

More than just talking about pain

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After completing this article, you should be able to:

- Identify the need for a multidisciplinary approach to pain management.
- Apply a systematic approach to the assessment of pain.
- Identify the importance of communication with patients and their families on the effects of pain
- Identify nursing and multidisciplinary treatment options for pain.
- Discuss cultural aspects of pain management

Healthcare professionals must be equipped with the necessary knowledge, skills and attitudes to deal with situations where patients are expecting intervention to reduce or stop their pain. Many patients will be able to cope with their illness, whether chronic or acute, so long as they are comfortable; which means to be free from pain or lowering the level pain whilst suffering from an illness, recovering from trauma or an operation. Nurses as Health care professionals must be able to treat patients in a holistic manner considering trans-cultural aspects, other compounding medical conditions, the age of the patient, and know and understand the root cause of the primary medical problem of the patient. In advanced countries, the role of the nurse includes prescribing certain medications and treatments, but elsewhere practice may be limited to methods such as administering prescribed medication, positioning, using the correct equipment, and the use of alternative non-pharmacological treatments. The key to pain management is to work with the patient and the multidisciplinary team to assess the patient in pain, plan appropriate intervention, carry out planned care and ensure that the pain management plan has been effective.

What is pain?

The International Association for the Study of Pain (1986) defines pain as "an unpleasant sensory and emotional experience associated with actual and potential tissue damage or described in terms of such damage." Pain is the most common reason people seek medical attention (APS 2000). The exact prevalence of pain is difficult to determine and ranges widely in the literature (McCarberg and Dachs 2003).

Pain is a serious, potentially fatal, medical issue. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in the United States of America recognises the seriousness of pain and has issued standards for pain assessment, management and education endorsed by the American Pain Society and mandated in all JCAHO-accredited health care settings (McCarberg and Dachs 2003:4). Internationally the Joint Commission has identified a number of standards that all hospitals around the world shall comply with when it comes to managing patients in pain, through their subsidiary Joint Commission International (JCI). These include:

- Identifying patients in pain, in both initial and subsequent assessments
- Pain assessments are documented, including intensity, character, frequency, location, duration and follow up actions taken
- Education about pain management with patients and their families
- All staff involved in patient care receive education on the management of pain (Joint Commission 2002:88-89)

Some effects of Pain

"Regardless of its nature, pattern, or cause, pain that is inadequately treated has harmful effects beyond the discomfort it causes" (Smeltzer & Barr 2000: 177). Over the years, research has reported countless adverse physiological and psychological consequences of unrelieved pain. Physiological effects can include everything from impaired gastrointestinal and pulmonary function, through to increased metabolic rate, increased tumour growth and metastasis, impaired immunity and healing, insomnia, increased blood clotting, loss of appetite and an inability to ambulate (Berry and Dahl. 2000, Smeltzer & Barr 2000). Psychological and emotional effects can include; anger, resentment, despondency, anxiety, depression, loss of enjoyment of life, isolation, impaired family functioning, marital conflict, reduced sexual activity and even requests for physician-assisted suicide (Berry and Dahl. 2000, Smeltzer & Barr 2000).

Research has linked unrelieved acute pain to the development of chronic pain, (Dworkin 1997) which highlights the necessity of adequate pain treatment

for the patient. "Beyond the burden to the individual and his/her family, untreated pain takes a tremendous financial toll on the healthcare system and society at large in terms of longer hospital stays, rehospitalizations, and visits to outpatient clinics, physicians' offices and emergency rooms, and an increasing impact on the disability system" (McCarberg and Dachs 2003:3).

People become increasingly more sensitive to a painful stimulus the longer it continues. Unrelieved pain can lead to a lowered pain threshold experienced. As the irritation persists, nerve fibres normally unassociated with pain sensation are recruited, so that non-painful stimuli, such as touch or vibration, now also induce pain. This type of persistent pain is known as 'allodynia'. Stimulation of increasing numbers of nerve fibres as a result of spinal neurotransmitter release is known as recruitment. A window of opportunity exists during which rapid and appropriate intervention can mitigate the development of chronic pain (McCarberg and Dachs 2003).

What is acute pain?

When tissue injury triggers an inflammatory reaction there is a rapid flow of events that causes pain signals to be sent to the brain in much the same way a fire alarm rings telling firefighters to go into action. In an acute pain pathway, the signals or electrical impulses stimulate one or more types of peripheral nerves, specifically nonmyelinated C-fibre nerves (nociceptors), which is the body's response to and perception of pain. The signals are transmitted by the C-fibres and by lightly myelinated A-delta fibres to the central nervous system (CNS), where they synapse with neurons in the dorsal horn of the spinal cord and are transmitted to the cerebral cortex for interpretation. (Allison 1997, and McCarberg and Dachs 2003)

In addition to the process of stimulating the C-fibre nerves (nociceptive), other (antinociceptive) activities are occurring. These pain signals cause the release of endorphins and enkephalins in the brain. Endorphins and enkephalins respond to the pain signal by binding to appropriate opioid receptors, causing the release of substances that dull the pain signal. These opioid receptors are the same ones that morphine and other narcotics combine with, producing the same effect, i.e. analgesia. (Allison 1997: 326) Spinal cord cells also release substances, such as noradrenaline, oxytocin and relaxin that help quiet the pain (McCarberg and Dachs 2003). "Interestingly, enkephalins bind only to μ -opioid receptors that are exposed on the nociceptors actively transmitting a pain signal, making them more sensitive to endogenous and exogenous opiates. This pathway explains how opiates can effectively relieve chronic pain without hindering the body's ability to feel pain from a new injury" (Brookoff. 2000 as cited by McCarberg and Dachs 2003). Acute pain is usually has a rapid onset and is self-limiting. Mild acute pain may require little intervention and more severe pain can

usually be managed quite successfully (Allison 1997: 326).

Is chronic pain different?

Chronic pain is often associated with a disease process or with the treatment of a disease, but can become a disease in itself. It differs from acute pain and often does not respond to the same approach, as it occurs through a different process. It is not simply an endlessly repeated version of the acute pain process. The repetitive generation pain signals actually alter the neural pathways making them hypersensitive and resistant to the body's natural painkillers (Brookoff 2000 as cited by McCarberg and Dachs 2003). In fact, the pain signals almost become incorporated into the spinal cord, replaying over and over again.

There are different mechanisms of action for acute and chronic pain as different receptors are involved. Those most involved in the acute process are of one type AMPA receptors (a-amino-3-hydroxy-5-methyl-isoxazole-4-propionic-acid receptors), while those of chronic pain are another NMDA receptors (N-methyl-D-aspartate receptors). Activation of NMDA receptors causes the spinal neurons carrying pain to be more easily stimulated and to require more endorphins and enkephalins to quiet them. These naturally occurring analgesics just can't keep up to the demand and over time, even morphine and other narcotics can lose the battle as bigger and bigger dosages are required in order to have the same effect. Think of a patient you may have nursed that has had chronic pain for a long time, such as a patient with cancer, the amount of narcotic analgesia you may administer would render another patient unconscious but in their case, you are just making them comfortable. Sometimes the situation can be complicated, these chronic pain receptors (NMDA) receptors can cause neural cells to grow new connective endings in effect increasing the pain signal sent to the brain. Prolonged pain signals can also cause some nerve cells to backfire, therefore amplifying pain signals from peripheral nerves and helping maintain chronic pain. Therefore, chronic pain is an ongoing experience that fails to resolve naturally and does not respond well to intervention (Allison 1997:326)

Another type of pain, neuropathic pain, occurs when injury or disease damages either the sensory nerves or central ganglia. Examples include lower back pain, diabetic neuropathy, pain after a stroke and phantom limb pain. Although the nerves that carry touch signals are destroyed, pain-carrying fibres can regenerate in patients who have had a stroke or spinal cord injury. That is why patients who have no feeling below the waist can experience extreme pain from a pressure ulcer or bladder infection (Brookoff. 2000 as cited by McCarberg and Dachs 2003). Neuropathic pain is difficult to treat; it is virtually immune to internal pain suppression and doesn't usually respond to over the counter medication.

What sort of things should I look for?

Nurses are a vital link in caring for the patient. Nurses are the health professionals who will most likely know more about the patient than any other group in the multidisciplinary team. Nurses as a health professional work very closely with patients developing the vital and dynamic nurse-patient relationship in ensuring patients are able to communicate their needs, fears, concerns and anxieties.

A complete pain assessment, should including both subjective and objective data, this is essential so that the multidisciplinary team can determine the best treatment. Objective data including physiological and behavioural signs of pain are only one aspect, the nurse should ask questions to enable the patient to describe the pain (Allison 1997:329). Remember to ask open-ended questions throughout the process and to keep the patient as comfortable as possible. Realise that the pain itself can be a primary barrier to any assessment; the patient may be so uncomfortable or distracted that they are unable to focus on answering your questions. Other barriers include confusion, physical/emotional status, time and cultural, language or gender issues. Continued assessment and revisiting treatment strategies is essential.

Pain assessment covers these ten main points:

1. Location - the patient may be able to locate the pain experience specifically, for example "the big toe on my right foot", or more general "all over my tummy"
2. Time - information about the onset of pain; was it sudden or gradual? With chronic pain, there may be differences in the time of day such as the arthritis. When assessing duration, ask whether the pain has a cyclic quality, occurring at certain times of the day or night. How long does the pain last, is it continual or intermittent?
3. Precipitating factors - certain physical or emotional factors may impact on the pain experienced, for example "chest pain after I walked up the stairs", "my stomach hurts after I ate some food"
4. Impact on activities - What impact does the pain have on activities of daily living, for example "I cant sleep", "I am unable to walk"
5. Character - This is how the patient describes their pain, it is important the at the nurse accurately records the patients own words as this can give vital clues as to further management by the team. A good example is the "burning, hot feeling" described by a patient with herpetic shingles. Neuropathic pain is typically described as "hot, burning, scalding or searing." Other words like; knife like, prickling, tingling, dull, ache, cramp, throbbing, crushing, shooting, stabbing all can give vital clues as to origin of the pain.

6. Severity - The intensity of the pain experienced is not always evident by the patient's reaction, and must be assessed as the their perception of severity. To determine the severity of the pain, employ one of the many available standardised pain scales available to help facilitate communication and validate the success or failure of interventions (Figure 1).
7. Associated signs/symptoms - Objective signs, such as oedema discolouration (bruising), changes in skin temperature, redness, swelling or warmth, flushing or pallor, incontinence. The nurse also needs to ask about subjective symptoms such as dizziness, photosensitivity, a sensation of light-headedness or faintness, nausea, diaphoresis, weakness, loss of balance.
8. Behaviour - The patient's posture or facial expression may be an indication of pain, this is especially important with paediatric patients as they are unable to answer many of the questions alluded to in the other points. The patient may assume a position that provides comfort, such as curled up on their side to relieve abdominal pain. Care should be taken when assessing facial expressions as acute pain may cause the patient to grimace, whereas someone who is suffering from chronic pain may not as they mask the chronic pain experienced.
9. Vital signs - While pain is a subjective phenomenon, the physical assessment can reveal objective signs, such as an increase or decrease in heart rate, blood pressure and/or respiration, or an altered state of consciousness. These can be important, but their absence should never be used as the basis for an assumption that pain is absent.
10. Emotional - The patient needs to be observed for signs of increased emotional tension, for example irritability, anxiety, depression, aggression, exhaustion or sleeplessness.

Thorough and detailed documentation is critical to a comprehensive pain assessment and to appropriate patient management whether or not controlled substances will be part of the treatment plan (McCarberg and Dachs 2003).

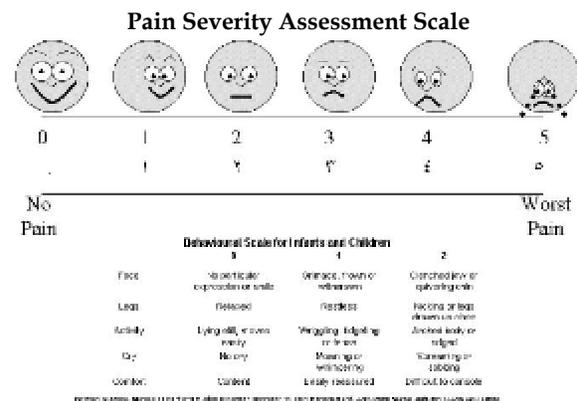


Figure 1: A simplified five-point tool that is multicultural and can be used for children or adults. A behavioural scale can be used for infants.

Pain also has a cultural element that is important in the pain assessment. The nurse must be able to assess a patient's pain against their cultural background, age and disease condition. The following pain related factors are all influenced by the individual's cultural background; how pain is expressed, the response they have to pain, their pain threshold and tolerance. Responses to pain may be classified broadly as stoic or emotive. Stoic means less expressive verbally and non-verbally, and the patient rarely complains. Emotive means to be quite vocal and will express their pain loudly. The nurse should understand a patient's culture and therefore their response to pain. In early childhood, individuals learn which responses are acceptable or not acceptable to pain.

Reasons for stoic response to pain include:

- *denial of pain*
- *a desire to be the perfect patient*
- *avoiding loss of control*
- *avoiding worrying family*
- *fear of addiction*
- *fear of overdose and side effects from pain medications*
- *paying a price for past sins and future joys*
- *acceptance of the pain.*

Reasons for an emotive response to pain include:

- *fear of pain*
- *a desire for help and fear of not receiving it.*
- *anger*
- *grief over loss of role and dignity*
- *exorcism of pain through the act of crying out*
- *experiencing great pain* Luckmann 1999: 269-270

According to Luckmann (1999: 269-270) "Men usually demonstrate greater stoicism than women; however, research indicates that stoicism decreases with increasing age". The fact that men complain less than women is generally known and is noticeable in most cultures. Men may feel that they are the stronger gender and should be in control of their situation in order to take care of the women and children. With reference to the above-mentioned statement, it appears that older men become less stoic and therefore will complain more than when they were younger.

How do we help the patient manage pain?

The management of pain includes treating the underlying cause or disease (heart disease causing chest pain), treating symptoms (such as nausea), factors that increase perception of pain (like emotions) as well as pharmacological and non-pharmacological therapy. Nursing interventions include minimising the stimulus for pain, alleviating pain and assisting

the patient and family to cope with pain.

The Principles of Pain Control

- Analgesia should be integrated into a comprehensive patient evaluation and management plan.
- The emotional and cognitive aspects of pain must be recognized and treated.
- There is no reliable way to objectively measure pain.
- Pain is most often undertreated, not overtreated.
- Beware of the "squeaky-wheel-gets-the-oil" phenomenon of pain control.
- Pain control must be individualized.
- Anticipate rather than react to pain.
- Whenever possible, let the patient control his or her own pain.
- Pain control is often best achieved by combination therapy.
- Pain control requires a multidisciplinary, team approach. (Ducharme 2000)

Non-pharmacological

Management of most painful conditions begins with non-pharmacological treatment modalities that often continue to play a role even after medication is prescribed. Such treatments include, but are not limited to:

Acupuncture - a skilled professional inserts fine needles into the skin at selected points in the body. Acupuncture may be used to treat both acute and chronic pain.

Biofeedback - is a method where a patient learns to control certain autonomic physiological responses (e.g. BP) through concentration and with the aid of instruments.

Education - The importance of patient education cannot be stressed enough as it will significantly improve outcomes. Patients and their families need to understand the origin of the pain, rationale behind treatment, goals of treatment and especially for chronic pain to be assured that while their pain may have a physiological basis, skills in coping will help.

Heat or Cold - heat applied to skin causes local blood vessels to dilate reducing swelling and promoting healing. Cold compresses may have a localised numbing effect reducing pain and increasing comfort.

Hypnosis - analgesia may be achieved when a person enters a deep relaxed state allowing for cognitive thought to be bypassed. Effective hypnosis varies amongst individuals.

Therapeutic touch - Therapeutic touch is often used in hospice care where the nurse have to deal with patients suffering from conditions such as cancer, HIV, or AIDS. There is enough research evidence to support the idea of therapeutic touch, which may improve relaxation, reduce pain, decrease anxiety, reduced oedema and even accelerate wound healing. To apply this method the nurse must consider the culture of the patient because in some cultures it might not be acceptable. (Hutchinson 1999:46)

Transcutaneous electrical nerve stimulation (TENS) - through the application of electrodes to trigger points on the skin to stimulate the peripheral nerves. The battery powered small impulses effectively block the transmission of pain impulses to the brain. Complications of TENS include skin irritation and possible interference with cardiac pacemakers.

Others may include chiropractic, cognitive-behavioural therapy (CBT), distraction, exercise, ice, immobilisation, lifestyle modifications, massage, music, occupational therapy and physical therapy.

Pharmacological

The pharmacological collection for treating pain is enormous. The selection of a pharmacological treatment for a particular patient depends on many factors including the source and pathophysiology of the pain and the presence of other conditions (McCarberg and Dachs 2003). Although in the hospital setting the multidisciplinary team will decide on drugs to be taken by the patient and a specific Doctor's order or prescription will be obtained, it is important that nurse is able to discuss them with the patient and family. Many patients may have medication that they have purchased outside the hospital, they could have been prescribed by another doctor or purchased over the counter without prescription. Previous or continued use of this medication by the patient may interfere in the pain management plan of the multidisciplinary team.

*****For complete information prior to the administration of the following medication, nurses must available themselves of suitable pharmacological information including indications, adverse effects, actions and contraindications*****

Some examples of Non-opioid Analgesics

Topical analgesics- are applied directly on the painful body area, such as gels, creams, liquids or patches. This route don't result in clinically significant serum levels and adverse reactions may be a local reaction such as allergy or rash (McCarberg and Dachs 2003).

can Pain Society, and the American Geriatrics Society designated paracetamol/acetaminophen as the first-line treatment for osteoarthritis because of its low incidence of side effects, over-the-counter availability and relatively low cost (McCarberg and Dachs 2003).

Traditional Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) - including aspirin, ibuprofen and naproxen, are all effective agents for mild to moderate pain with an inflammatory component. When administering NSAID, be aware that there is no evidence demonstrating one is more efficacious than another in the treatment of pain (McCarberg and Dachs 2003). As a drug class, NSAIDs have a relatively high rate of adverse effects; the risk of gastrointestinal bleeding with NSAIDs in the general population is only one percent but for those aged 60 and older the risk significantly increases, NSAIDs can also interfere with various antihypertensive therapies and may contribute to the development of congestive heart failure in elderly patients (several studies cited by McCarberg and Dachs 2003:7).

Opioid Analgesics

Opioids are the pharmacological foundation for the treatment of moderately severe to severe pain. Up to 90 percent of prescriptions In the United States that were written for opioids are for pain other than cancer (Brookoff 2000a). "The only absolute contraindication to the use of opioids is allergy. They work by activating opioid receptors in spinal and supraspinal sites within the central nervous system. Administration of these agents generally should be on a regularly scheduled basis rather than on an as-needed basis" (McCarberg and Dachs 2003:8). Common opioid examples include: pethidine, morphine and fentanyl. They are all excellent analgesics and are available as short-acting, immediate-release preparations as well as some long-acting, sustained release formulations. In acute pain, immediate-release agents provide necessary rapid analgesia and should be titrated to ensure effect. In chronic pain, sustained-release preparations are useful alternatives. These sustained-release agents provide steady serum levels in the body and help to avoid mini-withdrawals and rebound reactions that can occur with repeated dosing of short-acting preparations. Furthermore, sleep patterns in patients remain less interrupted and compliance tends to be higher with the more convenient sustained-release preparations (McCarberg and Dachs 2003:9).

The common practice of administering an antiemetic with an opioid at the same time is not necessary since narcotic- induced emesis occurs in only about 20 percent of patients (McCarberg and Dachs 2003:10). Antiemetics should not be given automatically, but rather prescribed only on an as-needed basis. Other adverse effects of opioids include sedation, dizziness, grogginess and constipation. Every effort should be made to anticipate constipation and an appropriate bowel regimen should begin on the onset of therapy in those patients that may require a prolonged course of opioid analgesia (McCarberg and Dachs 2003:10).

Antidepressants

More than half of individuals with chronic pain experience coexisting depression and/or anxiety

(McCarberg and Dachs 2003:11). Most people with chronic pain can benefit from antidepressants, not only for pre-existing psychiatric conditions, but also for treating the pain itself, particularly neuropathic pain. According to McCarberg and Dachs (2003:11) antidepressants have been used with "arthritis pain, atypical facial pain, cancer pain, chest wall pain, diabetic neuropathy, fibromyalgia, headache, low back pain, peripheral neuralgia, phantom limb pain, PHN, postoperative pain, trigeminal and glossopharyngeal neuralgia, and vasculitis neuropathy." Side effects of antidepressants can include dry mouth, blurred vision, urinary retention, constipation, postural hypotension, tremors and disturbed sleep

Antiepileptics

Antiepileptic drugs- such as carbamazepine and phenytoin have been used for the management of neuropathic pain. The anticonvulsants appear to work by reducing the neuronal excitability associated with some neuropathic pain states (McCarberg and Dachs 2003:11).

What is NOT an analgesic?

Some common medications are sometimes given instead of analgesia to the disadvantage of good patient care. "Note that phenothiazines, such as promethazine (Phenergan) and chlorpromazine (Thorazine), and benzodiazepines, such as diazepam (Valium) and lorazepam (Ativan), are not included in the discussion ... This is because, with few exceptions, they increase sedation without enhancing analgesia. Although a number of drugs are labelled as muscle relaxants, such as carisoprodol (Soma), cyclobenzaprine (Flexeril) and methocarbamol (Robaxin), there is little evidence that they actually relax skeletal muscle. At best they provide mild analgesia" (McCaffery & Portenoy, 1999 as cited by Pasero and McCaffery 2003).

Nursing Care for a patient experiencing pain

The nurse caring for the patient has the responsibility to try and minimise the stimulus that is causing pain, as well as monitoring, reporting, documenting and implementing nursing measures to alleviate pain. The nurse also plays an important role in supporting and educating the patient and their family.

The importance of good communication cannot be stressed enough. The nurse must use active listening techniques so that the patient's words heard and also any non-verbal cues are detected, for example; the patient who does not express their pain verbally but their body language and tone of voice indicate otherwise. "It is important to prevent or reduce the cycle of pain-stress-anxiety-pain" (Allison 1997:331). Alleviation of anxiety for the patient and family through education about the illness, treatments, medication, pain relieving measures. A variety of nursing measures are available, for example:

- *Position Changes* - an uncomfortable position can

increase and even cause pain experienced by the patient. Pillows used for support, aids such as sheepskins, bedclothes loose and the body in correct alignment.

- *Basic needs met* - ensure the patient's basic needs are met (e.g. pain caused by distended bladder), increase comfort by attending basic hygiene needs, offering a drink preferred by the patient if not contraindicated.
- *Handling gently* - when assisting the patient to move, use gentle movements, as pain is often increased with movement. The nurse or patient can 'splint' a surgical wound during movement. Timing movements when pharmacological treatments are at peak effect.
- *Rest* - fatigue increases reactions to pain, thus nurses need to promote adequate rest and sleep. Relaxation techniques can be used to reduce anxiety.
- *Checking dressings and splints* - A poorly positioned dressing can irritate a wound, an IV may have been sited over a joint, a bandage may be too tight or too loose, a splint may be causing pressure; nurses need to check, change or adjust a whole range of things that we attach to patients in hospital.
- *Environment* - manipulating the environment for the patient is important; some patients may prefer a darkened quiet room whilst others prefer distractions of a television or visitors. Air quality is important; a room too hot, the air-conditioning too cold, poor ventilation, smells can interfere in a patient's comfort.

The Importance of Documentation

The assessment of pain experienced by the patient is important and should therefore be documented. Documentation should include all aspects of the assessment, not just a severity score, these including intensity, character, frequency, location, duration and of course the follow up actions taken by the nurse. It is important that nurses document what action they took when noticing pain, just as it is important when a patient has acute hypertension or is febrile, so too is it important to document what the nurse does for pain management.

Was the intervention that the nurse administered effective? Often we can only find out from the nursing documentation, so nurses have to ask the patient if the medication worked, was the cold compress effective, did the analgesia relieve the pain etc... and document the result in a nursing note.

Conclusion

People can have acute pain without suffering, and people can suffer without having pain. Clearly the two are separate and distinct, but unfortunately, they

often co-exist. When pain becomes chronic and is inadequately treated, it causes suffering. People feel not only the immediate, present pain, but anticipate and fear the experience of pain in the future (McCarberg and Dachs 2003:12). Each episode of pain experienced by the patient is unique and subjective, it is important that the multidisciplinary team appreciates that **"pain is what the patient says it is"** (Allison 1997:332 emphasis added). The nurse should make every effort to include the patient and their family in the decisions and treatments thereby easing their pain and anxiety. Ducharme (2000:603) states about patients in our care; "if they suffer, it is because we have chosen for that to occur, not because it is unavoidable."

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