and capable and, I guess, more organised you tend to I guess, get beyond that and you're thinking about what the baby's feeling and what state the baby is at a lot more... and so I guess as I become more experienced I've become more in tune to thinking about what babies are feeling and looking at their faces and their actual physical posture and becoming more I guess in tune as to when I think babies are in pain (nc1-1)

Helen's thoughts were echoed by other neonatal nurses. *When I try and think back to when I initially started looking after neonates the babies pain wasn't something that was high on my priorities. You concentrated on doing the tasks that you had to do rather than think about what you were actually doing to the baby and if you were causing discomfort. And as you get more confidence over the tasks then you become aware of what the baby's experiencing um, with certain obvious things like tearing off tape and the baby gives you an obvious response that you sort of feel for that baby, but don't find it as distressing as I may have a few years ago in looking after babies because I'm a bit older and a bit more senior and I can usually do something about it* (nc9-1).

At the time of her second interview, Helen was participating in a programme offered by medical staff to teach nurses how to insert intravenous cannulae. This was a procedure that most nurses regarded as more

technically demanding for nurses and as more painful for the patients than many of the more routine procedures. Helen found herself reverting to the use of "distancing" in order to cope until she developed the necessary skills to conduct the procedure. *While I'm actually doing it, I guess, I find that I tend to try and, um, for the time when I'm actually handling the baby and, well, you sort of tune off the baby and try and shut out the fact that he's crying and his face is contorted and he's pulling his legs up and things like that. But as soon as you finish doing something like that then my next reaction is to try and comfort that baby as best as possible. I have a need to comfort that baby myself and because I've caused the baby pain in some way, it's important for me to be able to make it better as well. So I guess as nurses there are lots of things that we do now that are painful to the baby, there are going to be things in the future that.. there are going to be, we are going to be asked to do more actual procedures for the baby like intubations and things like that so I guess it's going to be something that's going to be er.. come up more and more.*

Helens' experiences suggest that engaging was a more mature strategy than distancing. Its use enabled nurses to act in accordance with their identities as carers, and to ensure that the patients' pain was managed in more effective ways.

SEEKING SOCIAL SUPPORT

Seeking social support was a strategy characterised by attempts to seek emotional or practical help, advice or social companionship. Social support reflected the nurses' need to be understood and it provided validation of nurses' constructs of their professional selves as caring and competent professionals. Social support was used less commonly than either distancing or engaging.

When the nurses sought social support, they tended to do so from colleagues, their own families and friends, professional counsellors and from patients and their families. The most common sources of support were colleagues followed by professional counsellors. The least common sources were patients and their families.

The Implications of Using Social Support Strategies

Thirty-one per cent of participants reported seeking social support, but this strategy was more characteristic of the nurses caring for burned patients. There was some evidence that social support helps to relieve guilt. There was a non-significant trend towards a negative correlation between social support and guilt for both disorder-induced ($r = -.23$ $p < .07$) and clinically inflicted pain ($r = -.23$ $p < .07$). In addition some nurses indicated that social support helped them deal with their feelings of guilt. *Yeah it's*

pretty hard when you think about it I don't think you realise how guilty you feel until you start talking about it like this. I don't think we talk about it enough as nurses. We just take it for granted that it's kind of our job (bc10-1).

Social support provided endorsement and as such had particular value for burns nurses. It helped offset the hostility they received from patients and their families during the burns baths. It also helped them cope with the lack of recognition and status associated with burns nursing (Brodie, 1984; Manon, 1985). However, many burns nurses commented that it was difficult for them to obtain support. Their families and non-nursing friends did not like to hear about the pain and injury suffered by patients and did not encourage the nurses to talk about their work. For many nurses there were limited opportunities to obtain emotional support. This also meant that family and friends tended to have little understanding of what was involved in the nurses' work.

The major share of the social support received by burns nurses was from their colleagues. The hostility they received from patients and their families, and to a lesser extent from the general community, had the effect of making them rely more heavily on each other.

While burns nurses tended to give each other practical help, there was not a lot of time in work hours for giving emotional support. Some nurses indicated that they recognised social support was important for their well-

being, but was largely inaccessible, *Sometimes I need some debriefing because I push down all my feelings about the horrificness of the injuries that they have and the pain that they have so I sometimes need to talk it out afterwards. Which can be a bit of a problem sometimes because there is not always the time or the people to talk to about it.* (bc8-1)

A Case Study in the Use of Social Support

Social support was a strategy more commonly used by burns nurses. The burns nurses' accounts demonstrated that they had a great need for emotional support, especially as they received many negative responses from patients and the patients' families.

Amanda was in her early twenties. At the time of her first interview she had been nursing for two years, the last six months of which had been spent in a paediatric burns unit. Her account exemplified the experiences of many burns nurses. Speaking about her feelings at the end of a day in the burns unit she said: *All I want is to be hugged and be, and be um in a comfortable surrounding and be, be sort of told that I'm a nice person and loved, and that kind of thing.*

Despite her need for reassurance the reactions of her friends and family made it difficult for her to talk to them about her experiences: *You find that your family and friends don't want to know about it. If you try to*

tell them they just say "Don't talk about it. How can you bear to work there?" She found a much greater source of support in the other nurses who shared her work experiences. Amanda spoke of the support she received from her nursing colleagues in the burns unit. *The people that we work with. You can go up and say "So-and-so, I can't cope with this any longer! Can you either give me a hand or do it for me?" And people where we are working at the moment will do that. So if we're getting too fed up someone else will either help you out or do it for you so you can go and have a rest. They understand what it's like!*

CORE ROLE RECONSTRUCTION

"Core role reconstruction" was used by 15% of participants (19% burns 12% neonatal) as a technique to cope with clinically inflicted pain (code 6 1 4 2). Core role reconstruction was their reaction to the incompatibility between the core role structure "carer" and their experience of nursing. The aim of such reconstruction was to include "pain inflictor" as a subordinate construct to "carer" which allowed nurses to continue to construe themselves as alleviators of pain, but not to do so exclusively. In personal construct terms it was an attempt to dilate a preemptive construct in order to broaden their perceptions of caring.

Nurses who used core role reconstruction as a method of coping with pain seemed to have reached the conclusion that caring for patients

sometimes meant hurting them and that hurting patients was so much a part of being a nurse that there was no alternative but to work out ways of coming to terms with it. *If you don't cause them that pain and if you don't do their dressings they're going to get septic and they could die on you, and that isn't doing the job, that's not looking after or caring for a person. Even though you're causing them pain, you're doing it because you care about them, or because you're trying to improve them. So not putting up with it or not doing a proper job because you're upset or you can't cope, then you shouldn't be there. You shouldn't be looking after them because you're not doing the patient any favours at all.* (bw5-3)

The Implications of Using Core Role Reconstruction as a Coping Strategy

Since so few nurses used core role reconstruction as a strategy, it is difficult to be definitive about its value. It is possible that those nurses who had not yet reconstrued their caring roles were unable to challenge their constructs and so coped by switching off emotionally. Indeed 86% of those who spoke about seeing nursing as relieving pain and did not speak about reconstruing the role, reported using emotional detachment as a coping strategy.

The construct "nurse as pain alleviator" was a relatively impermeable, preemptive construct similar to those characteristic of children (Kelly, 1955). Kelly defines preemptive constructs as those which are applied exclusively

to its elements. For example, in relation to pain, the nurses in this study construed themselves as pain alleviators. Their accounts suggest that, at least in relation to pain, many of them construed themselves as "nothing but pain relievers." The core role reconstruction was a way in which the nurses tried to loosen their constructs of themselves to include other ways of interpreting themselves as carers. What is noteworthy of this type of coping is its rarity, particularly as it seems to be one of the more mature ways that nurses may cope with patients' pain. For this reason core role reconstruction is worth further investigation in future research.

At this point is important to note that the differences between distancing, engaging and core role reconstruction simply amounted to the aspect of pain that was being reconstrued: the procedure, the nurse's behaviour or the nurse's role. Distancing sometimes involved reconstruing the painful procedure as beneficial in the long term. Engaging coping strategies helped nurses to gain personal satisfaction by matching their behaviour with their images of themselves as carers. Core role reconstruction was an attempt to change the way the nurses perceived themselves as carers.

Case studies in core role reconstruction

As previously noted, during the course of this study a programme was instituted in one of the neonatal units to teach cannulation skills to selected nurses. Inserting cannulae into the tiny veins of neonates was very difficult and it was often necessary to try several times before the cannula was inserted successfully. This procedure required neonatal nurses to inflict more severe pain than had been previously necessary and the experience prompted them to reconcile their view of nurses as pain alleviators, with the painfulness of these procedures that were essential for the patient's recovery.

There were three nurses in this study who were involved in the programme. These three were the only neonatal nurses who were trying to reconstrue their core role constructs of themselves as carers. One (nc1) had 11 years nursing experience, eight of which were in neonatal intensive care. She described how she was making a transition from seeing herself preemptively as an alleviator of pain and suffering to constructing an image of herself as a *pain inflictor. I guess between um, you being the nurse in the role of the comforter and the nurse in the role of carrying out what she's actually got to do and her practice, and I guess the way things are going in nursing if you look at the extended role of the nurses, [pain infliction] is something that nurses might have to come to grips with even more in the future. Because if they are taking on the role of doing more and more*

invasive things like putting in IV's um, it may be a little bit difficult. I guess you have to um, come to terms with that (nc1-1).

Another neonatal intensive care nurse (nc9) had been a nurse for over 20 years and had nine years experience in neonatal intensive care. She described how she had previously held the view that the nurses' role was to relieve pain and to comfort sufferers, but since her involvement in the cannulation programme, she had had to reconstrue her position: *You see doctors who inflicted a lot of the pain and they were the person who did the cuts and put the drips in and everything and we were there to comfort the patient following it. Suddenly, that's the reverse and we're doing both... To actually do that first stab where you knew that you were going through the tougher skin, which is probably the hardest for the baby (um) I felt as though I was going against everything that I believed in because I had to do that. But I guess somehow that you rationalise. You do it because you have to. I guess that's part of being a nurse, that (um) you know in your job that you have had to cause pain so it becomes part of your job and you can cope with it* (nc9-2).

The nurses who were making such reconstructions were among the more experienced. Fifty-five per cent of them had 12 or more years experience, compared with 25% of the total sample. However, experience was not a sufficient condition for the nurses to reconstrue their role. Indeed there were many other nurses who had more than ten years experience and

who spoke about the difficulties of hurting patients when it was inconsistent with their role constructs, and despite constant invalidation, gave no indication of reconstruction. The following statement from a nurse with over nine years experience illustrates this point: *It's stressful. It's very difficult to be put in the position where you inflict pain. You feel like your role is there as carer and to alleviate pain and it's very difficult when you actually have to do something that um, inflicts pain and sometimes if you're helpless, because you don't have, perhaps the time or the opportunity to alleviate it... You can feel quite guilty sometimes um, I think when you've done something painful* (bw4-3).

It is useful to consider why, after such long experience in neonatal intensive care units, these nurses were in the process of reconstruing their roles. There are two possible reasons. The first is that in the process of participating in the study and thinking about the impact of clinically inflicted pain on themselves, these nurses had begun to think more about their constructions of themselves as carers and relievers of pain. A further possibility is that the experience of participating in the cannulation programme had triggered the reconstruction process. In either case, it appears possible that discussion among nurses about their reactions to their patients' pain may provide the stimulus for nurses to develop a greater repertoire of coping strategies.

USING COMBINATIONS OF COPING STRATEGIES

All types of coping strategies had their advantages and it is possible that combinations of various strategies may be the most effective way for nurses to deal with issues surrounding their patients' pain. One neonatal nurse described how she used a combination of distancing and engaging strategies to cope with her feelings about inflicting pain on a baby: *At the time, it's, although you feel for the baby and you know that the baby's in pain, that you try and remove yourself to a certain extent and concentrate on getting the job done as quickly as possible and as most effectively as possible, so that minimises um the unpleasant and uncomfortable time for the baby. Um, and in some ways you sort of stand back from the baby. I don't know, it's hard to actually put it in words. But at the same time it's not, you don't become completely disconnected from the way, from the uncomfortable or the suffering feelings that the baby's undergoing. Um, it's, and I guess that that's the way that I deal with it. At the time it's to try and ah try and make the whole procedure as quick and as effective as possible. Um, but ah also um an important part of my own coping mechanism is to be a part of the ones who comfort the baby after the procedure. That that's important to me, very important. That um, that I, that in some way that I can, I help settle the baby down.* (nc1-2).

The relative merits of each group of coping strategies and of making use of judicious combinations needs to be evaluated in further research with a larger sample and with well validated measures.

IMPLICATIONS OF THE FINDINGS FOR A PERSONAL CONSTRUCT MODEL OF PAIN

The central problem facing the nurses in this study was that they continued to construe themselves as having primary responsibility for the alleviation of pain, yet they were without legitimate control over the prescription of analgesia. Most nurses appeared to take this situation for granted. Few spoke of the need to change it, and most set about trying to operate within it.

The burns nurses were faced with the additional complication of needing to reconcile their identity as pain alleviator with the necessity to inflict severe pain on patients. The most expedient way of dealing with the situation was to distance themselves from the patients' pain. The system under which they worked encouraged distancing and indeed it was the most commonly adopted group of strategies.

Distancing had limited usefulness. It enabled the nurses to continue working in situations that were beset with paradoxes. Distancing also

entailed disadvantages for both patients and nurses. In their efforts to distance themselves from the pain, the nurses seemed to distance themselves from patients. This had the effect of also reducing the nurses' satisfaction with their work with patients.

In the Kellian sense, engaging was a more aggressive strategy. Kelly (1955, p. 565) defines aggression as the "active elaboration of one's perceptual field". Engaging helped nurses to find other ways of reducing the incongruence between their images of themselves as pain relievers and their nursing practice. It was more commonly adopted by neonatal nurses, perhaps because non-analgesic methods of pain control were more effective in situations where the pain was less severe.

Social support seemed to have some potential to help them when they were feeling undermined by the situation. Burns nurses made greater use of social support by seeking validation from each other when it was not forthcoming from patients, relatives or other colleagues. As many of the difficulties faced by burns nurses were related to lack of acceptance of their work from patients, relatives and colleagues working in other areas, social support should logically be a useful strategy as it has the potential to offset persistent invalidation. However, the ways that burns nurses were forced to use social support may have some negative effects for them. By seeking validation mostly from those in similar situations, the burns nurses may have lost opportunities to discuss their situation with people who might take a

fresh approach and thus enable them to develop more mature ways of coping. Further research could fruitfully investigate the ways for burns nurses to mobilise more varied, and greater social support.

Core role reconstruction was a strategy used by a small number of nurses. However, while it also appears to have benefits, it was used too infrequently by the participants of this study to allow useful analysis of its worth. The fact that it was used by nurses with greater experience suggests that nurses may have to overcome much of their socialisation as members of lower status and less powerful group than medical staff to be able to engage in a strategy that involves more drastic reconstruction of their roles than the other strategies.

No coping strategies confronted the central problem faced by the nurses, that is the inconsistency between their goals and their power to meet their goals. The nurses continued to see themselves as responsible for pain control, yet they accepted the status quo that did not allow them direct control over the prescription of narcotic analgesia for their patients' pain relief. The burns nurses were distressed by the necessity to inflict pain, but few asked if there was a better way than debridement baths to treat burns. The relative frequency with which each group of strategies was used, suggested that the nurses tended to choose pathways that require little energy. Nurses were most likely to use distancing which involves the least reconstruction. Social support also required little reconstruction, but its use

depended on the cooperation of others. Engagement, the second most commonly used strategy, required more effort to reconstruct the way that nurses viewed their practice than distancing but less than reconstructing their core roles. Core role reconstruction was the one strategy aimed at addressing the incompatibility between professional image and the reality of practice. Further research is needed to investigate more closely the relative difficulty for nurses in incorporating more reconstructive strategies versus the benefits of making such changes.

The findings in this chapter suggested the following additions to the model of nurses' reactions to patients' pain. Additions to the model are highlighted.

Propositions About the Ways Nurses Revise Their Constructs

Some nurses defensively constrict their construing of patients' pain **which enables nurses to continue to carry out work that is inconsistent with their core role structures. They do so, however, at the cost of reducing their opportunities to gain satisfaction from their work, especially from their relationships with their patients.**

When constructs of themselves as carers are invalidated, some nurses respond by loosening their construct systems. **Strategies based on loosening enable nurses to widen the range of**

convenience of their systems in order to incorporate ways of caring for patients with pain that are compatible with their core role structures.

Some nurses cope with invalidation by seeking the support of colleagues who construe the events in similar ways to themselves.

Some nurses respond to incompatibilities between their core role constructs and their behaviour by modifying their core role constructs.

CHAPTER 9

THE STUDY OF NURSES' REACTIONS TO PAIN: IMPLICATIONS AND EVALUATIONS

In this, the final chapter of this thesis, I commence with a review of the process and main findings of this research. This is followed by a discussion of the way that the qualitative analysis has provided elaboration and clarification of the paradoxes inherent in being a pain reliever without adequate means of relieving pain, and of being a pain reliever who inflicts pain. The strengths and limitations of the study are discussed together with suggestions for future research. The revised model is then presented, followed by a summary of the study conclusions.

A REVIEW OF THIS RESEARCH

The primary goal of this research was to develop a model of nurses' constructs of pain. Personal construct theory was used to interpret existing research and to develop a preliminary model. Interview data gathered from burns and neonatal nurses with different experiences of their patients' pain were used to test and elaborate the model. Differences between measures of the emotional reactions and coping strategies of the two groups of nurses were tested statistically. Qualitative analysis was used to elaborate on the circumstances contributing to the differences between the two groups of nurses. The results were incorporated into a new model of nurses' reactions to pain.

The new model consists of a series of revised propositions related to (a) the ways nurses construe themselves professionally when caring for

people in pain, (b) nurses' emotional reactions when their constructs are validated and when they are invalidated, and (c) the strategies used by nurses to cope with invalidation of their core role structures.

The model incorporates the features of the nurses' accounts of caring for people in pain. One of the most distinctive features was the strength of the nurses' ideals of themselves as skilled carers, whose mission was to alleviate the pain of their patients.

The nurses' accounts of clinically inflicted pain were characterised by a sense of incompatibility between their core constructs of themselves as pain relievers and the need to conduct painful procedures on their patients. The presence of unrelieved pain and the necessity to inflict pain on patients were inconsistent with nurses' core constructs and were therefore a source of much personal anxiety to them. Those nurses who were confronted with more severe and persistent pain and who were required to inflict more intense pain on their patients, experienced higher levels of anxiety.

The nurses' accounts of disorder-induced pain were characterised by a sense of personal responsibility for the alleviation of the patient's pain. The nurses held strong beliefs that they should act as advocates for patients, particularly when patients were unable to speak on their own behalf. To the nurses in this study, advocacy meant accepting responsibility

for ensuring that adequate analgesia was prescribed by the medical practitioners.

When there were differences of opinion about the adequacy of analgesic orders, the nurses' beliefs that they should act as advocates for their patients tended to bring them into conflict with medical staff. Nurses who had greater difficulties in persuading medical staff to prescribe analgesia expressed less confidence about caring for people in pain. An important area for further research involves the interactions between doctors and nurses when their levels of experience differ, particularly when experienced nurses are dependent on inexperienced doctors to prescribe analgesia.

ELABORATION OF THE MODEL

In this section, I argue that the situations confronting nurses caring for people in pain can be seen as a series of paradoxes. Situations become paradoxical when they contain contradictory but equally valid elements which co-exist in a state of tension. Rappaport (1981, p. 5) observes that attempts to resolve problems arising out of paradoxical situations are often unsuccessful because attention is focused on only one element in order to produce "the right answer." He points out that the problems arising out of paradoxical situations are by nature dialectical and require attention to apparently incompatible ideas in order to produce multiple solutions (Rappaport, 1981).

Resolving paradoxical problems does not depend on reconciling poles of the *same* construct, but rather requires negotiating the inconsistencies that arise from two or more, apparently incompatible, constructs. Rappaport's notions of paradox are similar to Kelly's (1955) notion of fragmentation. In order to reconstruct our world we must negotiate apparently inconsistent ideas and behaviours at the more abstract, superordinate levels of our construct systems.

The paradoxes faced by the nurses in this study were that, despite construing themselves as pain relievers, there were occasions when the nurses were either unable to achieve pain relief for their patients or they found it necessary to inflict pain on them. The problems arose because the construct "pain reliever" tended to be preemptive in nature. A preemptive construct "preempts its elements for membership in its own realm exclusively" (Kelly, 1955, p. 563). In other words, when caring for people in pain, the nurses tended to see themselves as nothing but pain relievers. These paradoxical situations subjected the nurses to a dialectic in which they were being pulled between their images of themselves as pain relievers and the reality of their practice. The pain experienced by the patients was often out of the nurses' control but they nevertheless continued to construe themselves as personally responsible for it. The result was that when confronted by evidence that they were not effective pain relievers, the nurses tended to constrict their construct systems and distance themselves from the patients' pain.

In the discussion that follows, the oppositions that exist in paradoxical situations are considered in detail. The first occurred when nurses believed that the patient's pain was relievable but were unable to convince the medical staff to order what the nurses regarded as "adequate" medication. The second occurred when pain was caused by the nurses in the process of caring for the patient.

The Paradoxical Nature of Caring for Patients in Pain

Being a pain reliever without adequate means of pain relief

There were inherent contradictions in nurses' acceptance of responsibility for the relief of disorder-induced pain and their lack of authority to prescribe potent analgesics and narcotics for its relief. In order to fulfil their pain relief goals for their patients, it was necessary for nurses to persuade medical staff to order adequate analgesia. When nurses requested medical staff to prescribe analgesia or to modify an existing prescription there were two possible scenarios.

The first scenario occurred when doctors agreed with the nurses' assessments. They were then likely to prescribe medication with which the nurses were likely to be satisfied. The nurses then believed that they had achieved their pain relief mandate. The second scenario occurred when the doctors did not agree with the nurse's assessment. In such circumstances

the nurses had two options either of which had the potential to result in a loss of confidence in their ability to be effective carers. Firstly, nurses could accept the doctor's evaluation and continue to be confronted with the distress of the patients whose pain was unrelieved. When nurses chose this option, they were likely to feel that they had failed the patient and to feel dissatisfied with themselves. Secondly, nurses could continue to place pressure on the doctor to conform to their wishes. This option usually resulted in varying degrees of conflict with the medical staff.

Nurses requiring medical cooperation to obtain pain relief medication for their patients, was a major theme in this study. This theme centred on the interface between nurses and doctors and highlighted perceived differences in their respective superordinate constructs. Differences in the superordinate constructs of medicine and nursing largely reflected differences in the development of ethical reasoning in men and women (Kohlberg, 1981, 1984; Gilligan, 1982).

The nurses in this study conflicted with the medical staff when in Rappaport's (1980) terms, nurses and doctors failed to see the full complexity of the situation that involved different priorities for different professional purposes. Priorities became confused. Physicians obviously provided care with an emphasis on cure. Nurses also cured, but their emphasis was on caring for the patient by providing physical and emotional support until the person was sufficiently well to be able to support

him/herself. The incongruity for nurses stemmed from practising in an environment where the ethos of the medical profession prevailed.

As nurses are more likely than doctors to be concerned with preserving relationships (Gilligan, 1982), conflict probably produces greater distress among nurses. In this study, many neonatal intensive care nurses were caught between their wish to avoid conflict with medical staff and their wish to fulfil their responsibilities towards their patients. The paradox was, that the very characteristics that defined them as "good," caring nurses, also threatened their relationships with medical staff.

The nurses in this study were not able to sit comfortably within the ethos of their own discipline. This resulted in a degree of confusion about the nature of pain and the best way to approach its control. On the one hand nurses acknowledged the subjectivity of the pain experience. On the other hand they wanted to measure it objectively. It was understandable that nurses wished for objective measuring tools that would enable them to convince themselves and the medical staff about the patient's need for analgesia. While nurses wished for an objective tool, they were aware of the problems inherent in objectively measuring a subjective experience. In the words of one of the nurses: *Even if you use a scale to measure pain from one to ten - you're still relying on their perception of it. ... (bw6-2).*

In the present study, the differences between the culture of the medical and nursing staff were such that collegial interactions and negotiations surrounding pain were rare. For example, despite their knowledge and sensitivity to cues in the infants' behaviour (Levin, 1990), the nurses caring for neonates felt that their concerns remained unheeded and they felt devalued. Even worse, their identity as carers often rested on their ability to convince medical staff that the patients were experiencing unrelieved pain. Conflict with medical staff has been shown to create distress for nurses, both in this and other studies (eg., Astbury & Yu, 1982; Battersby, 1990). Austin et al. (1988, p. 13) found that "doctor-nurse conflict" was listed as one of the difficulties associated with working in a neonatal intensive care unit. They found "friendly working relationships", "effective communication between all staff" and "freedom to express opinion and be heard" to be among the factors that contributed most to relieving the stress of neonatal intensive care nurses (p. 14).

The outcome of this paradox was that nurses tended to cope by using strategies that enabled them to create an emotional and physical distance between themselves and the patient's pain. A more satisfactory solution required both nurses and doctors to reconstruct nursing as an entity, culturally distinct from, but complementary with, medicine.

Being a pain reliever and inflicting pain

Interpreting caring as relieving pain, but at the same time finding it necessary to conduct painful procedures on patients, created further paradoxes for nurses, especially those caring for burn victims. The predominant tone of the nurses' accounts was one of confusion over a multitude of conflicting responsibilities. The nurses believed that the procedure that was causing pain to the patients was an important part of their care and they were caught between the responsibility to avoid hurting the patients and the responsibility to assist them back to health. To stop the procedure was inconsistent with their responsibility to provide treatment; to continue, often meant incurring the recriminations of patients, of patients' families, of colleagues, and even of themselves. Paediatric nurses endeavoured to withstand the hostility they perceived in parents and to resist the temptation to exclude parents when painful procedures were in progress and when their presence was an additional source of stress to the nurses.

The alternatives to continue or to discontinue painful procedures threatened nurses' identities whose primary role was to care for others and to preserve relationships. Continuing the procedure meant damaging relationships with significant people in their professional lives. Discontinuing procedures meant neglecting their duty to bring the patients back to a state of health.

There has been little guidance for nurses about ways of managing the complex emotions aroused by the clinical infliction of pain. Nurses inflict pain and cause discomfort in many different ways, yet it has not been acknowledged as a legitimate part of the work of nursing. The nursing literature abounds with works about caring (e.g., Bishop & Scudder, 1985; Benner & Wrubel, 1989; Gaut, 1992; Morrison, 1992; Roach, 1984; Smerke, 1989; Watson, 1979; Wolf, 1986), yet there has been very little investigation of, or debate about, nurses as pain inflictors. The result is that nurses have had no alternative but to deal with the difficulties inherent in such situations as best they can.

In recent years there has been some increase in interest in the impact of pain infliction by nurses, but little has been produced that enables nurses to deal more effectively with the problems associated with pain infliction. Schroeder (1992) has compared the behaviour of nurses to that of political torturers and Dind (1989) has recommended that studies of torture be included in nursing curricula in order to help nurses understand their own reactions to inflicting pain. Madjar (1991) studied nurses and patients in a burns unit and concluded that nurses were not educationally prepared to meet the challenges inherent in inflicting pain. She recommended that nurses need to accept that their goals for their patients may not always be achieved and that nursing curricula should address the issue of inflicted pain.

A particularly striking issue in the present study, was the absence of explicit challenges to debridement baths as the treatment of choice for burn injuries. The nurses' accounts expressed dissatisfaction with the necessity to conduct painful procedures. The process of burn debridement was ordered by doctors and conducted by nurses, yet only one nurse speculated that there may be better ways to treat burn injuries.

Coping with Paradoxical Situations

Caring for people in pain meant negotiating a series of situations that contradicted nurses' idealised images of themselves as nurses. There were few solutions that were not in conflict with nurses' basic ethical position as carers. Understandably, in such circumstances, the nurses often retreated to a position of emotional and physical distance. While distancing enabled nurses to continue to work with patients suffering such pain, it also appeared to decrease their sensitivity to the patients' pain and suffering. When nurses were able to continue to find ways of making the patient more comfortable, they were able to help the patients and at the same time, to enhance their own feelings of satisfaction.

Distancing, as a self protective strategy, has a long tradition in nursing. Nurses have often employed distancing strategies to protect themselves from the emotional distress involved in the physical and emotional intimacy of patients' care (Coghlan, 1985; Davitz & Davitz, 1981;

Iafrati, 1986; Madjar, 1991; Marshall, 1980; Menzies, 1964; Perry, 1984a; Quinby & Bernstein, 1971; Street, 1992; Walkenstein, 1982). In this study, distancing was the strategy most widely adopted by both groups of nurses and particularly by those with less experience in their particular specialty.

Overall, distancing appeared to have some positive and some negative consequences for nurses. It enabled them to continue to work with patients experiencing severe pain and to conduct painful therapeutic procedures. Morrison (1989) found that some of the nurses he studied believed that it was important to their mental health to limit the extent of their caring about patients. In this study, distancing was associated with greater feelings of self confidence.

Yet distancing was incongruent with the ethos of nursing. It was associated with lower satisfaction with personal relationships and as such deprived nurses of some of the pleasure associated with the development of close and trusting relationships with patients and their families. The experience of Sandra, the neonatal intensive care nurse whose story is reported in Chapter 8, suggests that distancing is unlikely to be a useful strategy in the long term. Distancing helped Sandra make interim adjustments, but also produced dissatisfaction with the way she was approaching her work.

Nurses who place heavy reliance on distancing to help them manage the stresses associated with patients' pain may ultimately seek one of two options. Some like Sandra, may find alternative forms of work that do not demand such defensive strategies. Others may continue to work in areas where pain is a major issue, but with more detached attitudes towards patients. In such cases, the discrepancy between their beliefs about themselves as nurses and their practice will remain unresolved.

Maintaining a professional distance is more consistent with the practice of medicine than of nursing. For instance, in contrast with medicine, much of the satisfaction of nursing arises from the close and trusting relationship that often develops between nurses and patient (Dunlop, 1992; Heath, 1989; Gardner, 1992). In an attempt to diagnose disease and find a cure, medicine has found it necessary to value emotional neutrality and to accept the consequences of "transforming the patient or the procedure into an analytic object or event" or "avoiding sensitive contact" (Smith & Kleinman, 1989, p. 56). Excessive use of distancing is likely to deny nurses the pleasure of being a nurse, while failing to provide the satisfactions of medicine that compensate medical practitioners for the lower intensity of their relationships with patients. As Morse et al., (1990, p. 11) noted "If nurses must become detached from caring to perform pain-inducing nursing procedures, in other words to nurse, how can caring retain its seminal, theoretic position as the essence of nursing?"

Social support was also a strategy that appeared to have positive and negative consequences for the nurses in this study. Group cohesiveness was a significant feature of the environment of the nurses working in burns units. The nurses' friends and relatives, horrified by the nurses' descriptions of their work, frequently refused to listen to their stories of their work experiences. Consequently the nurses were more likely to turn to each other for understanding. The need of burns nurses to be understood by others has been noted previously (Manon, 1985). However, the burns nurses in this study tended to use social support to seek validation from those who construed situations involving pain similarly to themselves and to disregard the invalidating evidence of those who construed such situations differently. In this way, social support became, in the Kellian sense, a constricting strategy. The supportive nature of the burns unit helped the nurses deal with the situation because it gave them a sense of valuing themselves when others in their lives were giving them devaluing messages. However, it also helped them to resist reconstructing their roles. More research needs to be conducted on the ways in which social support may sometimes provide comfort, but at the same time inhibit personal growth.

Two sets of strategies, core role reconstruction and engaging, were more aggressive in the Kellian sense in that they were attempts to actively elaborate the nurses' perceptual fields. Engaging was an attempt to extend the range of nurses' options to help patients manage painful experiences and thereby enable the nurses to enhance their own sense of achievement and

satisfaction. Engaging was associated with closer relationships with patients and with greater enjoyment of their work. Nurses who made greater use of engaging strategies tended to accept that pain relief involved more than chemical intervention. Engaging enables the nurses to acknowledge their ability to help the patients, and therefore to maintain their identity as carers.

Core role reconstruction was a strategy used by a very small number of nurses. It consisted of aggressive attempts to develop a construct that acknowledged that caring requires nurses to inflict, as well as alleviate, pain. Perhaps the reason why very few nurses selected this way of coping lies in the paucity of research and debate within nursing about the way nurses react to inflicted pain. Morse (1992a, p. 93) suggested that nurses focus on comfort as the "end state of therapeutic nursing actions." Interpreting the core construct of nursing as providing comfort may allow nurses to incorporate the intervening stages of discomfort, without the feelings of invalidation that were evident among the nurses in this study (Morse, 1992a).

The potential benefits of combinations of coping strategies

It is possible that combinations of strategies may be the optimal way of coping. Perhaps, the judicious use of distancing strategies may have

positive outcomes for nurses, particularly if used in conjunction with engaging strategies. Indeed some of the nurses in this study suggest that this may be so. "*You can only do so much to help them. It's very nice to be able to help them, but there comes a time when you can't do any more and you just have to turn off.*" These thoughts seemed to be echoed by the mother of a burned child in a current study (Crisp & Nagy, 1994): *The nurses were very good when things [burns baths] had to be done. They were detached professionally but they were still caring enough.*

The findings of Consolvo, Brownewell and Distefano (1989) provide support for the potential benefits of wise combinations of coping strategies. These researchers investigated nurses who, after a long history of effective service in a neonatal intensive care unit, demonstrated a certain resistance to stress. The work of Consolvo et al. (1989) was based on that of Kobasa (1979) who had coined the term "hardiness" to describe a combination of coping strategies associated with an ability to tolerate stress. Consolvo et al. (1989) found that the nurses they studied used strategies which paralleled those identified among the nurses in this study. Two of the hardiness strategies were similar to engaging: (a) a belief that one can control one's life and (b) a sense of commitment to one's goals. Another hardiness strategy, an ability to construe change as a challenge rather than a threat, was similar in nature to reconstruction. A further strategy was the ability to exact emotional support from peers, family and friends.

The findings of this study and those of Kobasa (1979) and Consolvo et al. (1989) raise a number of questions for further research. Does distancing effectively protect nurses from work related stress? If so, at what point does detachment hinder nurses' sensitivity to patients' needs? Is it possible for nurses to find an optimum level of sensitivity to the patients' feelings whilst maintaining sufficient emotional detachment for the maintenance of their own mental health?

Moderate use of distancing may be useful as a temporary strategy until nurses are ready to modify their construct systems. Distancing may also help deal with the anxiety that remains after all avenues to relieve the patients' pain have been exhausted. Further research with a validated coping instrument and a larger sample is necessary to test these hypotheses.

LIMITATIONS OF THE STUDY AND METHODOLOGICAL SUGGESTIONS FOR FURTHER RESEARCH

The conclusions of this study should be considered together with its methodological strengths and weaknesses. The lessons learned in the process of conducting this study may be used to inform the design of subsequent research in the area.

The size of the sample was both a strength and a weakness of this study. The sample was large for the qualitative analysis component of the study and as such permitted in-depth exploration of the themes emerging from the nurses' accounts of their experiences. It was also sufficiently large to permit statistical analysis of the participants' scores on the content analysis scales. It was, however, too small to allow separate statistical analyses of the subscales. Analyses of the differences between the burns and neonatal nurses' guilt, shame and mutilation anxiety, for example, may have revealed some interesting results. A larger sample of nurses caring for paediatric burn patients would have enabled separate analysis of the reactions of nurses caring for burned adults and children.

Comparison of the sample with data from all registered nurses in NSW showed that it was representative of the population in terms of gender and the proportion of nursing managers. While the response rate was low, the use of multiple sites may have contributed to the representativeness of the sample.

There was, however, an over-representation of younger nurses and yet also expert clinicians. The results are therefore more likely to reflect the reactions of career nurses than those who do not follow nursing as a career. Participation in this research was demanding of the participants' time and energy. Younger career nurses may have thus decided to participate

because of their greater commitment to nursing and greater interest in research.

Some criticism may be made of the relatively crude way that coping was measured in this study. While the coping measures were modelled on the validated content analysis scales, the coping measures have not yet been validated.

A major strength of this study, however, is that qualitative analysis allowed the components of distancing and engaging strategies to be identified. The description of these components will provide a strong base for the development of instrumentation that will allow more robust examination of the effects of different methods of coping than was possible in this research. Until such time as this instrumentation is developed and research is conducted to either confirm or modify the results of this study, conclusions concerning the effects of the different groups of coping strategies must remain tentative.

A number of strategies were employed to ensure that the process of the qualitative analysis was as rigorous as possible. The influence of my expectations on the process of data analysis was reduced by the development of a prior list of expected codes. Thematic saturation was demonstrated by the absence of new themes after the third interview. The results of the qualitative analysis provided in Chapters 6 to 8 incorporate all the codes

in the final list. The results were illustrated with selected extracts from the nurses' accounts. These extracts were selected because they tended to be representative of the views expressed by most of the participants whose data had contributed to the development of the specific code.

There were a number of ways in which the conclusions were checked to ensure that as far as possible, they were consistent with the participants' experiences. First, the study conclusions were checked against the raw data to reduce the possibility that constant focusing on small sections of extracted text did not result in a loss of the overall picture provided by the nurses' accounts. This process helped to confirm the consistency of the conclusions and the interview data. Second, the fit between the coding criteria and the extracted text for each code was checked by other researchers. Third, four separate meetings were held with groups of nurses working in adult and paediatric burns and neonatal intensive care units during which the nurses confirmed the authenticity of the study findings.

Implications for Further Research

The lesson to be learned from this study is that future research should ideally be conducted on a larger sample with an improved response rate. As the size of the sample reflects not only the response rate but also the size of the population, national recruitment may be necessary. Assuming the

same response rate, a sufficiently large sample would require recruitment from a number of capital cities.

Further research should also seek to sample across a range of nursing specialities. Nurses, for example working in accident and emergency units and those caring for people with cancer, may have different experiences of working with people in pain.

When this research commenced, I had hoped to track changes in the nurses' emotional reactions to their work over a two and a half year period. Hindsight suggests that a longer period of time is necessary to achieve this end. Nurses seem to make significant adjustments in the first few months of working in the type of units included in this study. After that the process of adaptation appears to slow down. For some nurses, change appeared to be triggered by events occurring within the unit. The ideal way to conduct such research would be to study a large sample of nurses as they commenced their first duty in the burns and neonatal intensive care units and track the experiences of those who remain working in the area over a longer period. Five years may be sufficient to identify the processes of change. The sample size would need to be sufficiently large to compensate for a high attrition rate.

A REVISED PERSONAL CONSTRUCT MODEL OF NURSES' REACTIONS TO PATIENTS' PAIN

The findings of this study form the basis for the revised model which is presented below. The preliminary model was presented in Chapter 2. Additions to the model are highlighted. Deletions are [in square brackets].

General Propositions About Nurses' Reactions to Pain

1.1 Nurses use their previous experiences of pain (both as nurses and as individuals) to develop a system of constructs about themselves as carers of patients in pain.

1.2 Nurses try to make sense of their own part in the management of the pain experienced by their patients.

Propositions About the Ways in Which Nurses Construe Themselves Professionally

2.1 "Caring" is a core construct which many nurses use to define themselves professionally.

2.2 The construct of "caring" subsumes the generally agreed upon functions of nurses. When caring for patients in pain, nurses construe their major function as the alleviation of the pain.

2.3 When caring for patients experiencing pain, the construct of "nurse as pain alleviator" subsumes the constructs of "having compassion for patients in pain," "facilitating well-being by relieving pain," "relieving pain that patients cannot relieve for themselves" and "carrying out the necessary procedures to restore the health of patients and relieve painful conditions."

2.4 When caring for patients experiencing disorder-induced pain, the opposite pole to the construct of "nurse as pain palliator" is "nurse as ineffective palliator."

2.5 When conducting painful procedures on patients the opposite pole to the construct of "nurse as pain alleviator" is "nurse as pain inflictor."

2.6 Nurses, whose behaviour is consistent with caring, accept personal responsibility for the alleviation of pain.

2.7 Nurses, whose behaviour is consistent with caring, advocate for the patient with the doctor, when the patients' well-being is threatened by unrelieved pain.

2.8 When the patients' well-being is threatened by unrelieved pain, nurses' constructs of themselves as effective carers partially depend on their ability to successfully advocate for the patient in order to obtain adequate analgesia.

Propositions About Nurses' Emotional Reactions When Constructs are Validated or Invalidated

3.1 When nurses' constructs allow them to anticipate events surrounding their patients' pain, their constructs are validated and they experience positive emotions.

3.2 When nurses' constructs of their patients' pain are invalidated, they experience negative emotions.

3.3 Nurses react to intense disorder-induced pain in patients with feelings of anxiety.

3.4 When nurses are unable to alleviate disorder-induced pain, they experience negative emotions, especially [helplessness and] a loss of self confidence.

3.5 When it is necessary to inflict intense pain, [nurses respond with negative emotions, and especially with feelings of hostility] the hostile reactions of others invalidate the core role construct of "nurse as carer." Nurses respond to this invalidation with anxiety and hostility.

3.6 Unresolved ethical dilemmas about the infliction of pain on patients contribute to the nurses' anxiety.

3.7 When nurses' core role constructs are threatened, they tend to seek the support of colleagues with whom they have a shared understanding.

Propositions about the ways nurses revise their constructs

4.1 In order to avoid feeling negative emotions nurses must revise or replace invalidated constructs.

4.2 Nurses differ in the way they revise and replace their constructs.

4.3 When constructs of themselves as carers are invalidated, some nurses respond by withdrawing from the invalidating situation.

4.4 When constructs of themselves as carers are invalidated, some nurses respond by loosening their construct systems. Strategies based on loosening enable nurses to widen the range of convenience of their systems in order to incorporate ways of caring for patients with pain that are compatible with their core role structures.

4.5 Some nurses defensively constrict their construing of patients' pain which enables nurses to continue to carry out work that is inconsistent with their core role structures. They do so, however, at the cost of reducing their opportunities to gain satisfaction from their work, especially from their relationships with their patients.

4.6 Some nurses cope with invalidation by seeking the support of colleagues who construe the events in similar ways to themselves.

4.7 Some nurses respond to incompatibilities between their core role constructs and their behaviour by modifying their core role constructs.

CONCLUSION

A remaining question is: How does the seriousness with which the nurses in this study attached to their pain relief role, fit with the poor pain management record suggested by the literature? The results of this and other studies (Perry, 1984a; Smith & Kleinman 1989; Walkenstein, 1982) suggest that the way health professionals cope with pain has implications for the way they manage the pain of their patients and also for the nurses' own emotional well-being.

While this study was not designed to compare pain relief beliefs with pain relief practices, some inferences can be made. A major inference is that distancing, the most common way of coping, affects nurses' sensitivity to patients' pain. Nurses who cope by distancing are more likely to disregard the patients' pain and are thus more likely to mismanage pain relief. The

result has been an overriding tendency for nurses to focus their attention away from the patients, away from the pain and consequently to reduce their opportunity to find satisfaction in their work.

The impact of patients' pain on nurses is complex and further research is necessary. The way nurses cope with pain must be studied in its full complexity. Creative solutions must be sought rather than accepting what could be described as the "default option." If this does not occur and simplistic answers are resorted to, mediocre solutions will continue to effect both nurses and patients.

The results of this study also suggest that nurses who remain working in areas where pain is an issue, gradually develop more mature ways of coping with it. They may try to find more creative ways of alleviating pain and, in the process, provide both comfort for the patient (Morse, Bottorff, & Hutchinson, 1994) and satisfaction for the nurse. Alternatively, nurses may reconstruct their roles so that their perceptions of caring are broadened. They may then be able to accept that caring may not necessarily mean alleviating pain. Nurses can always choose an alternative construction but to do this effectively, they need the support of their profession.

Clinical nurses have received little guidance from theoretical and research literature on ways of dealing with pain that are consistent with their identity as nurses. Nursing continues to promote itself as a "caring profession" but has not addressed the paradoxical nature of existence in an environment dominated by medical values. Indeed, some writers have

attempted to base nursing ethical standards on justice, rather than caring, as the essential ethical principle (eg., Greipp, 1992). Public debate is necessary for nurses to be able to reconstruct their roles so that the gap between the practice and the rhetoric of nursing is narrowed and nurses develop more mature coping patterns. In this way the psychological health of both nurses and patients is more likely to be enhanced.

The time is now ripe for nursing to reconsider its position and to reappraise the meaning of nursing and the meaning of caring. Tertiary education of nurses is now well established in Australia, and there is growing debate about and research into nursing practice.

Interpreting nursing as coping with paradoxes is not new (Strauss et al., 1984; Chapman, 1983). My argument is that focusing attention on only one side of the paradox leaves the opposing side unanswered. Finding more creative solutions requires energy and inspiration. Because nursing as a profession has not yet addressed the issues raised in this study, there has not been much research or public debate to facilitate creative rethinking. Nurses have been struggling with paradoxical situations and must now begin to focus their attention on those aspects which have previously been ignored.

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APPENDIX A

AN EXAMPLE OF A CONTENT ANALYSIS SCALE

THE PAWN AND ORIGIN SCALE

A person is considered to perceive her/himself as an origin if:

1. *Self-expresses intention* (says that he or she intended, planned, decided; mentions plans, purposes, goals, e.g., "I planned the party," " we decided to have a child.")

2. *Self-expresses exertion* or trying (describes his or her efforts to achieve some stated or implied result, e.g., "I'm trying to find out: "it took quite a bit of energy to load the boxes")

3. *Self-expresses ability* (comments on his or her skill, competence, e.g., "I became school champion," "I'm managing very well").

4. *Self-describes overcoming or influencing others or the environment* (e.g., "I didn't let them stop me", "the hill was steep but I managed to climb to the top").

5. *Self-perceived as cause or origin* (e.g., "I took control during labour," "I produced the play").

A person is considered to perceive her/himself as a pawn if:

6. *Self-indicates that he or she did not intend an outcome* (e.g., "I did not plan to have this baby," "I was in a car accident").

7. *Self-indicates that he or she did not try to bring about an occurrence* (e.g., "I wasn't trying to fix it but when I bumped it, it started to go," "I made no effort to look after the orchids, but they bloomed profusely").

8. *Self-expresses lack of ability* (describes self as powerless, ineffective, incapable, a failure, e.g., "I couldn't attract a man," "I just couldn't help it").

9. *Self-expresses being controlled, forced, prevented by, at the mercy of external forces* such as other people, environmental forces, chance (e.g., "He wouldn't let me take the kiddies," "I don't want to be locked up in a place like this").

10. *Self-perceived as a pawn* (events are described as unpredictable or uncontrollable (e.g., "The sickness struck me," "my car hit one side of the bridge and careened to the other side").

A score of 1 is given for each clause in which the speaker describes her/himself as an Origin or as a Pawn. Origin and Pawn scales are summed independently. The scoring categories listed here for each "scale" are not considered mutually exclusive and are not identified in the scoring. To overcome the positive skew of the distribution of the scores a square root transformation is used. Thus Origin (or Pawn) score =

$$\sqrt{(\text{total raw score} \times \text{CF})} + \tfrac{1}{2}\ \text{C.F.}$$

where CF is a correction factor, the total number of words in the verbalization divided into 100. This serves to take into account individual differences in the length of verbalizations.

APPENDIX B

EQUATIONS FOR THE CALCULATION OF SCORES ON EACH CONTENT ANALYSIS SCALE

Positive Affect Scale

Positive affect $= \sqrt{}$ (total raw score x CF*) + ½ CF

Pawn Scale

Pawn $= \sqrt{}$ (total raw score x CF) + ½ CF

Cognitive Anxiety Scale

Cognitive anxiety $= \sqrt{}$ (total raw score x CF) + ½ CF

Sociality Scale

Sociality = log [(total raw score x CF) + ½ CF +1

Anxiety Scale

Total anxiety $= \sqrt{}$ (total raw score x weighting)CF + ½ CF

Hostility Directed Outward Scale

Hostility out $= \sqrt{}$ (total raw score x weighting)CF + ½ CF

Hostility Directed Inward Scale

Hostility in $= \sqrt{}$ (total raw score x weighting)CF + ½ CF

Ambivalent Hostility Scale

Ambivalent Hostility $= \sqrt{}$ (total raw score x weighting)CF + ½ CF

* Where CF (Correction factor) 100/total number of words

Coping scores

Distancing = $\sqrt{}$ number of text lines x CF + ½ CF**

Engaging = $\sqrt{}$ number of text lines x CF + ½ CF

Social Support = $\sqrt{}$ number of text lines x CF + ½ CF

** CF (Correction factor) is 100/total number of text lines

APPENDIX C

LISTS OF CODES AND EXAMPLES

OF CODING CRITERIA

PRELIMINARY CODING LIST

Demographic data about participants

1. gender
    1. female
    2. male

2. years experience
    1. in nursing
    2. in unit

3. type of unit
    1. burns
        1. adults
        2. paediatric
    2. neonatal

4. hospital
    1. Hospital A
    2. Hospital B
    3. Hospital C
    4. Hospital D

5. age

6. qualifications
    1. certificate
        1. single certificate
        2. two certificates
        3. three or more certificates
    2. UG diploma
    3. degree
    4. PG diploma
    5. masters
    6. PhD

7. position
    1. clinical nurse specialist
    2. clinical nurse consultant
    3. registered nurse
    4. manager
    5. clinical educator

Data sectors

1. interviews
    1. interview 1
    2. interview 2

3. interview 3
4. interview 4

2. question
1. question 1
2. question 2

Emotional content

1. positive affect
2. pawn
3. origin
4. cognitive anxiety
5. sociality
6. anxiety
1. death anxiety
2. mutilation anxiety
3. separation anxiety
4. guilt anxiety
5. shame anxiety
6. diffuse anxiety
7. hostility
1. hostility out
2. hostility in
3. ambivalent hostility

3. People

1. Patients
1. age
1. babies
2. small children
3. older children
4. adolescents
5. adults
6. elderly

4. Behaviour

1. of patients
1. reactions
1. to nurse
1. negative
2. positive
1. gratitude
2. to treatment
2. communicating
1. communicating pain
2. failure to communicate pain

2. of nurses

2. coping
    1. acceptance
    2. making the most of it
    3. avoiding

3. of relatives
    1. parents
        1. negative
        2. positive
    2. other relatives
        1. negative
        2. positive

4. of nursing colleagues
    1. negative
    2. positive

5. of doctors
    1. negative
    2. positive

6. of physiotherapists
    1. negative
    2. positive

4. Ideas/attitudes

1. about nursing
2. about nurses
3. about pain
    1. awareness of pain
    2. denial of pain
    3. beliefs about ability to feel pain
    4. attitudes to patients' pain

4. about self as nurse
    1. competence
    2. incompetent

5. Professional world

1. negative aspects
2. positive aspects
3. early experiences

6. Pain

1. type of pain
    1. inflicted
    2. observed

2. control of pain
    1. ineffective
    2. effective

3. beliefs about pain control
    1. dangers of drug addiction
    2. dangers to respiratory function

FINAL CODING LIST

Codes Relating to Emotional Content

(3 1)	/emotional content/positive affect
(3 2)	/emotional content/pawn
(3 3)	/emotional content/origin
(3 4)	/emotional content/cognitive anxiety
(3 5)	/emotional content/sociality
(3 5 1)	/emotional content/sociality/solidarity
(3 5 2)	/emotional content/sociality/intimacy
(3 5 3)	/emotional content/sociality/influence
(3 5 4)	/emotional content/sociality/shared experiences
(3 6)	/emotional content/anxiety
(3 6 1)	/emotional content/anxiety/death
(3 6 2)	/emotional content/anxiety/mutilation
(3 6 3)	/emotional content/anxiety/separation
(3 6 4)	/emotional content/anxiety/guilt
(3 6 5)	/emotional content/anxiety/shame
(3 6 6)	/emotional content/anxiety/diffuse
(3 7)	/emotional content/hostility in
(3 8)	/emotional content/hostility out
(3 9)	/emotional content/ambivalent hostility

Codes Relating to People

Patients

(4 1)	/people/patients
(4 1 3)	/people/patients/age
(4 1 3 1)	/people/patients/age/baby
(4 1 3 2)	/people/patients/age/toddlers
(4 1 3 3)	/people/patients/age/older child, adolescent
(4 1 4)	/people/patients/reactions
(4 1 4 1)	/people/patients/reactions/negative
(4 1 4 1 1)	/people/patients/reactions/negative/hostile
(4 1 4 1 2)	/people/patients/reactions/negative/rejecting

(4 1 5) /people/patients/inability to communicate pain

Patients' Relatives

(4 2) /people/relatives
(4 2 1) /people/relatives/parents
(4 2 1 1) /people/relatives/parents/hostility
(4 2 1 2) /people/relatives/parents/empathy
(4 2 1 3) /people/relatives/parents/harmony

Nurses

(4 3) /people/colleagues
(4 3 1) /people/colleagues/nurses
(4 3 1 1) /people/colleagues/nurses/evaluations
(4 3 1 1 1) /people/colleagues/nurses /evaluations/negative
(4 3 1 1 2 3) /people/colleagues/nurses/evaluations /positive

Doctors

(4 3 2) /people/colleagues/doctors
(4 3 2 3) /people/colleagues/doctors/conflict
(4 3 2 3 3 3) /people/colleagues/doctors/don't listen
(4 3 2 4) /people/colleagues/doctors/co-operate
(4 3 2 4 1) /people/colleagues/doctors/co-operate /analgesia
(4 3 2 4 2) /people/colleagues/doctors/co-operate/pain
(4 3 2 4 3) /people/colleagues/doctors/co-operate /listen
(4 3 2 9) /people/colleagues/doctors/improving attitude

Self

(4 4) /people/self
(4 4 1) /people/self/competent
(4 4 2) /people/self/inadequacy
(4 4 2 1) /people/self/inadequacy/fear of
(4 4 2 2) /people/self/inadequacy/lack of pain assessment skills

(4 4 2 3) /people/self/inadequacy/cause unnecessary pain
(4 4 2 4) /people/self/inadequacy/lack of coping ability
(4 4 2 5) /people/self/inadequacy/making errors
(4 4 2 6) /people/self/inadequacy/pain control

Codes Relating to Behaviour

Nurses' Coping Strategies

Engaging
(5 1) /behaviour/coping
(5 1 1) /behaviour/coping/engaging
(5 1 1 1) /behaviour/coping/engaging/preparation & support
(5 1 1 2) /behaviour/coping/engaging/emotional comfort
(5 1 1 3) /behaviour/coping/engaging/allowing patient control
(5 1 1 4) /behaviour/coping/engaging/relieve or reduce pain
(5 1 1 5) /behaviour/coping/engaging/encourage support of significant others
(5 1 1 6) /behaviour/coping/engaging/provide physical comfort
(5 1 1 7) /behaviour/coping/engaging/personalising
(5 1 1 8) /behaviour/coping/engaging/improve technical competence and knowledge
(5 1 1 9) /behaviour/coping/engaging/non-pain activities

Distancing
(5 1 2) /behaviour/coping/distancing
(5 1 2 1) /behaviour/coping/distancing/focus on long-term gains
(5 1 2 2) /behaviour/coping/distancing/acceptance of pain
(5 1 2 3) /behaviour/coping/distancing/emotional detachment
(5 1 2 4) /behaviour/coping/distancing/maintaining control of situation
(5 1 2 5) /behaviour/coping/distancing/displacing

emotions

(5 1 2 6) /behaviour/coping/distancing/physical distancing

(5 1 2 7) /behaviour/coping/distancing/relaxation

Social Support

(5 3 1) /behaviour/coping/social support

(5 3 2) /behaviour/coping/social support/colleagues

(5 3 3) /behaviour/coping/social support/family & friends

(5 3 4) /behaviour/coping/social support /professionals

(5 3 5) /behaviour/coping/social support/patient and family

(5 1 3) /behaviour/coping/role reconstruction

Nurses' Helping Behaviour

(5 2) /behaviour/helping efforts

(5 2 1) /behaviour/helping efforts/build trust

(5 2 2) /behaviour/helping efforts/make comfortable

(5 2 4) /behaviour/helping efforts/help patient take control

(5 2 5) /behaviour/helping efforts/emotional support

(5 2 6) /behaviour/helping efforts/relaxation

(5 2 7) /behaviour/helping efforts/distraction

(5 2 8) /behaviour/helping efforts/talk to babies

(5 2 9) /behaviour/helping efforts/develop a fast technique

Codes Relating to Nurses' Professional World

Negative Aspects

(6 1 1) /professional world/negative

(6 1 1 3) /professional world/negative/depleted personal resources

(6 1 1 9) /professional world/negative /relationship effects

(6 1 1 10) /professional world/negative/forcing procedure on patient

(6 1 1 11) /professional world/negative/patient's

aggression

(6 1 3) /professional world/nurses' early experiences

Core Constructs

(6 1 4) /professional world/core constructs
(6 1 4 1) /professional world/core constructs /carer
(6 1 4 1 1) /professional world/core constructs /carer/pain reliever
(6 1 4 2) /professional world/core constructs /pain inflictor
(6 1 4 3) /professional world/core constructs /effective practitioner
(6 1 4 4) /professional world/core constructs /coping professional
(6 1 4 5) /professional world/core constructs /advocate
(6 1 4 5 1) /professional world/core constructs advocate/failed advocate
(6 1 4 5 2) /professional world/core constructs /advocate/advocate dilemma

Codes Relating to Pain

(7) /pain
(7 1) /pain/control
(7 1 1) /pain/control/effective
(7 1 2) /pain/control/ineffective
(7 1 3) /pain/control/dilemma
(7 1 3 1) /pain/control/dilemma/inflict pain vs patient's wish
(7 1 3 2) /pain/control/dilemma/quality of life
(7 1 3 3) /pain/control/dilemma/dose vs adverse effects
(7 1 3 4) /pain/control/dilemma/nurse vs patient judgement
(7 1 3 5) /pain/control/dilemma/usefulness of procedure

(7 2) /pain/constructs
(7 2 1) /pain/constructs/awareness of patients' pain

Codes Relating to Nursing Dilemmas

(9)	/dilemmas
(9 1)	/dilemmas/advocate dilemma
(9 2)	/dilemmas/pain control
(9 2 1)	/dilemmas/pain control/inflict pain vs patient's wish
(9 2 2)	/dilemmas/pain control/quality of life
(9 2 3)	/dilemmas/pain control/dose vs adverse effects
(9 2 4)	/dilemmas/pain control/nurse vs patient judgement
(9 2 5)	/dilemmas/pain control/usefulness of procedure

Criteria for Coding Text for Four Groups of Coping Strategies

Text to be coded "Engaging" when a participant indicates that any of the following make the situation easier for him/herself to cope with.

(1) preparing and supporting patients so they can manage the pain better.

(2) providing emotional comfort by talking soothingly to the patient during a painful episode or procedure.

(3) allowing the patient to take control rather than the nurse.

(4) helping to relieve or reduce the pain.

(5) encouraging/facilitating the support of significant others.

(6) providing physical comfort.

(7) personalising - consciously trying not to lose sight of the patient as a person.

(8) deliberately attempting to improve technical competence and knowledge base so that pain is managed better and/or less pain is inflicted and the procedure is conducted as quickly and efficiently as possible.

(9) spending time with patient in nonpainful activities so the patient does not associate the nurse solely with painful procedures.

Text to be coded as "Distancing" when a participant indicates that any of the following make the situation easier for him/herself to cope with.

(1) focusing attention on the long term benefits of the painful procedure rather than the immediate pain.

(2) emotional distancing by "switching off", "tuning out", "not dwelling on it" or by deliberately trying not to think of the patient as a *person* or by focusing attention on the procedure rather than the pain.

(3) accepting the inevitability of pain in order to "switch off" more easily.

(4) maintaining control of and directing the situation rather than allowing the patient to do so.

(5) displacing emotions on family, friends or colleagues.

(6) physical distancing from the situation including using recreational activities as diversions.

(7) using relaxation techniques.

Text to be coded as "Seeking Social Support" when a participant indicates that any of the following make the situation easier for him/herself to cope with.

Seeking emotional support, practical support, information or social companionship from

(1) colleagues

(2) family & friends

(3) professional counsellors

(4) patients and their families.

Text to be coded as "Core Role Reconstruction" when a participant indic that the situation is easier to cope with when he/she does not contin construe nursing as exclusively concerned with relieving the pain of pati

APPENDIX D

TABLES OF MEANS AND STANDARD DEVIATIONS AND CORRELATION MATRICES

Table D.1

Means and Standard Deviations for the Positively Toned Content Analysis Scales Associated with Disorder-Induced Pain for the Entire Sample Over Three Interviews

Scales	Burns n=32			Neonatal Intensive Care n=33		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Positive Affect	.37 (.13)	.36 (.01)	.52 (.29)	.46 (.24)	.5[illegible] (.[illegible]8)	.46 (.16)
Origin	1.16 (.38)	1.08 (.31)	1.01 (.34)	.10 (.38)	.99 (.41)	.98 (.42)
Sociality	.55 (.28)	.46 (.28)	.58 (.24)	.64 (.50)	.61 (.26)	.60 (.33)

Table D.2

Means and Standard Deviations for the Negatively Toned Content Analysis Scales Associated with Disorder-Induced Pain for the Entire Sample Over Three Interviews

Scales	Burns n=32			Neonatal Intensive Care n=33		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Pawn	.99	.99	.87	.92	.87	.72
	(.46)	(.41)	(.35)	(.48)	(.55)	(.32)
Cognitive	.82	.73	.57	.83	.87	.71
Anxiety	(.47)	(.41)	(.39)	(.53)	(.46)	(.45)
Total	2.71	2.25	2.11	2.15	2.13	2.24
Anxiety	(.57)	(.70)	(.73)	(.61)	(.62)	(.52)
Hostility	.94	1.07	1.18	.99	1.02	1.23
Out	(.46)	(.55)	(.68)	(.58)	(.52)	(.66)
Hostility	.52	.43	.46	.48	.47	.52
In	(.29)	(.17)	(.28)	(.23)	(.20)	(.23)
Ambivalent	.50	.57	.51	.40	.40	.49
Hostility	(.26)	(.38)	(.41)	(.17)	(.12)	(.29)

Table D.3

Means and Standard Deviations for [illegible]e Coping Scores Associated With Disorder-Induced Pain for the Entire [illegible]ample Over Three Interviews

Scales	Burns n=32			Neonatal Intensive Care n=33		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Distancing	2.02 (1.92)	2.60 (2.43)	3.1[illegible] (2.[illegible])	1.56 (1.09)	1.77 (1.66)	2.09 (2.13)
Engaging	1.48 (1.89)	1.38 (1.05)	1.50 (1.80)	1.38 (.93)	1.18 (.55)	1.74 (1.47)
Social Support	1.27 (1.08)	1.11 (.80)	.92 (.32)	1.31 (.84)	1.05 (.32)	1.12 (.38)

Table D.4

Means and Standard Deviations for the Positively Toned Content Analysis Scales Associated with Clinically Inflicted Pain for the Entire Sample Over Three Interviews

Scales	Burns n=32			Neonatal Intensive Care n=33		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Positive Affect	.40 (.25	.38 (.16)	.37 (.15)	.43 (.18)	.41 (.17)	.42 (.13)
Pawn	.91 (.35)	.83 (.45)	.79 (.25)	.80 (.35)	.74 (.36)	.70 (.34)
Origin	1.17 (.37)	.98 (.42)	.91 (.31)	.88 (.32)	.98 (.42)	1.01 (.39)
Sociality	.63 (.29)	.47 (.25)	.44 (.32)	.53 (.30)	.60 (.34)	.49 (.34)

Table D.5

Means and Standard Deviations for the Negatively Toned Content Analysis Scales Associated With Clinically Inflicted Pain for the Entire Sample Over Three Interviews

Scales	Burns n=32			Neonatal Intensive Care n=33		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Cognitive Anxiety	.74 (.36)	.60 (.47)	.67 (.32)	.69 (.40)	.71 (.47)	.57 (.30)
Total Anxiety	2.19 (.55)	2.05 (.63)	1.94 (.83)	1.74 (.63)	1.61 (.77)	1.65 (.69)
Hostility Out	1.70 (.65)	1.72 (.49)	1.73 (.64)	1.71 (.69)	1.67 (.51)	2.04 (.55)
Hostility In	.54 (.43)	.41 (.23)	.45 (.21)	.50 (.26)	.49 (.30)	.57 (.38)
Ambivalent Hostility	.6 (.41)	.77 (.55)	.70 (.54)	.38 (.14)	.43 (.19)	.46 (.20)

Table D.6

Means and Standard Deviations for the Coping Scores Associated With Clinically Inflicted Pain for the Entire Sample Over Three Interviews

Scales	Burns n=32			Neonatal Intensive Care n=33		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Distancing	3.09 (3.23)	3.59 (2.53)	3.06 (2.19)	2.27 (1.70)	2.36 (2.29)	3.30 (2.37)
Engaging	1.52 (1.75)	2.03 (2.10)	1.44 (1.23)	2.39 (1.87)	1.92 (1.63)	2.47 (2.10)
Social Support	1.30 (1.07)	1.46 (1.44)	1.16 (1.07)	1.00 (.41)	1.01 (.36)	1.02 (.25)

Table D.7

Correlation Matrix Showing Significant Associations Between Coping Strategies and Content Analysis Scale Scores for Disorder-Induced Pain.

	Distancing	Engaging	Social support
	r	r	r
Positive Affect	.05	.25*	.11
Pawn	.27**	.25*	.24
Origin	.34**	.37**	.08
Cognitive Anxiety	.05	.14	.12
Sociality	-.28*	.03	.01
Total Anxiety	.16	.01	-.01
Hostility In	-.13	.02	.15
Hostility Out	.14	.02	.18
Amb. Hostility	.00	.11	.08

* $p<.05$ ** $p<.01$

Table D.8

Correlation Matrix Showing Association Between Content Analysis Scale Scores and Coping Strategies for Clinically Inflicted Pain

	Distancing	Engaging	Social support
	r	r	r
Positive Affect	.18	.18	-.04
Pawn	.12	-.07	.02
Origin	.07	-.09	.07
Cognitive Anxiety	-.21	-.10	-.14
Sociality	.07	-.07	.23
Total Anxiety	.07	-.38**	-.05
Hostility In	.11	-.18	-.02
Hostility Out	.11	-.11	.09
Amb. Hostility	.05	-.21	-.19

** $p<.01$

Table D.9

Correlation Matrix Showing Association of Experience Scores with Content Analysis Scale and Coping Strategy Scores for Disorder-Induced Pain

	Nursing Experience	Speciality Experience
	r	r
Positive Affect	.15	.08
Pawn	-.04	-.09
Origin	-.05	-.07
Cognitive Anxiety	.06	.10
Sociality	.03	.07
Total Anxiety	-.18	-.25*
Hostility In	-.06	-.11
Hostility Out	.07	-.11
Ambivalent Hostility	.04	.01
Distancing	-.13	-.06
Engaging	.05	.1
Social Support	.2	.14

* $p<.05$ ** $p<.01$

Table D.10

Correlation Matrix Showing Association of Experience Scores with Content Analysis Scale and Coping Strategy Scores for Clinically Inflicted Pain

	Nursing Experience	Speciality Experience
	r	r
Positive Affect	-.12	-.16
Pawn	-.15	-.21
Origin	.00	-.01
Cognitive Anxiety	.17	.20
Sociality	-.20	-.16
Total Anxiety	-.27*	-.14
Hostility In	.16	.00
Hostility Out	.04	.10
Ambivalent Hostility	-.03	.03
Distancing	-.23	-.25*
Engaging	.23	.04
Social Support	.06	.05

* $p<.05$

Table D.11

Means and Standard Deviations for Positively Toned Content Analysis Scales Associated with Disorder-Induced Pain for Participants who Completed Three Interviews

Scales	Burns n=17			Neonatal Intensive Care n=27		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Positive Affect	.37 (.10)	.36 (.10)	.52 (.29)	.44 (.2)	.44 (.18)	.46 (.16)
Origin	1.04 (.34)	1.14 (.31)	1.01 (.34)	.95 (.34)	.99 (.42)	.98 (.42)
Sociality	.59 (.28)	.43 (.29)	.58 (.24)	.65 (.54)	.60 (.26)	.60 (.33)

Table D.12

Means and Standard Deviations for Negatively Toned Content Analysis Scores Associated with Disorder-Induced Pain for Participants who Completed Three Interviews

Scales	Burns n=17			Neonatal Intensive Care n=27		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Pawn	.98 (.43)	1.00 (.46)	.87 (.35)	.85 (.43)	.90 (.54)	.72 (.32)
Cognitive Anxiety	.73 (.42)	.8 (.42)	.57 (.39)	.77 (.45)	.88 (.47)	.71 (.45)
Total Anxiety	2.56 (.59)	2.41 (.62)	2.11 (.73)	2.27 (.55)	2.17 (.59)	2.24 (.52)
Hostility Out	.92 (.46)	1.08 (.57)	1.18 (.68)	1.00 (.61)	1.05 (.5)	1.23 (.66)
Hostility In	.52 (.35)	.47 (.23)	.46 (.28)	.44 (.19)	.48 (.19)	.52 (.23)
Ambivalent Hostility	.45 (.20)	.48 (.24)	.51 (.41)	.38 (.16)	.41 (1.68)	.49 (.29)

Table D.13

Means and Standard Deviations for the Coping Scores Associated With Disorder-Induced Pain for Participants who Completed Three Interviews

Scales	Burns n=17			Neonatal Intensive Care n=27		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Distancing	1.92 (2.04)	2.82 (2.60)	3.12 (2.23)	1.62 (1.16)	1.81 (1.68)	2.09 (2.13)
Engaging	1.11 (.82)	1.45 (1.17)	1.50 (1.80)	1.41 (1.00)	1.20 (.55)	1.74 (1.47)
Social Support	1.37 (1.4)	.94 (.24)	.92 (.32)	1.31 (.89)	1.06 (.32)	1.12 (.38)

Table D.14

Means and Standard Deviations for Positively Toned Content Analysis Scores Associated With Clinically Inflicted Pain for Participants who Completed Three Interviews

Scales	Burns n=17			Neonatal Intensive Care n=27		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Positive Affect	.43 (.32)	.37 (.12)	.37 (.15)	.39 (.13)	.42 (.17)	.42 (.13)
Origin	1.56 (.40)	1.03 (.43)	.91 (.31)	.87 (.33)	.98 (.43)	1.01 (.39)
Sociality	.67 (.25)	.43 (.24)	.44 (.32)	.51 (.31)	.59 (.34)	.49 (.34)

Table D.15

Means and Standard Deviations for Negatively Toned Content Analysis Scores Associated With Clinically Inflicted Pain for Participants who Completed Three Interviews

Scales	Burns n=17			Neonatal Intensive Care n=27		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Pawn	.89 (.37)	.79 (.44)	.79 (.25)	.79 (.33)	.75 (.36)	.70 (.34)
Cognitive Anxiety	.72 (.40)	.60 (.50)	.67 (.32)	.63 (.38)	.71 (.48)	.57 (.30)
Total Anxiety	2.11 (.64)	2.02 (.49)	1.94 (.83)	1.72 (.67)	1.63 (.78)	1.65 (.69)
Hostility Out	1.61 (.7)	1.76 (.51)	1.73 (.64)	1.79 (.55)	1.69 (.51)	2.04 (.55)
Hostility In	.48 (.39)	.44 (.26)	.45 (.21)	.48 (.25)	.50 (.3)	.57 (.38)
Ambivalent Hostility	.54 (.32)	.82 (.61)	.70 (.54)	.37 (.13)	.44 (.19)	.46 (.20)

Table D.16

Means and Standard Deviations for Coping Scores Associated With Clinically Inflicted Pain for Participants who Completed Three Interviews

Scales	Burns n=17			Neonatal Intensive Care n=27		
	Interview			Interview		
	1	2	3	1	2	3
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Distancing	2.68 (2.59)	3.86 (2.76)	3.06 (2.19)	2.15 (1.53)	2.42 (2.30)	3.30 (2.37)
Engaging	1.45 (1.52)	2.27 (2.3)	1.44 (1.23)	2.21 (1.76)	1.96 (1.65)	2.47 (2.10)
Social Support	1.33 (1.02)	1.49 (1.52)	1.16 (1.07)	.99 (.44)	1.02 (.36)	1.02 (.25)

APPENDIX E

OVERVIEW OF THE PROCESS OF DATA ANALYSIS

Data analysis was undertaken in seven steps. There were as follows.

Exploratory Statistical Analysis

1. Means and standard deviations for scores on the Content Analysis scales and the coping scores were calculated for both types of pain for each group of nurses. Means and standard deviations were also calculated for Nursing Experience and for Specialty Experience for both groups of nurses.

2. Correlation matrices was calculated for all major variables for both types of pain and for each group of nurses. Variables included scores on the Content Analysis scales, the coping scores, Nursing Experience and Specialty Experience.

Analyses of the Effects of Nursing and Specialty experience

3. Multi-variate analysis of variance (MANOVA) to determine whether the paediatric burns group fitted best into the groups of nurses concerned with burns or those concerned with caring for infants.

3. Repeated measures multi-variate analysis of covariance (MANCOVA) of the group differences on the coping and content analysis scores between interviews

one, two and three for each type of pain. In each analysis, length of nursing experience was entered as the covariate.

4. Analysis of covariance (ANCOVA) of the group differences for the full set of participants' coping and content analysis scores for interview one. Nursing Experience and Specialty Experience were used as covariates.

Comparison of the reactions of the groups of nurses at the time of the first interview

5. For each type of pain, a separate MANOVA was conducted to identify differences in the reactions of the two groups.

6. Discriminant function analysis was used to interpret the nature of significant differences identified by the MANOVAs

Qualitative Analysis

7. Qualitative analysis was used to study the nature of the nurses experiences. In particular qualitative analysis was used to improve understanding of the circumstances that gave rise to the statistical differences between the two groups of nurses.